

## 1.0 Bioassays

### 1.1 Urinalysis

License Condition 38, Part D requires that bioassays exceeding 15 ug/l be investigated. Attachment 1 shows the results of 11 bioassay reports in which none exceeded the 150 ug/l reporting level.

## 2.0 Stack Sampling

Attachment 2 shows the results of stack sampling for the first and second quarters of 1989. The mill operated at or near tonnage capacity both quarters. No trends are apparent. Second quarter grizzly stack sampling data has been delayed from the laboratory and will be forwarded under separate cover.

## 3.0 Environmental, Radiological, and Effluent Monitoring Data

### 3.1 Environmental Radon

Environmental Radon concentrations are determined by Trak Etch detectors furnished by Terradex Corporation. There is one detector at each of the five environmental monitoring stations with a duplicate at BHV-2, the nearest residence. Figure 1 shows the locations of the environmental stations in and around the mill.

Table 1 and Graphs 1 through 5 show the results. Table 2 and Graph 6 are used for quality control purposes. Table 2 is the linear regression results comparing BHV-2 to BHV-6 (duplicate at BHV-2). The calculated  $r^2$  is 0.06, a value little different from one generated by random selection. Graph 6 shows BHV-2 versus BHV-6 with the expected curve shown.

A significant trend has appeared at BHV-5. The corrected value at this location is below 25% MPC for an unrestricted area. However, it appears that this limit could be exceeded in the near future with no action on Umetco's part. Umetco has evaluated the condition and taken actions that should reverse this trend.

Radon at BHV-5 could be coming from the ore pad area, from ore carried onto the access road during muddy periods, from yellowcake stored on the property, or from the tailings area. The ore pad has been eliminated from consideration because the quantity of ore and the contained pounds stored there are less than during previous years.

It was possible though not likely, in Umetco's judgement, that the radon was coming from mud carried onto the access road (near BHV-5) from the ore pad by truck wheels during muddy periods. Umetco personnel performed a gamma scan and although the contamination was minimal, actions were taken to reduce the contamination to background levels.

### 3.2 Environmental Gamma

Gamma levels at the five environmental locations are determined by the Thermal Luminescent Dosimeters (TLDs) furnished by Eberline Instruments. The badges are exchanged quarterly and the data is presented in Tables 3 through 7 and Graph 7. There are no apparent trends in the data, with measured values in the range of previous values.

### 3.3 Vegetation Samples

Tables 8 through 10 and Graphs 8 through 10 show the results of the vegetation samples. No apparent trends appear in the data.

### 3.4 Environmental Air Monitoring

Air monitoring at the White Mesa Mill is accomplished by five high volume stations located around the periphery of the mill. See Figure 1. In all parameters with the exception of lead 210, BHV-5 registers the highest values. It is felt that this is the result of mud carried onto the mill access road by the ore haul trucks as they exit the mill yard. No other trends are apparent.

### 3.5 Groundwater Monitoring

The results of groundwater monitoring are shown in Tables 18 and 19 and Graphs 15 through 36. Table 20 can be used to evaluate the quality of analyses from the analytical laboratory. Three types of quality control samples have been submitted to the vendor laboratory: blanks, spikes, and duplicates,

all of which are "blind". No trends are apparent in the data.

### 3.6 Surface Water Monitoring

The results of surface water monitoring is presented in Table 21. Note that a request for License amendment has been submitted to drop Westwater Creek from monitoring requirements due to its being dry 15 out of the last 24 quarters. No apparent trends are visible.

### 4.0 Meteorological Data

The Semi-Annual Air Quality and Meteorology Monitoring Report provided by EnecoTech is attached as Appendix A.

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Investigation of Elevated Bioassay

January 5, 1989

A sample collected from a yellowcake precipitation operator on January 5, 1989 exceeded the 15 ug/l u-nat resample level at 24 ug/l uranium. An additional sample was collected on 1/19/89 prior to going on long change which showed bioassay levels at 45 ug/l u-nat. The operator was removed from yellowcake until bioassay levels returned to normal levels. A sample collected on 1/24/89 showed bioassay levels had returned to near normal levels at 8 ug/l uranium. The investigation of this incident is based on information gathered from discussions with the operator.

1. Airborne results from breathing zone and area airborne samplers were showing low concentrations both inside and outside the enclosures.
2. Samples collected from yellowcake operators during this same time period were all at normal levels. This suggests this incident was an isolated occurrence and not a condition prevalent throughout yellowcake.
3. Discussion held with the operator indicate the elevated reading was a result of ingestion of material at the centrifuge area. During some cleanup around the centrifuge the operator got splashed with material from the hose attached to the pots that feed the centrifuge.

With the frequency at which this operator's samples exceed the 15 ug/l u-nat level it is recommended that he be removed from yellowcake permanently.

*S. L. Schierman*

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Radiation Protection Officer

SLS/gp

Investigation of Elevated Bioassay

January 12, 1989

On 1/12/89 a sample collected from a yellowcake packaging operator exceeded the 15 ug/l resample level at 24 ug/l uranium. An additional sample collected on 1/21/89 shows bioassay levels had returned to normal levels. In discussions with the operator it appears the material was ingested during the cleanout of the yellowcake scrubber tank.

1. The yellowcake packaging and precipitation operator were assigned to cleanout the build-up in the yellowcake scrubber tank.
2. Build-up from the tank was transferred by bucket to 55 gallon drums to be reprocessed at a later date.
3. The remainder of the material is then washed back to a sump pump for reprocessing.

The operator removed his full-face respirator due to fogging to see how much build-up remained in the tank and was splashed causing the ingestion of some material.

4. Bioassay results from the other operator working on this job were at 2 ug/l or normal levels.

Nose cups are supplied to help prevent the fogging of full-face respirators which should prevent this from occurring in future jobs.

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Investigation of Elevated Bioassay

January 20, 1989

A bioassay sample collected on 1/20/89 exceeded the 15 ug/l resample level at 17 ug/l uranium. Additional samples collected on 2/2/89 show bioassay levels had returned to normal at 2 ug/l uranium. The sample appears to have been contaminated as it was submitted one (1) day late. Discussions with the operator could not account for any explanation of elevated bioassay results.

The sample is considered to be contaminated prior to analysis due to being submitted late.

Discussions were held with the shifter and the operators about submitting samples in a timely manner. Any further problems of this nature could result in disciplinary action.

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Investigation of Elevated Bioassay

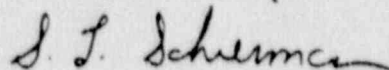
January 20, 1989

A bioassay sample collected on 1/20/89 exceeded the 15 ug/l u-nat action level at 38 ug/l uranium. An additional sample from 2/1/89 showed bioassay levels at normal levels of 5 ug/l uranium. The Maintenance Foreman was notified of the results and his mechanic was restricted from work at yellowcake until bioassay levels returned to normal.

The investigation of this incident comes to the following conclusions:

1. Samples submitted by the maintenance workers for RWP 558 were turned in after break at 9:00 A.M. Both employees had been at work since 7:00 A.M.
2. Bioassay levels from other people working on this job were below the 15 ug/l u-nat level.
3. Discussions with the employee indicate there were no unusual circumstances this was verified with the Radiation Tech. present during the job.

It is felt that this sample exceeded the 15 ug/l uranium level because of contamination of the sample due to being submitted late.



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Investigation of Elevated Bioassay

January 24, 1989

On 1/24/89 a sample collected from a yellowcake precipitation operator exceeded the 15 ug/l resample level at 29 ug/l uranium. An additional sample collected on 1/31/89 showed bioassay levels normal. Discussions with the operator have indicated this sample was contaminated due to late submittal. The following information was used to make this determination:

- 1) A sample collected on 1/21/89 was at normal levels of < 5 ug/l uranium.
- 2) The operator had no recollection of any circumstances that would have caused an elevated reading.
- 3) The sample was collected during the middle part of this operator's shift. The bioassay cup was put out for swing shift coming back from their long change. The sheet was read wrong and a cup put out for the wrong packaging operator.
- 4) The operator had been at work for approximately 2 hours before giving the sample. During this time he had barreled 2 drums of yellowcake.

Because the operator was not scheduled for a sample bottle he did not check prior to going to work. With the amount of time spent at the work location and the sample on 1/31/89 at normal levels, the sample is considered to be contaminated prior to analysis.

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Investigation of Elevated Bioassay

January 31, 1989

On 1/31/89 a bioassay sample was collected from a vanadium operator that exceeded the 15 ug/l resample level at 30 ug/l uranium. An additional sample was collected on 2/7/89 which shows bioassay levels at 12 ug/l uranium. Discussions with the operator have little explanation as to why or how his bioassays would have exceeded 15 ug/l uranium.

The operator works at vanadium and has spent little or no time at yellowcake.

No explanation as to why the sample exceeded the 15 ug/l uranium is available. The only likely circumstances would be that the sample was contaminated. This, however, would have had to have been prior to analysis as both laboratory surfaces were scanned prior to analysis and little to no contamination was found. Samples being assayed around this sample were not spiked or known to have any elevated readings so splatter during evaporation is not likely.



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Investigation of Elevated Bioassay

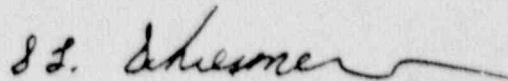
February 2, 1989

On 2/2/89 a sample was collected from a vanadium packaging operator which exceeded the 15 ug/l action level at 16 ug/l uranium. The sample was from a yellowcake operator that had been removed since 1/19/89 and assigned to vanadium. Samples collected on 2/17/89 show bioassay levels are at normal levels.

My evaluation of this incident is based on the following:

- 1) Monthly sampling at vanadium shows little airborne uranium.
- 2) Samples were submitted in a timely manner which minimizes contamination potential.
- 3) This operator had a frequent elevated bioassay history at yellowcake and was removed and it has been recommended that removal be permanent.
- 4) Discussions with the operator identified no potential explanation of why the sample exceeded 15 ug/l u-nat.
- 5) Laboratory analysis on the sample had good reproducibility and wipe tests for alpha contamination were negative.

Upon review of the data, how the sample was collected and submitted in a timely manner, no explanation as to why the sample is above 15 ug/l uranium can be given.

  
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Radiation Protection Officer

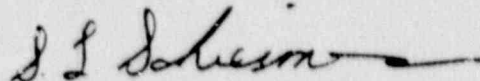
Investigation of Elevated Bioassay

February 16, 1989

A bioassay sample collected on 2/16/89 from an instrument man exceeded the 15 ug/l resample level at 59 ug/l uranium. Follow-up samples collected on 2/19/89 show bioassay levels were at < 5 ug/l or at normal levels. Interviews with the employee lead to the following conclusions:

- 1) The employee had worked on burners in the YC dryer enclosure for one (1) hour on 2/14/89. Additional time was spent working on burners on 2/15/89 about five (5) hours.
- 2) The job on the 15th shows the highest airborne concentrations but wearing a respirator would provide adequate protection.
- 3) Prior to submitting the sample on the 16th the employee had reported to work and filled the cup prior to changing into his work clothing. During discussions with the employee an accumulation of dust was observed on the hard hat with fingerprints on the bill. While submitting the sample the employee was wearing his hard hat. The hard hat was scanned later that day and the dust determined to be yellowcake.

Because the follow-up sample collected three (3) days after the initial sample of 59 ug/l shows no uranium content present. It is believed the sample was contaminated during collection by yellowcake from the hard hat. This is further evident by the fingerprints on the hat which would greatly increase the chance of contamination of the sample.



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## BIOASSAY INVESTIGATION

March 24, 1989

A sample collected on 3/24/89 was in the 15 ug/l resample level. The sample was collected from a contractor doing refractory work to the Skinner dryer at yellowcake. A follow-up sample collected on 4/7/89 showed bioassay levels had returned to normal levels of 3 ug/l uranium.

Discussions with the employee and the following information indicate the material was ingested.

1. Airborne levels were not above protection levels for the type of respiratory protection used. Listed below are the airborne concentrations:

A.	3/21/89	$2.5 \times 10^{-10}$	or	250% MPC
B.	3/22/89	$3.9 \times 10^{-11}$	or	39% MPC
C.	3/23/89	$1.1 \times 10^{-10}$	or	110% MPC
D.	3/24/89	$1.8 \times 10^{-9}$	or	1800% MPC

Airline respirators were used for the duration of this job by the contractor.

2. After work each day the coveralls were laundered and showers were taken by the contractors.
3. Bioassay samples were collected on 3/20/89 as baseline samples all were below 5 ug/l uranium. Additional samples were taken mid-shift on 3/23/89 and all these samples were below 5 ug/l uranium.
4. Personal observations made during the construction were that respirators were removed frequently as only short durations of time could be spent in the Skinner dryer. It is my opinion that this is when the ingestion of material occurred. Discussion with the contractor could not identify an incident which would have lead to any elevated readings.

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xc: W. W. Brice  
G. G. Ray  
D. K. Sparling  
Central File

## Investigation of Elevated Bioassay

May 2, 1989

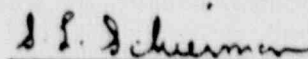
A bioassay sample collected on 5/25/89 exceeded the 15 ug/l resample level at 22 ug/l uranium content. Follow-up samples collected on 5/31/89 show uranium levels had returned to normal at 2 ug/l.

The cause of the initial elevated bioassay is based on information gathered from the employee and personal observations. My evaluation of this incident is listed below:

- 1) Area airborne and breathing zone samples show uranium airborne concentrations are low during the period prior to submitting the bioassay sample.
- 2) The employee has no recollection of an incident which would have caused an elevated bioassay reading.
- 3) Other operators during the same time period show no elevated bioassay results.
- 4) The sample submitted on 5/25/89 was turned in about two (2) hours late. With no recall of an incident by the employee and follow-up levels showing normal values it appears the sample was contaminated prior to analysis.
- 5) Both the sample prep. and fluorometric room alpha wipe tests show levels were below 25 dpm/100 cm<sup>2</sup>.

It is felt the sample was contaminated by the employee during collection due to being submitted late and not indicating a true value of 22 ug/l uranium content.

Discussions have been held with the shifter and the employee about submitting samples prior to reporting to the work location.



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INVESTIGATION OF ELEVATED BIOASSAY SAMPLE

July 5, 1989

A bioassay sample collected on 6/21/89 exceeded the 15 ug/l action level. Follow-up samples collected on 6/28/89 show uranium levels had returned to normal levels. Discussions held with the operator suggest the sample was contaminated during collection. This is based on the following information supplied by the operator:

The sample was collected prior to reporting to his work location.

Because of the small amount submitted prior to work the operator filled the remainder of the specimen bottle at the end of his shift. This person was working as the yellowcake precipitation operator and submitted the sample prior to showering. Because of the above information, along with no recall of an incident by the operator, the sample is considered to be contaminated.

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Radiation Protection Officer

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xc: W. W. Brice  
G. G. Ray  
D. K. Sparling  
Central File

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UMETCO URANIUM MILL

DEMISTER STACK

June 10, 1989

Dry gas volume sampled	160.872	dscf		
Stack gas velocity	42.880	ft/sec		
Flow rate	6.512	dscm/sec		
Isokinetic variation	101	%		<u>LLDs</u>
U-nat emission	$1.36 \times 10^{-11}$	$\mu\text{Ci/ml}$		$5 \times 10^{-13}$
Ra-226 emission	$1.71 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$6.59 \times 10^{-14}$	$3 \times 10^{-14}$
Th-230 emission	$6.37 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$2.41 \times 10^{-13}$	$3 \times 10^{-14}$
Pb-210 emission	$4.39 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$4.39 \times 10^{-14}$	$8 \times 10^{-14}$
Uranium release rate	$6.98 \times 10^{-4}$	Ci/qtr		
Uranium release rate	1033	grams/qtr	or	1.03 kg/qtr

UMETCO URANIUM MILL

YELLOW CAKE DRYER STACK

June 9, 1989

Dry gas volume sampled	141.096	dscf		
Stack gas velocity	31.793	ft/sec		
Flow rate	1.097	dscm/sec		
Isokinetic variation	98	%		<u>LLDs</u>
U-nat emission	$8.68 \times 10^{-10}$	$\mu\text{Ci/ml}$		$5 \times 10^{-13}$
Ra-226 emission	$3.73 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$1.50 \times 10^{-13}$	$3 \times 10^{-14}$
Th-230 emission	$2.50 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$2.50 \times 10^{-13}$	$3 \times 10^{-14}$
Pb-210 emission	$7.01 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$5.01 \times 10^{-14}$	$8 \times 10^{-14}$
Uranium release rate	$3.88 \times 10^{-5}$	Ci/qtr		
Uranium release rate	5741	grams/qtr	or	5.7 kg/qtr

UMETCO URANIUM MILL

YELLOW CAKE DRYER STACK

March 29, 1989

Dry gas volume sampled	135.721	dscf		
Stack gas velocity	30.596	ft/sec		
Flow rate	1.056	dscm/sec		
Isokinetic variation	97	%		<u>LLDs</u>
U-nat emission	$1.38 \times 10^{-9}$	$\mu\text{Ci/ml}$		$5 \times 10^{-13}$
Ra-226 emission	$1.30 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$5.20 \times 10^{-14}$	$3 \times 10^{-14}$
Th-230 emission	$2.29 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$1.14 \times 10^{-13}$	$3 \times 10^{-14}$
Pb-210 emission	$7.27 \times 10^{-13}$	$\mu\text{Ci/ml} \pm$	$7.81 \times 10^{-14}$	$2 \times 10^{-13}$
Uranium release rate	$7.19 \times 10^{-3}$	Ci/qtr		
Uranium release rate	10640	grams/qtr	or	10.6 kg/qtr

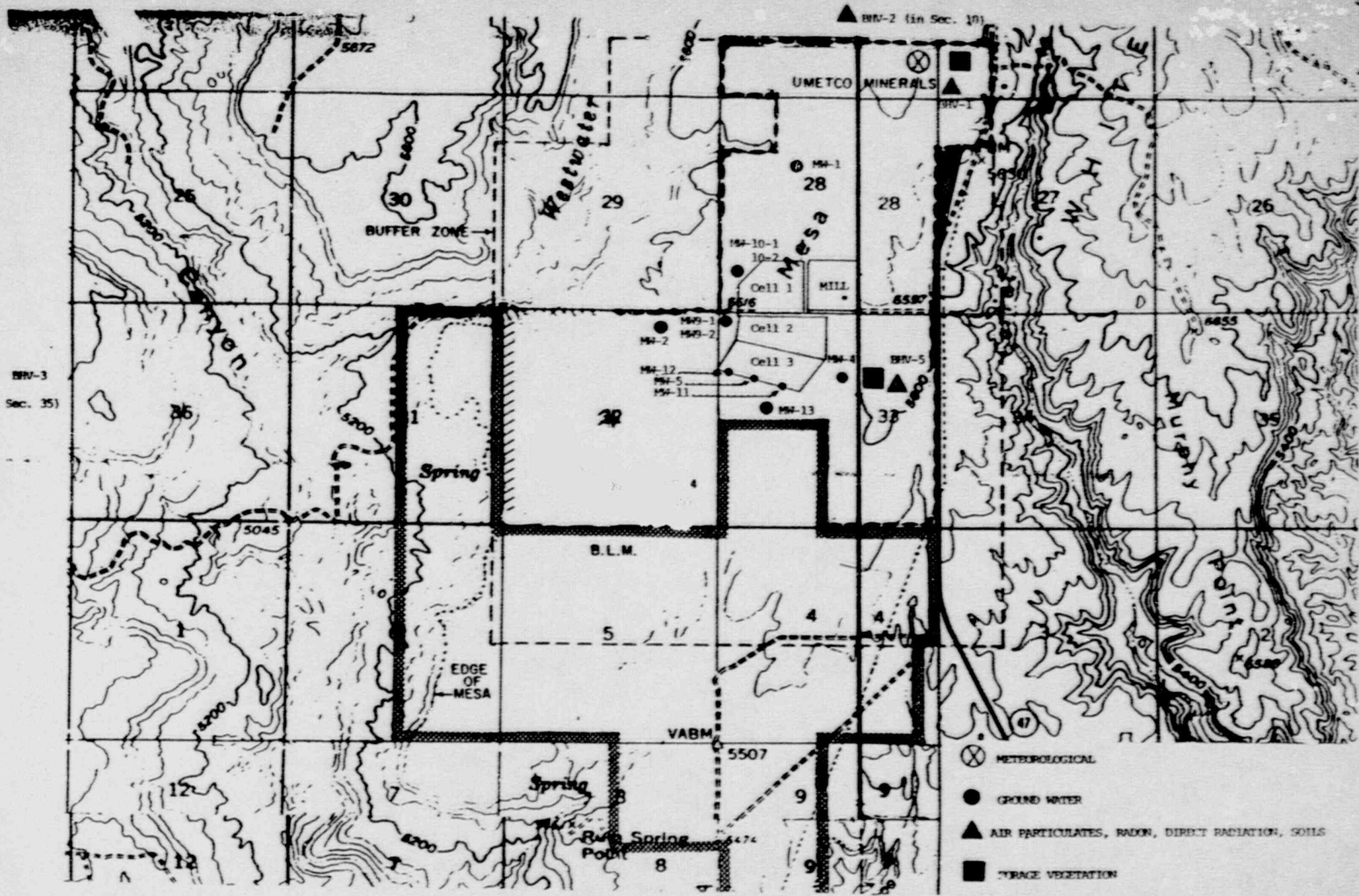


Figure 1

TABLE 1

UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
AMBIENT RADON LEVELS  
pCi/Liter

PERIOD ENDING	BHV-1	BHV-2	BHV-3	BHV-4	BHV-5	BHV-6 Duplicate
09-Sep-86	0.56	0.57	0.13	0.60	0.72	0.37
21-Dec-86	0.5	0.6	0.4	0.6	1.1	0.4
23-Mar-87	0.4	0.4	0.2	0.6	1.0	0.4
18-Jun-87	1.7	1.9	1.7	1.7	2.0	3.0
09-Sep-87	0.6	0.7	0.3	0.5	0.7	0.7
31-Dec-87	1.4	0.8	0.7	0.7	1.3	0.6
21-Apr-87	0.3	0.5	0.5	0.6	0.6	0.4
27-Jun-88	0.4	0.6	0.7	1.0	1.2	1.0
03-Oct-88	1.0	0.4	0.2	0.6	1.4	0.5
03-Jan-89	0.6	0.6	0.6	0.9	2.3	1.7
04-Apr-89	1.3	3.1	0.5	0.7	2.5	1.0
30-Jun-89	0.6	1.3	0.6	3.0	3.3	1.1
MEAN	0.78	0.96	0.54	0.96	1.51	0.93
Count	12	12	12	12	12	12
Std Dev	0.457	0.801	0.414	0.720	0.839	0.764

Note: Vendor laboratories were switched third quarter, 1986.

TABLE 2

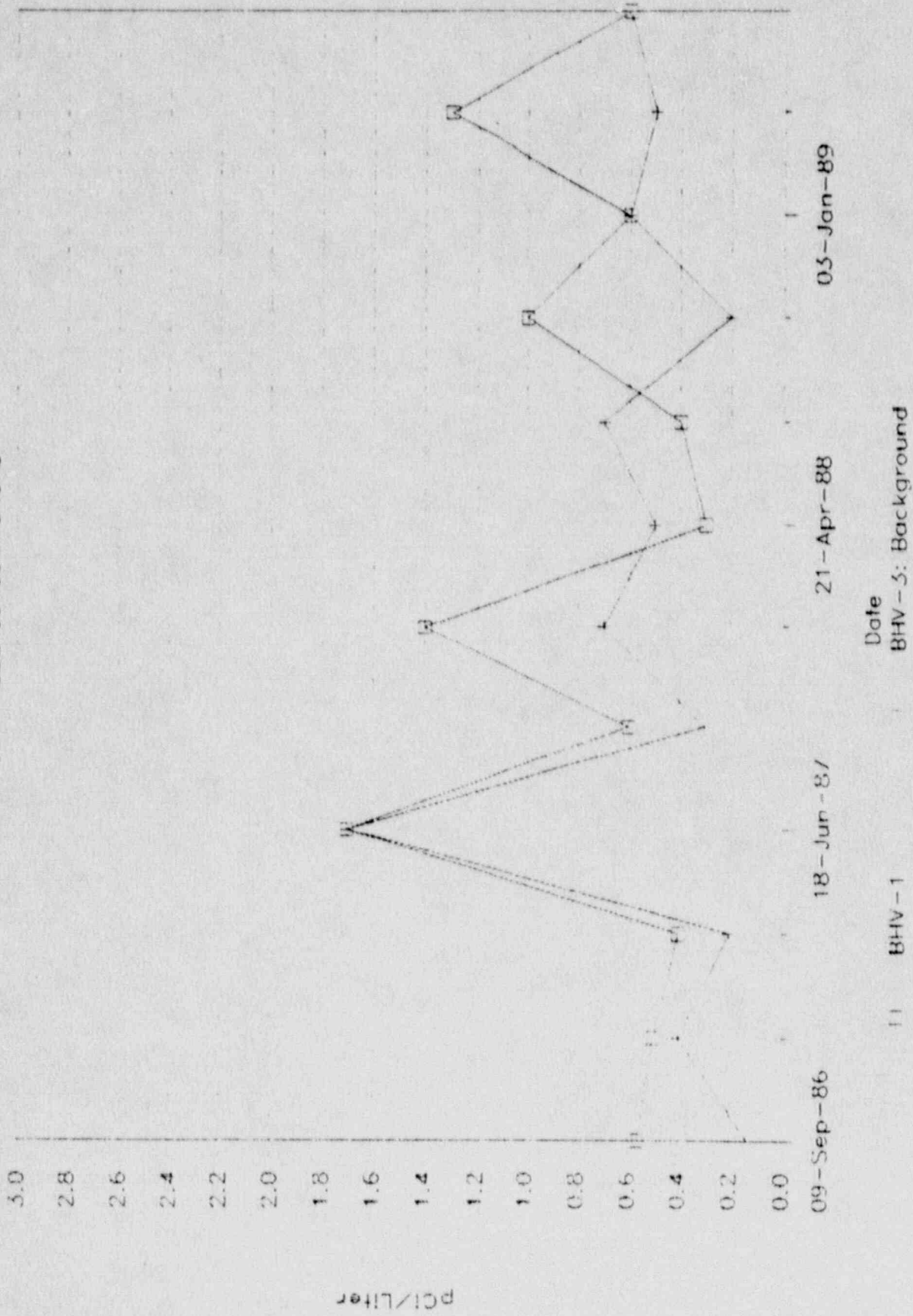
UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
BHV-2 versus BHV-6

## Regression Output:

Constant	0
Std Err of Y Est	0.7769
R Squared	0.0583
No. of Observations	12
Degrees of Freedom	11
X Coefficient(s)	0.8224
Std Err of Coef.	0.1895

# UMETCO MINERALS CORPORATION

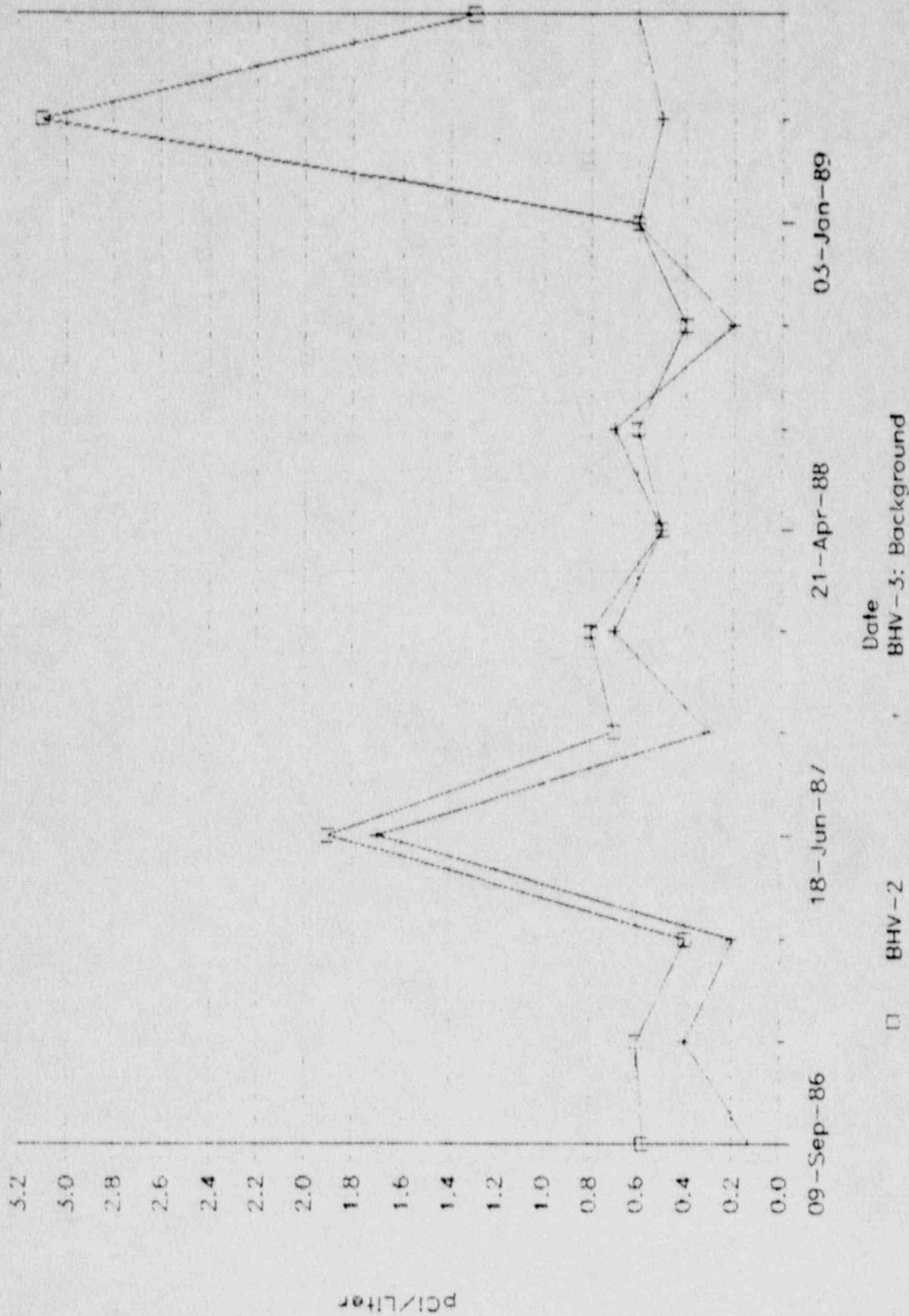
Radon-222 Concentrations



Graph 1

# UMETCO MINERALS CORPORATION

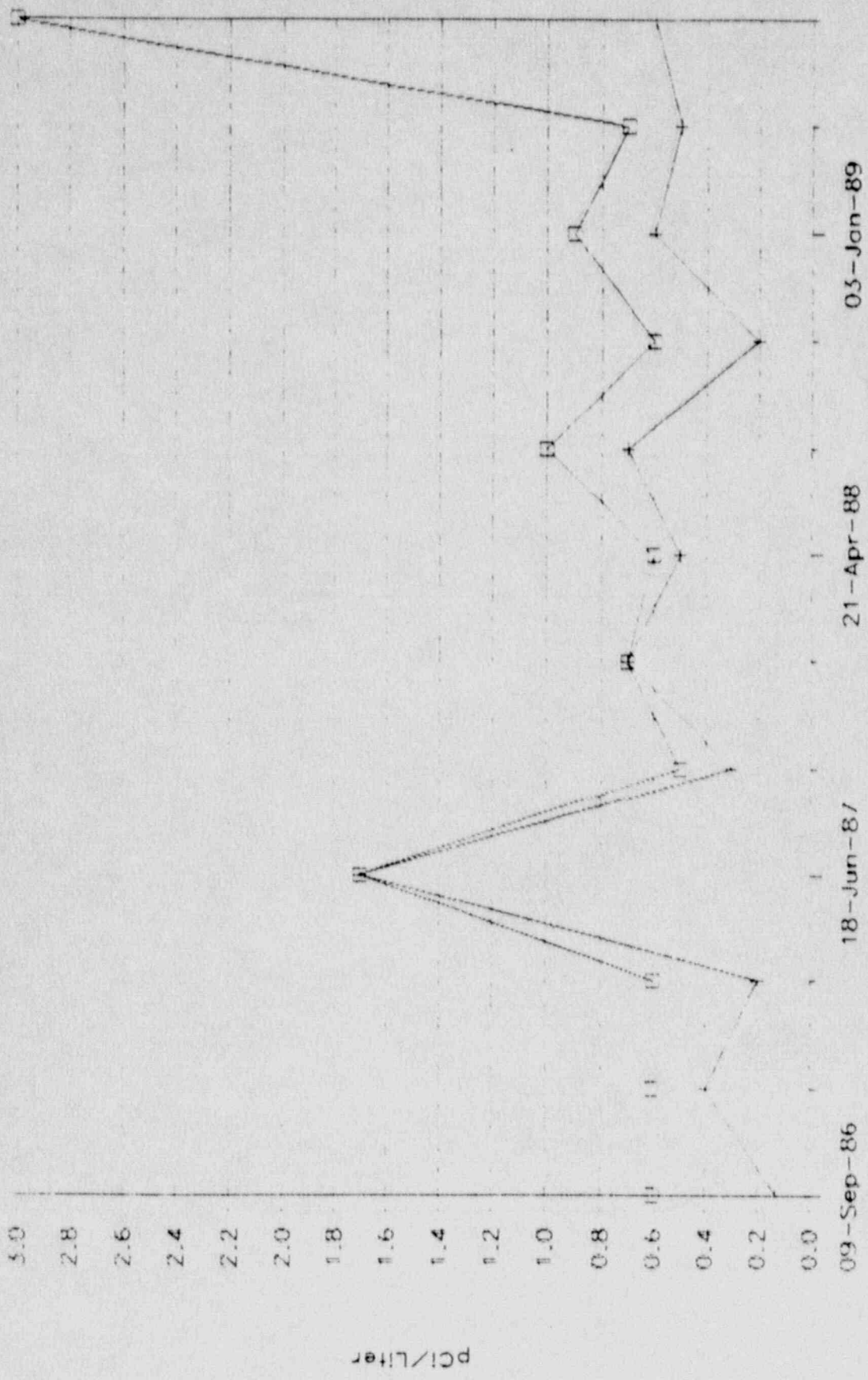
Radon-222 Concentrations



Graph 2

# UMETCO MINERALS CORPORATION

Radon-222 Concentrations



Date  
 BHV-5: Background

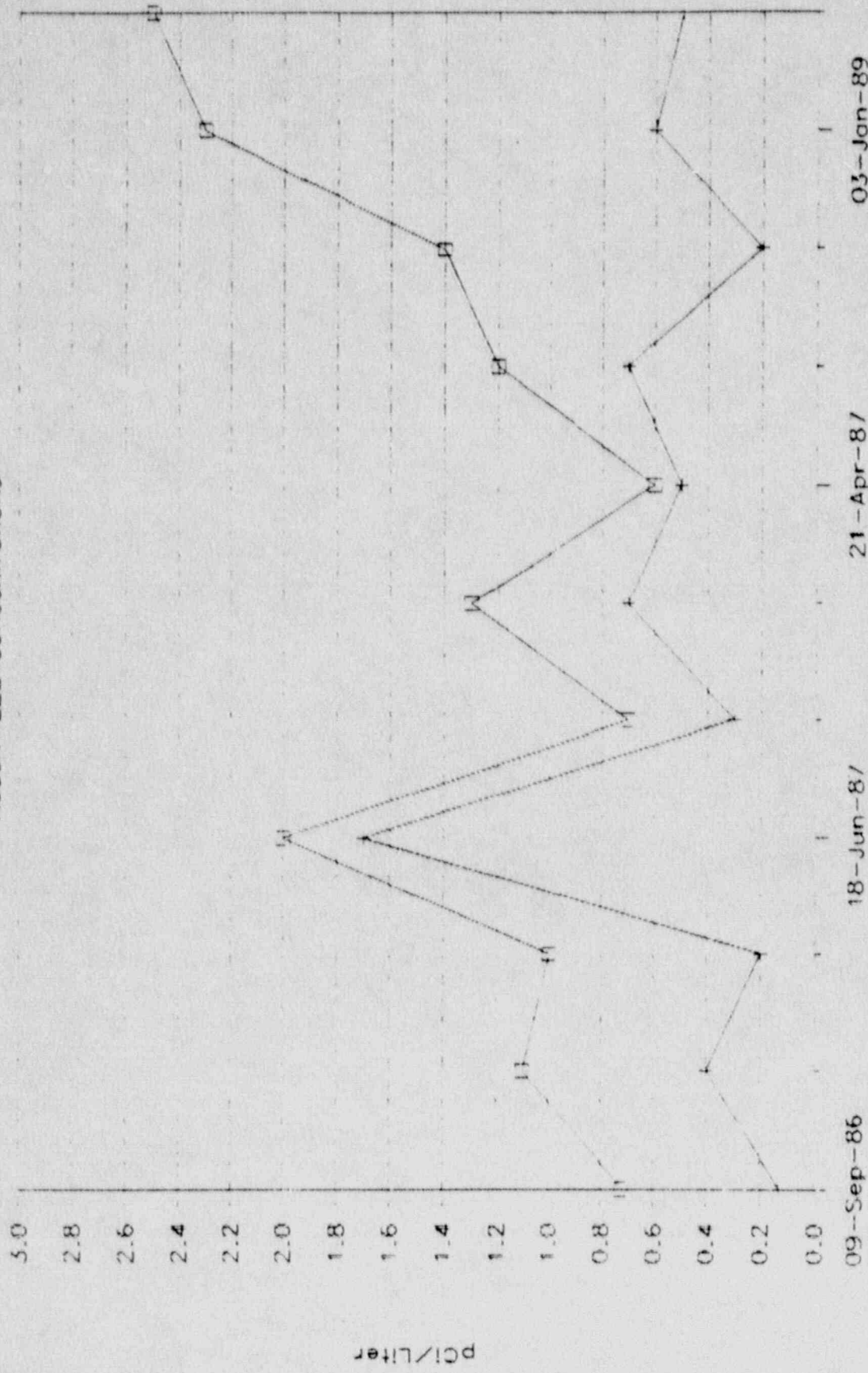
BHV-4

Graph 3



# UMETCO MINERALS CORPORATION

Radon-222 Concentrations

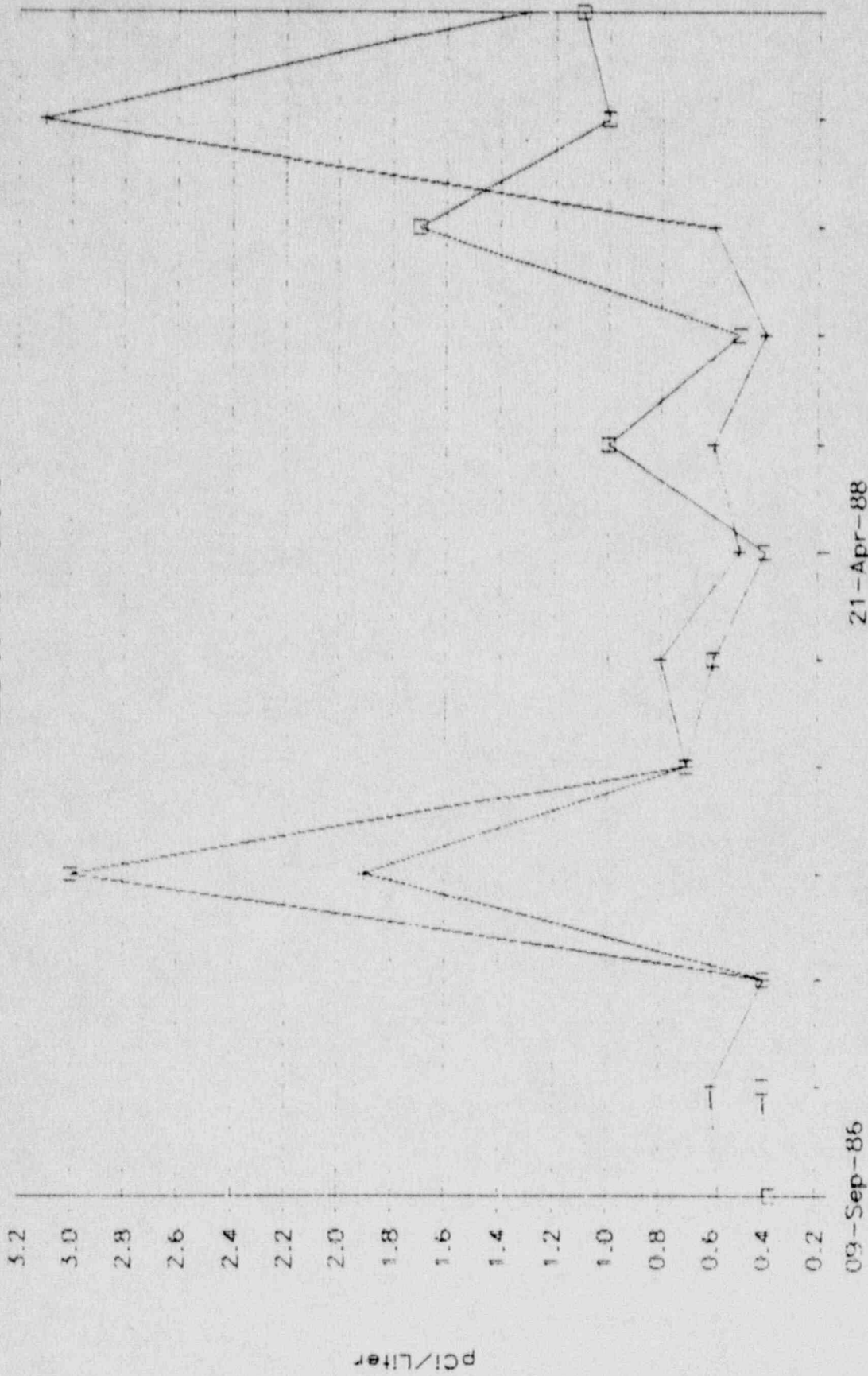


Date  
 BHV-5: Background

Graph 4

# UMETCO MINERALS CORPORATION

Radon-222 Concentrations

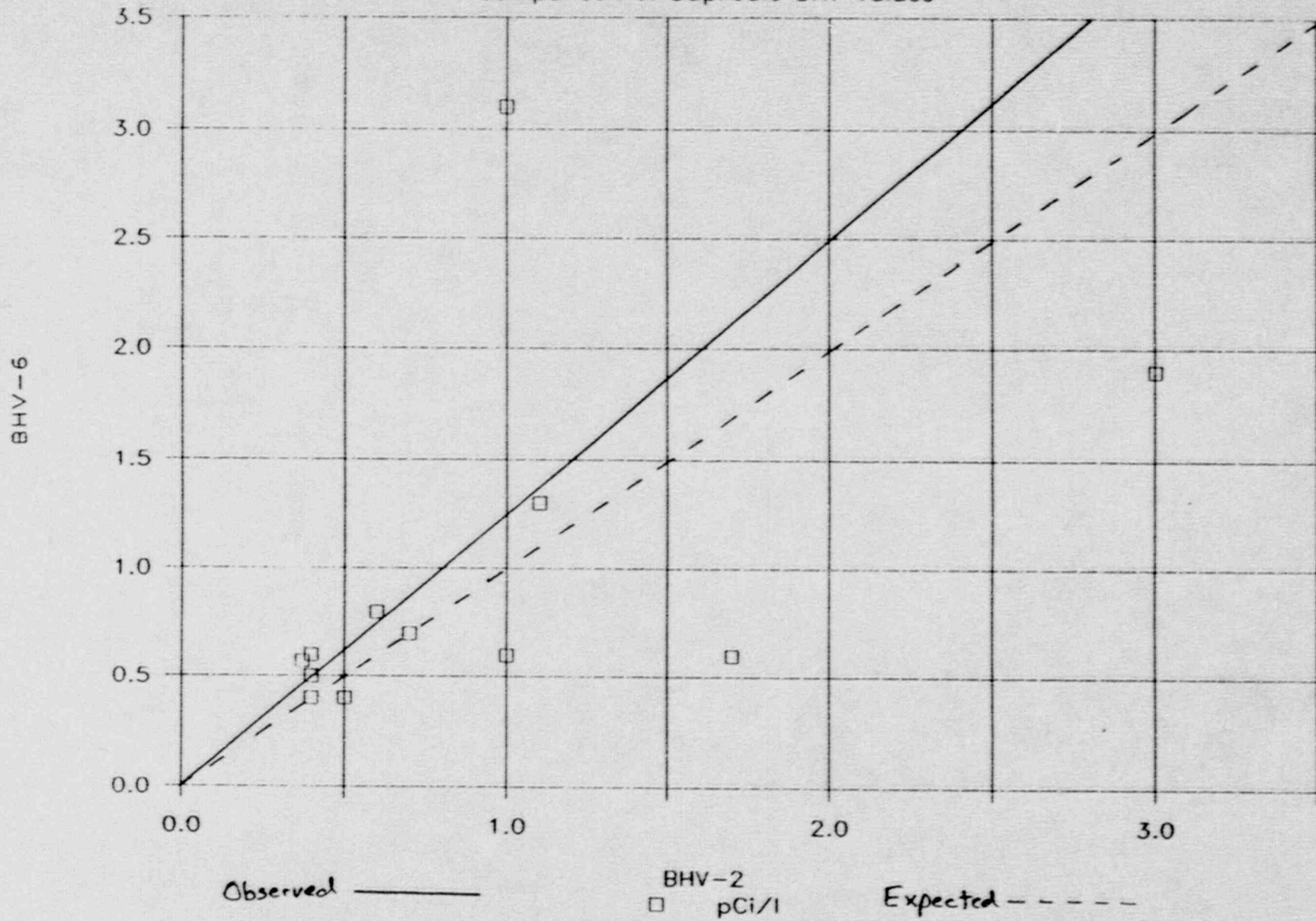


Legend: BHV-6: Duplicate      Date: 21-Apr-88      BHV-2

Graph 5

# UMETCO MINERALS CORPORATION

## Comparison of Duplicate BHV Values



BHV-2  
□ pCi/l

Graph 6

TABLE 3

UMETCO MINERALS CORPORATION  
WHITE MESA MILL

DIRECT RADIATION  
MR/QTR

Location: BHV-1, Meterological Station

Period Ending	Total Exposure Rate	Counting Error	Net Exposure Rate	Net Error	Total Rate Mr/week	Counting Error Mr/week
30-Sep-81	23.66	0.00	3.90	0.00	1.82	
31-Dec-81	25.87	0.00	-2.21	0.00	1.99	
31-Mar-82	26.00	0.00	1.69	0.00	2.00	
30-Jun-82	24.05	0.00	-3.64	0.00	1.85	
01-Oct-82	25.35	0.00	3.12	0.00	1.95	
03-Jan-83	30.55	0.00	4.94	0.00	2.35	
04-Apr-83	22.49	0.00	-1.82	0.00	1.73	
05-Jul-83	32.11	0.00	7.54	0.00	2.47	
03-Oct-83	20.54	0.00	-1.43	0.00	1.58	
03-Jan-84	22.75	0.00	-0.91	0.00	1.75	
03-Apr-84	24.70	0.00	1.56	0.00	1.90	
02-Jul-84	22.49	0.00	1.69	0.00	1.73	
02-Oct-84	19.89	2.21	1.82	4.37	1.53	0.170
02-Jan-85	21.58	3.12	1.30	4.89	1.66	0.240
04-Apr-85	23.40	10.01	1.04	10.70	1.80	0.770
08-Jul-85	16.90	6.50	4.55	7.58	1.30	0.500
07-Oct-85	20.28	1.58	1.56	2.49	1.56	0.122
17-Jan-86	23.79	5.89	1.43	6.32	1.83	0.453
22-Apr-86	23.92	-0.70	0.91	0.92	1.84	-0.054
21-Jul-86	17.94	26.40	-6.37	30.31	1.38	2.031
03-Nov-86	19.63	0.09	-2.99	4.59	1.51	0.007
03-Feb-87	20.67	0.05	1.30	1.55	1.59	0.004
01-Apr-87	22.75	1.92	-8.19	2.09	1.75	0.148
01-Jul-87	Sample lost in the field					
09-Oct-87	17.94	0.03	1.95	1.07	1.38	0.002
14-Jan-88	20.80	1.58	-0.13	1.63	1.6	0.122
19-Apr-88	25.61	2.32	1.43	3.43	1.97	0.178
15-Jul-88	26.52	7.37	1.69	8.28	2.04	0.567
11-Oct-88	20.02	5.81	-0.39	5.81	1.54	0.447
19-Jan-89	23.14	2.61	-1.17	5.30	1.78	0.201
08-May-89	30.42	5.61	0.26	7.14	2.34	0.432
21-Jul-89	27.43	6.73	1.17	6.95	2.11	0.518

TABLE 4

UMETCO MINERALS CORPORATION  
WHITE MESA MILL

DIRECT RADIATION  
MR/QTR

Location: BHV-2, Nearsset Residence

Period Ending	Total Exposure Rate	Counting Error	Net Exposure Rate	Net Error	Total Rate Mr/week	Counting Error Mr/week
30-Sep-81	19.11	0.00	-0.65	0.00	1.47	
31-Dec-81	24.57	0.00	-3.51	0.00	1.89	
31-Mar-82	27.04	0.00	2.73	0.00	2.08	
30-Jun-82	23.66	0.00	-4.03	0.00	1.82	
01-Oct-82	22.88	0.00	0.65	0.00	1.76	
03-Jan-83	25.61	0.00	0.00	0.00	1.97	
04-Apr-83	22.88	0.00	-1.43	0.00	1.76	
05-Jul-83	23.66	0.00	-0.91	0.00	1.82	
03-Oct-83	22.75	0.00	0.78	0.00	1.75	
03-Jan-84	29.38	0.00	5.72	0.00	2.26	
03-Apr-84	23.92	0.00	0.78	0.00	1.84	
02-Jul-84	20.02	0.00	-0.78	0.00	1.54	
02-Oct-84	18.72	3.12	0.65	4.89	1.44	0.24
02-Jan-85	22.23	3.38	1.95	5.06	1.71	0.26
04-Apr-85	9.10	3.77	-13.26	5.33	0.70	0.29
07-Jul-85	15.47	5.72	3.12	6.92	1.19	0.44
07-Oct-85	21.32	-0.12	2.60	1.93	1.64	-0.01
17-Jan-86	21.97	8.89	-0.39	9.18	1.69	0.68
22-Apr-86	29.51	9.90	6.50	9.92	2.27	0.76
21-Jul-86	25.35	7.30	1.04	16.59	1.95	0.56
03-Nov-86	22.88	0.09	0.26	4.59	1.76	0.01
03-Feb-87	29.25	-0.75	9.88	1.72	2.25	-0.06
01-Apr-87	22.88	0.82	-8.06	1.16	1.76	0.06
01-Jul-87	30.29	4.61	5.20	8.65	2.33	0.35
09-Oct-87	17.81	3.73	1.82	3.88	1.37	0.29
14-Jan-88	21.19	4.08	0.26	4.10	1.63	0.31
19-Apr-88	27.82	4.72	3.64	5.35	2.14	0.36
15-Jul-88	25.48	6.67	0.65	7.66	1.96	0.51
11-Oct-88	25.35	8.51	4.94	8.51	1.95	0.65
19-Jan-89	24.44	5.21	0.13	6.96	1.88	0.40
08-May-89	32.37	2.61	2.21	5.12	2.49	0.20
21-Jul-89	27.95	2.33	1.69	2.90	2.15	0.18

TABLE 5

UMETCO MINERALS CORPORATION  
WHITE MESA MILLDIRECT RADIATION  
MR/QTR

Location: BHV-3, Black Mesa (Background)

Period Ending	Total Exposure Rate	Counting Error	Net Exposure Rate	Net Error	Total Rate Mr/week	Counting Error Mr/week
30-Sep-81	19.76	0.00	0.00	0.00	1.52	
31-Dec-81	28.08	0.00	0.00	0.00	2.16	
31-Mar-82	24.31	0.00	0.00	0.00	1.87	
30-Jun-82	27.69	0.00	0.00	0.00	2.13	
01-Oct-82	22.23	0.00	0.00	0.00	1.71	
03-Jan-83	25.61	0.00	0.00	0.00	1.97	
04-Apr-83	24.31	0.00	0.00	0.00	1.87	
05-Jul-83	24.57	0.00	0.00	0.00	1.89	
03-Oct-83	21.97	0.00	0.00	0.00	1.69	
03-Jan-84	23.66	0.00	0.00	0.00	1.82	
03-Apr-84	23.14	0.00	0.00	0.00	1.78	
02-Jul-84	20.80	0.00	0.00	0.00	1.60	
02-Oct-84	18.07	3.77	0.00	5.33	1.39	0.29
02-Jan-85	20.28	3.77	0.00	5.33	1.56	0.29
04-Apr-85	22.36	3.77	0.00	5.33	1.72	0.29
07-Jul-85	12.35	3.90	0.00	5.52	0.95	0.30
07-Oct-85	18.72	1.93	0.00	2.73	1.44	0.15
17-Jan-86	22.36	2.29	0.00	3.24	1.72	0.18
22-Apr-86	23.01	0.60	0.00	0.85	1.77	0.05
21-Jul-86	24.31	14.90	0.00	21.07	1.87	1.15
03-Nov-86	22.62	4.59	0.00	6.49	1.74	0.35
03-Feb-87	19.37	1.55	0.00	2.19	1.49	0.12
01-Apr-87	30.94	0.82	0.00	1.16	2.38	0.06
01-Jul-87	25.09	7.32	0.00	10.35	1.93	0.56
09-Oct-87	15.99	-1.07	0.00	1.51	1.23	-0.08
14-Jan-88	20.93	-0.42	0.00	0.59	1.61	-0.03
19-Apr-88	24.18	2.52	0.00	3.56	1.86	0.19
15-Jul-88	24.83	3.77	0.00	5.33	1.91	0.29
11-Oct-88	20.41	0.21	0.00	0.30	1.57	0.02
19-Jan-89	24.31	4.61	0.00	6.52	1.87	0.35
08-May-89	30.16	4.41	0.00	6.24	2.32	0.34
21-Jul-89	26.26	1.73	0.00	2.45	2.02	0.13

TABLE 6

UMETCO MINERALS CORPORATION  
WHITE MESA MILLDIRECT RADIATION  
MR/QTR

Location: BHV-4, South Tailings Area

Period Ending	Total Exposure Rate	Counting Error	Net Exposure Rate	Net Error	Total Rate Mr/week	Counting Error Mr/week
30-Sep-81	18.33	0.00	-1.43	0.00	1.41	
31-Dec-81	25.61	0.00	-2.47	0.00	1.97	
31-Mar-82		0.00	-24.31	0.00	0.00	
30-Jun-82		0.00	-27.69	0.00	0.00	
01-Oct-82	27.43	0.00	5.20	0.00	2.11	
03-Jan-83	37.31	0.00	11.70	0.00	2.87	
04-Apr-83	28.08	0.00	3.77	0.00	2.16	
05-Jul-83	25.09	0.00	0.52	0.00	1.93	
03-Oct-83	26.65	0.00	4.68	0.00	2.05	
03-Jan-84	31.46	0.00	7.80	0.00	2.42	
03-Apr-84	26.65	0.00	3.51	0.00	2.05	
02-Jul-84	26.39	0.00	5.59	0.00	2.03	
02-Oct-84	18.98	4.94	0.91	6.21	1.46	0.38
02-Jan-85	21.45	1.56	1.17	4.08	1.65	0.12
04-Apr-85	24.31	1.69	1.95	4.13	1.87	0.13
07-Jul-85	13.52	4.42	1.17	5.89	1.04	0.34
07-Oct-85	21.45	0.68	2.73	2.04	1.65	0.05
17-Jan-86	24.05	6.69	1.69	7.07	1.85	0.51
22-Apr-86	28.21	23.40	5.20	23.41	2.17	1.80
21-Jul-86	25.61	3.60	1.30	15.33	1.97	0.28
03-Nov-86	24.18	2.69	1.56	5.32	1.86	0.21
03-Feb-87	23.27	2.55	3.90	2.98	1.79	0.20
01-Apr-87	22.36	2.12	-8.58	2.27	1.72	0.16
01-Jul-87	26.26	14.71	1.17	16.43	2.02	1.13
09-Oct-87	20.15	-0.87	4.16	1.38	1.55	-0.07
14-Jan-88	22.36	2.68	1.43	2.71	1.72	0.21
19-Apr-88	26.13	-1.68	1.95	3.03	2.01	-0.13
15-Jul-88	27.69	1.77	2.86	4.16	2.13	0.14
11-Oct-88	23.40	2.81	2.99	2.82	1.80	0.22
19-Jan-89	24.18	3.91	-0.13	6.04	1.86	0.30
08-May-89	32.50	0.61	2.34	4.45	2.5	0.05
21-Jul-89	29.64	-0.57	3.38	1.82	2.28	-0.04

TABLE 7

UMETCO MINERALS CORPORATION  
WHITE MESA MILLDIRECT RADIATION  
MR/QTR

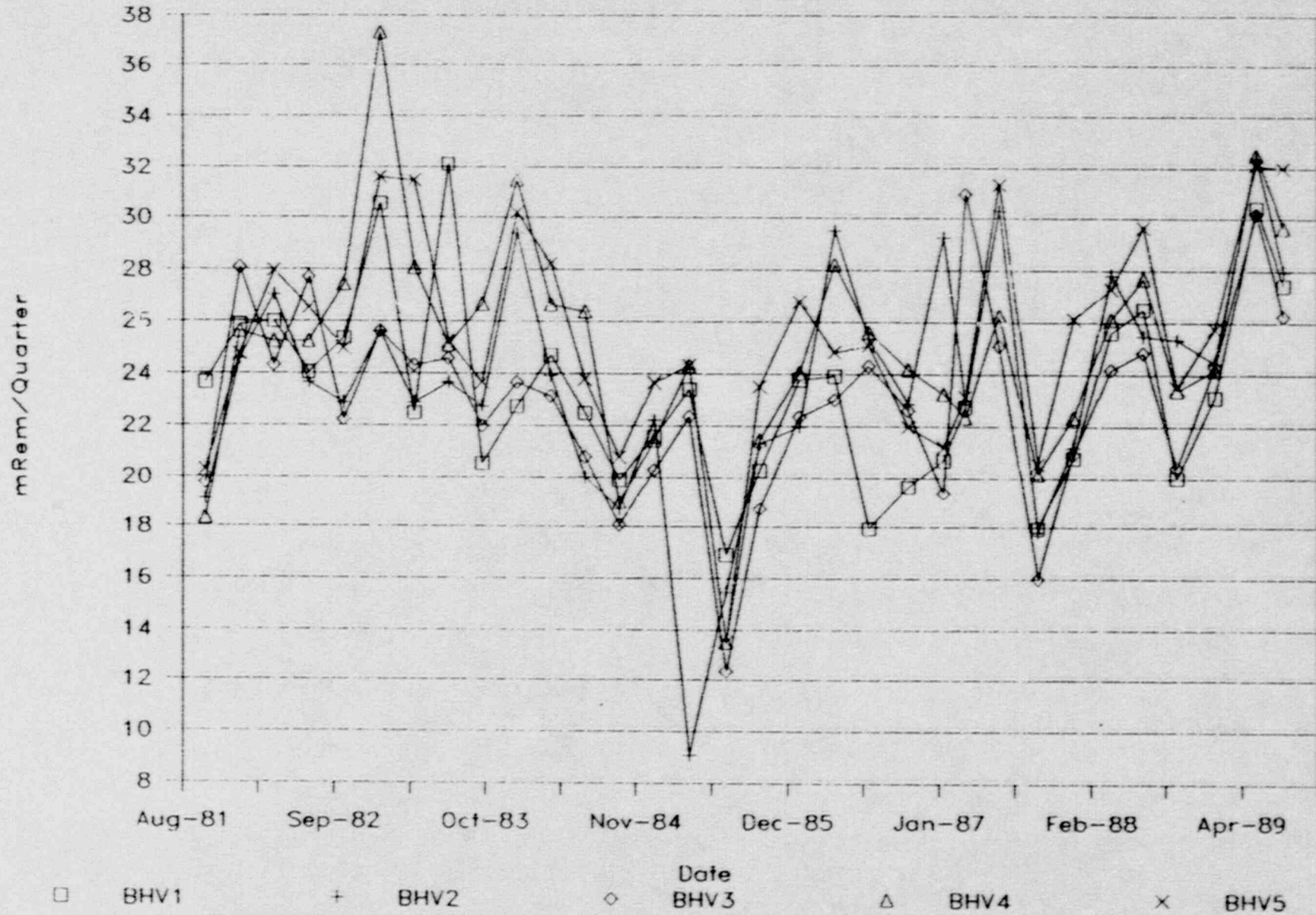
Location: BHV-5, East Tailings Area

Period Ending	Total Exposure Rate	Counting Error	Net Exposure Rate	Net Error	Total Rate Mr/week	Counting Error Mr/week
30-Sep-81	20.28	0.00	0.52	0.00	1.56	
31-Dec-81		0.00	-28.08	0.00	0.00	
31-Mar-82	27.95	0.00	3.64	0.00	2.15	
30-Jun-82	26.52	0.00	-1.17	0.00	2.04	
01-Oct-82	24.96	0.00	2.73	0.00	1.92	
03-Jan-83	31.59	0.00	5.98	0.00	2.43	
04-Apr-83	31.46	0.00	7.15	0.00	2.42	
05-Jul-83	25.22	0.00	0.65	0.00	1.94	
03-Oct-83	23.66	0.00	1.69	0.00	1.82	
03-Jan-84	30.16	0.00	6.50	0.00	2.32	
03-Apr-84	28.21	0.00	5.07	0.00	2.17	
02-Jul-84	23.79	0.00	2.99	0.00	1.83	
02-Oct-84	20.80	1.56	2.73	4.08	1.60	0.12
02-Jan-85	23.66	4.03	3.38	5.52	1.82	0.31
04-Apr-85	24.31	6.50	1.95	7.51	1.87	0.50
07-Jul-85	13.52	2.99	1.17	4.91	1.04	0.23
07-Oct-85	23.53	-0.92	4.81	2.14	1.81	-0.07
17-Jan-86	26.78	9.09	4.42	9.37	2.06	0.70
22-Apr-86	24.83	8.40	1.82	8.52	1.91	0.65
21-Jul-86	25.09	1.80	0.78	15.01	1.93	0.14
03-Nov-86	21.97	0.29	-0.65	4.60	1.69	0.02
03-Feb-87	21.19	1.65	1.82	2.26	1.63	0.13
01-Apr-87	23.14	9.52	-7.80	9.56	1.78	0.73
01-Jul-87	31.33	13.11	6.24	15.02	2.41	1.01
09-Oct-87	20.54	2.23	4.55	2.47	1.58	0.17
14-Jan-88	26.13	-1.22	5.20	1.29	2.01	-0.09
19-Apr-88	27.30	3.82	3.12	4.58	2.10	0.29
15-Jul-88	29.64	2.07	4.81	4.30	2.28	0.16
11-Oct-88	23.53	1.51	3.12	1.52	1.81	0.12
19-Jan-89	25.74	6.21	1.43	7.73	1.98	0.48
08-May-89	32.11	4.91	1.95	6.60	2.47	0.38
21-Jul-89	31.98	0.93	5.72	1.96	2.46	0.07



# UMETCO MINERALS CORPORATION

## Ambient Gamma Levels



Graph 7

TABLE 8

UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
FORAGE RADIONUCLIDE DATA  
NORTH EAST OF MILL

SAMPLED DATE	Ra-226 VALUE uCi/Kg	Ra-226 ERROR uCi/Kg	LLD uCi/Kg 5.00E-08	Pb-210 VALUE uCi/Kg	Pb-210 ERROR uCi/Kg	LLD uCi/Kg 1.00E-06
27-Aug-81	3.90E-04	1.0E-05	5.0E-08	1.10E-03	1.0E-04	1.0E-06
20-Oct-81	1.40E-04	1.0E-05	5.0E-08	6.80E-04	8.0E-05	1.0E-06
15-Apr-82	1.31E-04	1.3E-05	1.0E-06	4.90E-04	7.0E-05	8.0E-05
01-Jul-82	1.60E-04	1.0E-05	5.0E-08	8.00E-04	1.7E-04	1.0E-07
30-Nov-82	2.67E-06	1.1E-06	1.0E-06	1.08E-04	9.0E-06	1.0E-05
13-Apr-83	9.36E-05	6.2E-06	8.0E-09	4.97E-04	9.3E-05	1.0E-04
01-Jul-83	1.12E-04	1.2E-05	6.0E-06	1.84E-04	1.2E-05	1.0E-06
30-Jan-84	1.09E-04	8.0E-06	4.0E-06	7.80E-04	6.2E-05	6.0E-05
28-Jun-84	3.47E-04	1.2E-05	2.0E-09	3.75E-03	1.6E-04	4.0E-08
14-Nov-84	5.61E-04	2.0E-04	2.0E-07	7.82E-03	3.3E-04	7.0E-08
27-Mar-85	1.05E-03	3.0E-05	2.0E-06	3.22E-03	1.4E-04	2.0E-05
15-Jul-85	8.20E-05	7.0E-06	3.0E-06	7.70E-04	1.3E-04	2.0E-04
09-Oct-85	1.15E-04	1.0E-05	3.0E-06	5.10E-04	3.0E-05	2.0E-05
24-Mar-86	5.72E-04	2.1E-05	4.0E-06	2.49E-03	1.0E-04	1.0E-05
10-Jul-86	5.01E-04	1.3E-05	3.0E-06	1.57E-03	1.7E-03	2.0E-04
18-Dec-86	8.70E-04	5.0E-05	3.0E-06	6.80E-04	3.0E-05	3.0E-06
20-Apr-87	5.90E-04	7.0E-05	5.0E-08	1.50E-03	1.0E-04	1.0E-06
05-Jun-87	1.60E-04	3.0E-05	5.0E-08	9.50E-04	4.0E-05	1.0E-06
22-Dec-87	2.10E-04	4.0E-05	5.0E-08	1.70E-03	1.0E-04	1.0E-06
19-Apr-88	4.50E-04	7.0E-05	5.0E-08	1.40E-03	1.0E-04	1.0E-06
28-Jul-88	3.20E-05	2.2E-05	5.0E-08	1.50E-04	4.4E-04	1.0E-06
07-Apr-89	5.60E-04	4.0E-05	***	1.10E-03	1.0E-01	***
06-Jun-89	1.50E-04	2.0E-05	***	2.30E-04	2.0E-05	***
# OBSERVED	23		23	23		23
MINIMUM	2.67E-06		2.00E-09	1.08E-04		4.00E-08
MAXIMUM	1.05E-03		6.00E-06	7.82E-03		2.00E-04
MEAN	3.21E-04		1.33E-06	1.41E-03		3.09E-05
STD. DEV.	2.74E-04		1.74E-06	1.65E-03		5.86E-05

TABLE 9

UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
FORAGE RADIONUCLIDE DATA  
NORTH WEST OF MILL

SAMPLED DATE	Ra-226 VALUE uCi/Kg	Ra-226 ERROR uCi/Kg	LLD uCi/Kg 5.00E-08	Pb-210 VALUE uCi/Kg	Pb-210 ERROR uCi/Kg	LLD uCi/Kg 1.00E-06
27-Aug-81	2.73E-03	5.0E-05	5.0E-08	7.10E-03	3.0E-04	1.0E-06
20-Oct-81	2.00E-04	1.0E-05	5.0E-08	8.30E-04	5.0E-05	1.0E-06
15-Apr-82	1.04E-04	9.0E-06	7.0E-06	6.40E-04	5.0E-05	4.0E-05
01-Jul-82	2.00E-05	1.0E-05	5.0E-08	2.20E-04	9.0E-05	1.0E-07
30-Nov-82	2.36E-06	9.5E-07	1.0E-06	8.00E-05	1.0E-05	1.0E-05
13-Apr-83	8.58E-05	1.4E-05	2.0E-08	3.53E-04	1.9E-05	1.0E-05
01-Jul-83	1.19E-04	1.1E-05	5.0E-06	1.58E-04	1.3E-05	1.0E-05
30-Jan-84	9.78E-05	7.0E-06	2.0E-06	2.16E-03	3.4E-04	3.0E-04
28-Jun-84	2.08E-04	1.0E-05	3.0E-09	1.60E-03	7.0E-05	3.0E-08
14-Nov-84	6.05E-04	1.6E-04	2.0E-07	2.58E-03	1.1E-04	3.0E-08
27-Mar-85	1.10E-04	8.0E-06	3.0E-06	8.63E-04	4.2E-05	3.0E-05
15-Jul-85	6.10E-05	6.0E-06	2.0E-06	5.40E-04	5.0E-05	5.0E-05
09-Oct-85	1.07E-04	6.0E-06	2.0E-06	3.80E-04	3.0E-05	2.0E-05
24-Mar-86	8.86E-04	1.8E-05	2.0E-06	4.40E-03	1.9E-04	3.0E-05
10-Jul-86	6.66E-04	1.8E-05	3.0E-06	4.78E-03	2.1E-04	6.0E-05
18-Dec-86	5.20E-04	1.0E-04	3.0E-06	1.70E-03	1.0E-04	6.0E-05
20-Apr-87	4.10E-04	1.0E-04	5.0E-08	1.60E-03	1.0E-04	1.0E-06
05-Jun-87	1.60E-04	3.0E-05	5.0E-08	5.50E-04	4.0E-05	1.0E-06
22-Dec-87	3.60E-04	5.0E-05	5.0E-08	1.80E-03	1.0E-04	1.0E-06
19-Apr-88	2.60E-04	5.0E-05	5.0E-08	1.90E-03	1.0E-04	1.0E-06
28-Jul-88	3.10E-05	1.9E-05	5.0E-08	1.60E-04	4.0E-05	1.0E-06
07-Apr-89	6.20E-04	5.0E-05	***	1.70E-03	1.0E-04	***
06-Jun-89	3.40E-04	3.0E-05	***	7.40E-04	3.0E-05	***
# OBSERVED	23		23	23		23
MINIMUM	2.36E-06		3.00E-09	8.00E-05		3.00E-08
MAXIMUM	2.73E-03		7.00E-06	7.10E-03		3.00E-04
MEAN	3.78E-04		1.33E-06	1.60E-03		2.73E-05
STD. DEV.	5.54E-04		1.83E-06	1.69E-03		6.14E-05

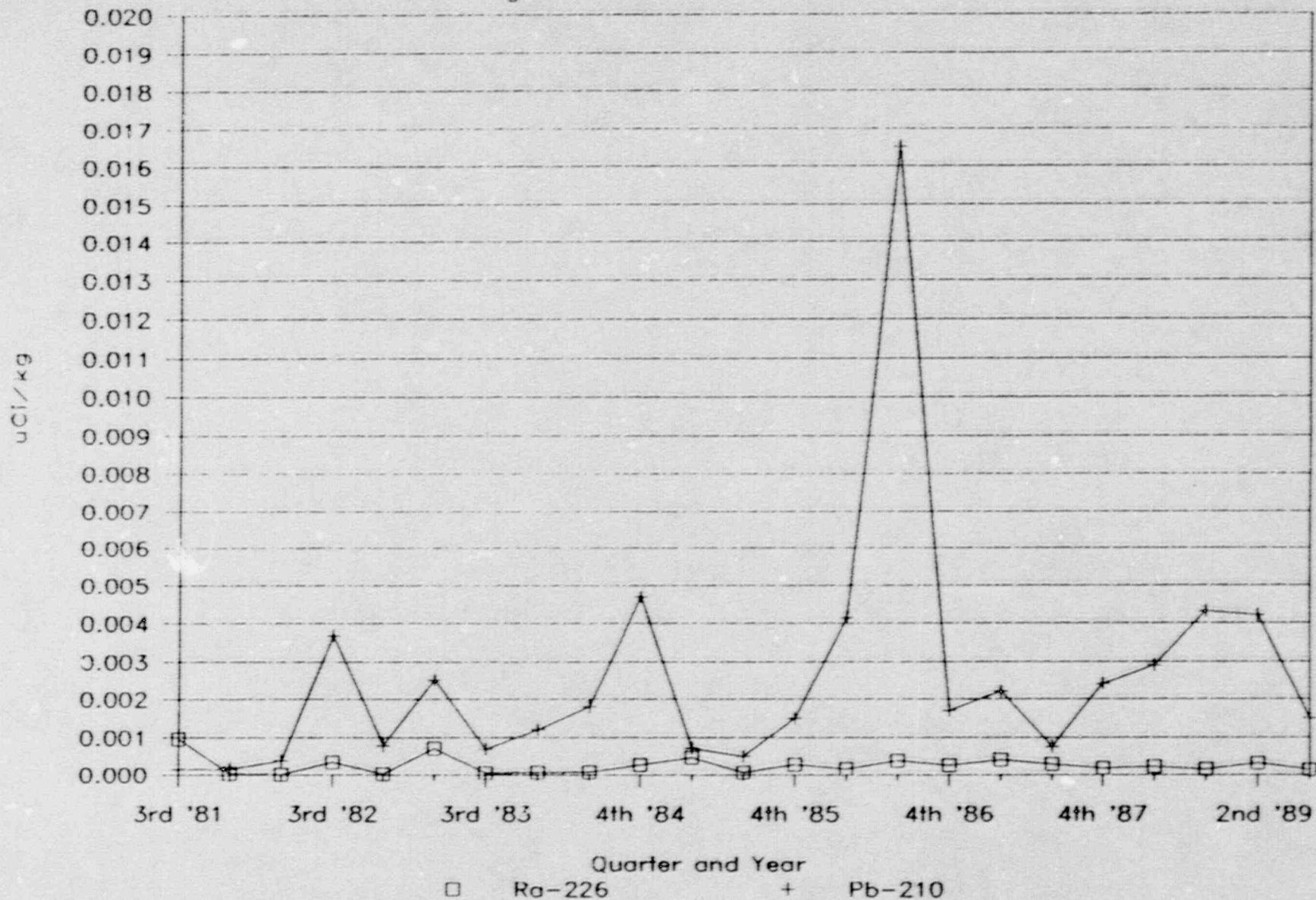
TABLE 10

UMETCO MINERALS CORPORATION  
 WHITE MESA MILL  
 FORAGE RADIONUCLIDE DATA  
 SOUTH WEST OF MILL

SAMPLED DATE	Ra-226	Ra-226	LLD	Pb-210	Pb-210	LLD
	VALUE uCi/Kg	ERROR uCi/Kg	uCi/Kg 5.00E-08	VALUE uCi/Kg	ERROR uCi/Kg	uCi/Kg 1.00E-06
27-Aug-81	9.50E-04	2.0E-05	5.0E-08	1.50E-04	1.0E-05	1.0E-06
21-Oct-81	3.00E-05	3.0E-06	5.0E-08	1.50E-04	2.0E-05	1.0E-06
15-Apr-82	1.37E-05	3.0E-06	3.0E-06	3.80E-04	4.0E-05	4.0E-05
01-Jul-82	3.40E-04	2.0E-05	5.0E-08	3.68E-03	2.7E-04	1.0E-07
30-Nov-82	1.75E-05	3.0E-06	2.0E-06	7.92E-04	4.0E-06	2.0E-05
14-Apr-83	7.13E-04	7.3E-05	9.0E-08	2.51E-03	3.0E-04	3.0E-04
01-Jul-83	5.39E-05	4.5E-06	2.0E-06	6.88E-04	4.3E-05	4.0E-05
30-Jan-84	6.40E-05	7.0E-06	4.0E-06	1.20E-03	1.0E-04	4.0E-05
28-Jun-84	8.27E-05	6.3E-06	3.0E-09	1.80E-03	1.0E-04	9.0E-08
14-Nov-84	2.72E-04	1.5E-04	2.0E-07	4.70E-03	7.2E-04	3.0E-07
27-Mar-85	4.73E-04	1.6E-07	3.0E-06	7.07E-04	3.6E-05	3.0E-05
15-Jul-85	6.60E-05	7.0E-06	4.0E-06	4.90E-04	3.0E-05	3.0E-05
09-Oct-85	2.83E-04	2.0E-05	7.0E-06	1.50E-03	1.0E-04	7.0E-05
24-Mar-86	1.57E-04	1.0E-05	4.0E-06	4.14E-03	1.8E-04	3.0E-05
10-Jul-86	3.78E-04	1.0E-05	2.0E-06	1.65E-02	7.0E-04	1.0E-04
18-Dec-86	2.60E-04	2.0E-05	2.0E-06	1.70E-03	1.0E-04	1.0E-04
20-Apr-87	4.10E-04	7.0E-05	5.0E-08	2.20E-03	1.0E-04	1.0E-06
05-Jun-87	2.90E-04	4.0E-05	5.0E-08	7.50E-04	5.0E-05	1.0E-06
22-Dec-87	1.80E-04	3.0E-05	5.0E-08	2.40E-03	1.0E-04	1.0E-06
19-Apr-88	2.30E-04	5.0E-05	5.0E-08	2.90E-03	1.0E-04	1.0E-06
28-Jul-88	1.50E-04	3.0E-05	5.0E-08	4.30E-03	2.0E-04	1.0E-06
07-Apr-89	3.10E-04	4.0E-05	***	4.20E-03	1.0E-04	***
06-Jun-89	1.30E-04	2.0E-05	***	1.50E-03	1.0E-04	***
# OBSERVED	23		23	23		23
MINIMUM	1.37E-05		3.00E-09	1.50E-04		9.00E-08
MAXIMUM	9.50E-04		7.00E-06	1.65E-02		3.00E-04
MEAN	2.55E-04		1.46E-06	2.58E-03		3.51E-05
STD. DEV.	2.23E-04		1.88E-06	3.28E-03		6.41E-05

# UMETCO MINERALS CORPORATION

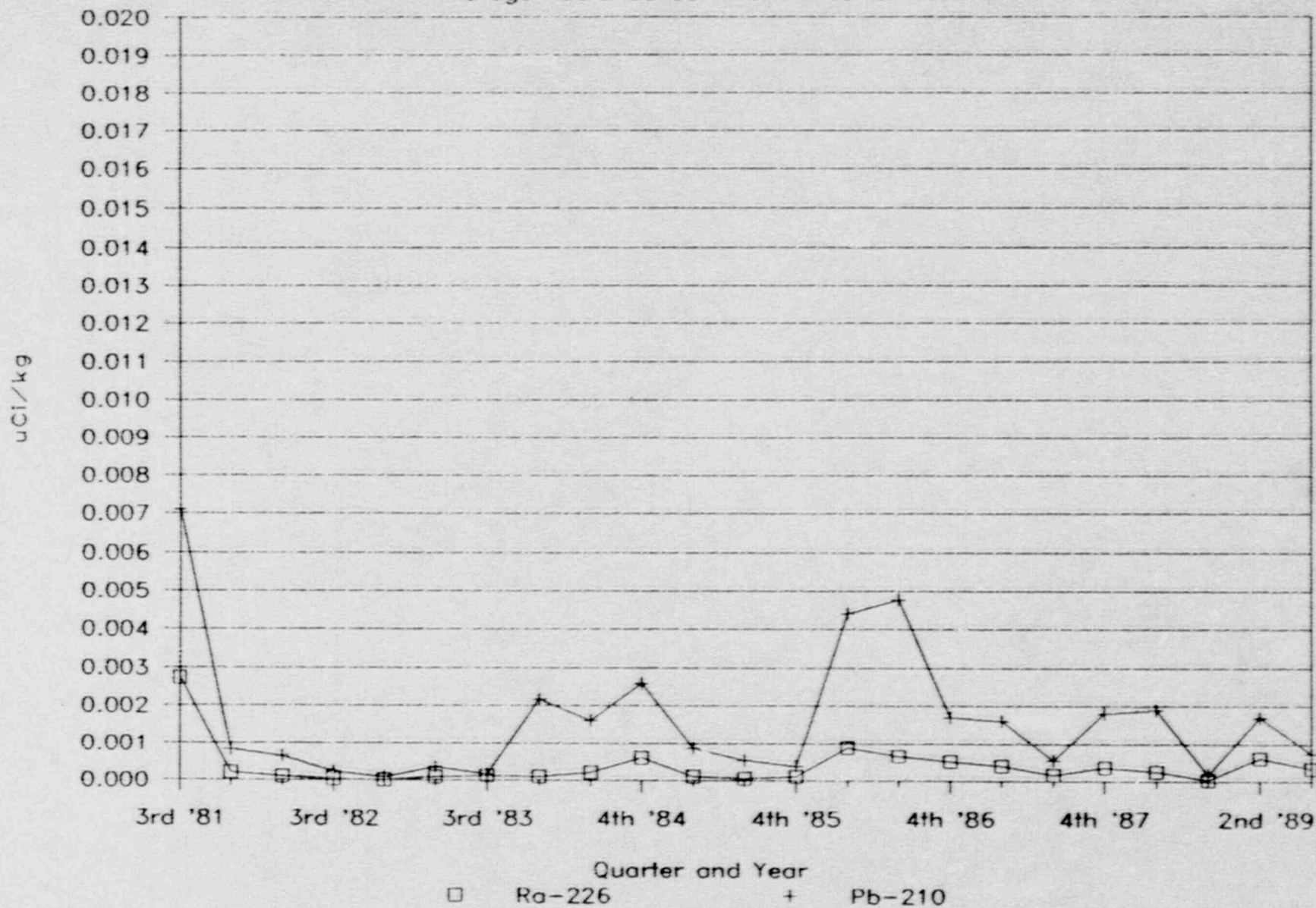
Forage Radionuclide- South West of Mill



Graph 8

# UMETCO MINERALS CORPORATION

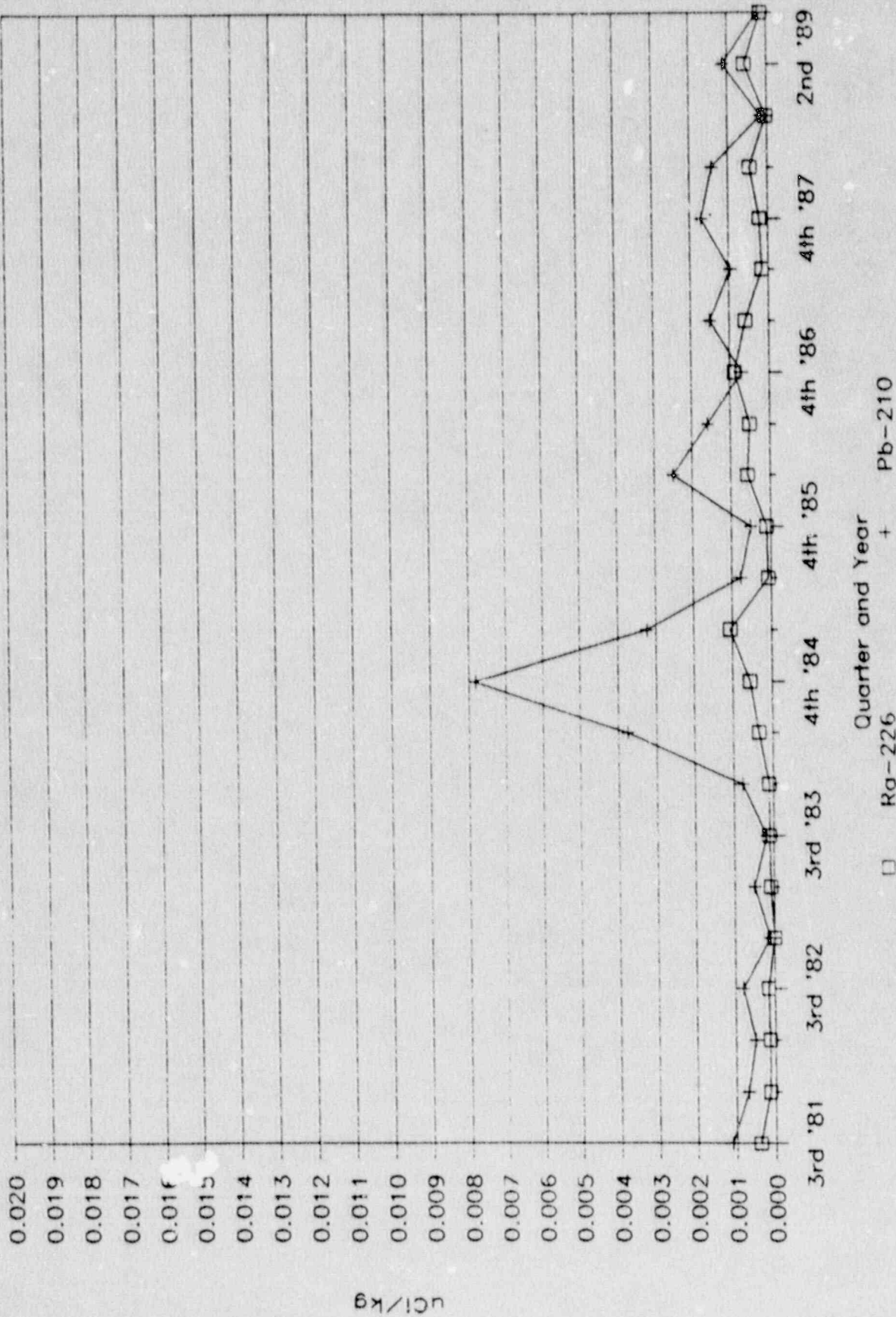
Forage Radionuclide- North West of Mill



Graph 9

# UMETCO MINERALS CORPORATION

Forage Radionuclide— North East of Mill



Graph 10

TABLE 11

URETECO MINERALS CORPORATION  
 WHITE MESA MILL  
 AMBIENT AIR RADIONUCLIDE PARTICULATES  
 UCI/mi  
 LOCATION: BHV-1

Current Quarter  
 % time operated 89.5% 87.4%  
 Air Volume, SCF x 1e6 5.10 4.48

PERIOD ENDING	URANIUM NAT.				THORIUM-230				RADIUM-226				LEAD-210			
	GROSS CONC.	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (2E-15)	% MPC	
28-Sep-81	2.35E-15	5E-17	4.70E-02	7.82E-16	2.75E-16	1E-16	2.61E-01	1.06E-15	1.24E-16	1E-16	5.30E-02	2.57E-14	1.52E-15	2E-15	3.21E-01	
14-Dec-81	1.56E-15	5E-17	3.12E-02	1.49E-15	2.10E-16	1E-16	4.97E-01	1.93E-15	3.34E-16	1E-16	9.65E-02	2.64E-14	2.28E-15	2E-15	3.30E-01	
29-Mar-82	2.16E-15	9E-16	4.32E-02	2.93E-15	1.15E-15	3E-15	9.77E-01	1.16E-15	5.78E-16	4E-15	5.80E-02	2.09E-14	2.76E-15	2E-14	2.61E-01	
30-Jun-82	4.69E-15	1E-16	9.38E-02	3.46E-15	3.28E-16	1E-16	1.15E+00	2.39E-15	4.77E-16	5E-16	1.19E-01	2.14E-14	3.70E-15	5E-15	2.68E-01	
27-Sep-82	4.45E-15	1E-16	8.90E-02	3.29E-15	4.76E-16	1E-16	1.10E+00	3.23E-15	4.02E-16	1E-16	1.62E-01	1.99E-14	3.60E-15	2E-15	2.49E-01	
03-Jan-83	4.39E-15	5E-17	8.78E-02	5.91E-16	1.34E-16	7E-17	1.97E-01	9.14E-16	1.03E-16	6E-17	4.57E-02	4.87E-14	2.70E-15	2E-15	6.09E-01	
04-Apr-83	7.51E-16	5E-17	1.50E-02	2.13E-16	3.05E-17	2E-17	7.10E-02	3.20E-16	7.63E-17	5E-17	1.60E-02	1.88E-14	1.00E-15	9E-16	2.35E-01	
30-Jun-83	2.68E-16	5E-17	5.36E-03	6.92E-16	1.32E-16	9E-17	2.31E-01	7.92E-16	1.32E-16	1E-16	3.96E-02	2.00E-14	2.00E-15	1E-15	2.50E-01	
03-Oct-83 Sample Lost																
03-Jan-84	2.87E-15	1E-16	5.74E-02	1.14E-16	4.98E-17	6E-17	3.80E-02	1.79E-16	7.69E-17	1E-16	8.95E-03	1.06E-14	1.99E-15	2E-15	1.33E-01	
02-Apr-84	1.59E-15	5E-17	3.18E-02	3.40E-16	1.01E-16	3E-17	1.13E-01	3.71E-16	7.80E-17	7E-17	1.86E-02	3.34E-14	1.69E-15	1E-15	4.18E-01	
02-Jul-84	3.10E-15	6E-17	6.20E-02	1.00E-15	3.59E-16	3E-16	3.33E-01	2.09E-15	2.29E-16	1E-16	1.05E-01	1.88E-14	1.10E-15	9E-16	2.35E-01	
01-Oct-84	6.42E-16	5E-17	1.28E-02	1.39E-16	1.17E-17	7E-17	4.63E-02	1.94E-16	1.11E-16	9E-17	9.70E-03	1.85E-14	1.39E-15	1E-15	2.31E-01	
02-Jan-85	5.06E-16	5E-16	1.01E-02	4.56E-16	2.26E-16	2E-16	1.52E-01	3.49E-16	1.32E-16	1E-16	1.75E-02	3.03E-14	1.17E-15	7E-16	3.79E-01	
01-Apr-85	0.00E+00	5E-17	0.00E+00	1.23E-15	2.52E-16	4E-17	4.10E-01	4.88E-16	1.09E-15	9E-17	2.44E-02	8.06E-15	8.99E-16	8E-16	1.01E-01	
01-Jul-85	7.17E-16	5E-17	1.43E-02	0.00E+00	4.76E-14	1E-16	0.00E+00	1.05E-15	1.50E-16	7E-17	1.95E-02	2.15E-14	1.32E-15	8E-16	2.69E-01	
30-Sep-85	6.13E-16	5E-16	1.23E-02	1.18E-16	1.18E-16	1E-16	3.93E-02	3.71E-16	8.56E-17	7E-17	5.25E-02	3.64E-15	6.61E-16	9E-16	4.55E-02	
02-Jan-86	3.42E-15	9E-16	6.84E-02	4.74E-16	1.32E-16	2E-16	1.58E-01	1.22E-16	2.15E-15	2E-16	6.11E-03	5.00E-16	3.22E-16	2E-15	6.25E-03	
01-Apr-86	3.98E-15	2E-18	7.96E-02	9.74E-16	2.05E-16	5E-18	3.25E-01	1.50E-15	2.07E-16	4E-18	7.51E-02	1.41E-14	4.04E-16	1E-16	1.76E-01	
30-Jun-86	1.93E-15	1E-17	3.87E-02	3.52E-16	3.13E-17	2E-18	1.17E-02	1.37E-15	3.01E-17	4E-18	6.87E-02	1.23E-14	6.01E-16	5E-16	1.54E-01	
27-Oct-86	1.99E-15	2E-18	3.98E-02	3.06E-16	8.00E-17	2E-18	1.03E-01	1.25E-15	1.00E-16	4E-18	6.25E-02	1.08E-14	2.00E-16	4E-18	1.35E-01	
15-Dec-86	1.67E-15	3E-18	3.34E-02	1.16E-16	4.00E-17	2E-17	3.87E-02	5.98E-16	1.00E-16	4E-17	2.99E-02	1.37E-14	2.00E-16	3E-17	1.71E-01	
16-Mar-87	2.33E-15	3E-18	4.66E-02	4.30E-16	9.00E-17	6E-18	1.43E-01	1.92E-16	5.00E-17	5E-18	9.60E-03	5.59E-14	1.00E-15	8E-18	6.99E-01	
11-May-87	2.36E-15	5E-18	4.72E-02	7.69E-16	1.60E-16	5E-18	2.56E-01	8.74E-16	1.00E-16	5E-18	4.38E-02	1.45E-14	3.00E-16	3E-17	1.81E-01	
09-Sep-87	2.27E-15	1E-19	4.54E-02	2.44E-15	2.00E-16	6E-18	8.13E-01	8.51E-16	1.40E-16	4E-18	4.26E-02	3.45E-14	5.00E-16	8E-18	3.93E-01	
27-Oct-87	2.75E-15	1E-17	5.50E-02	2.46E-15	3.00E-16	1E-17	8.20E-01	1.34E-15	2.00E-16	1E-17	6.70E-02	2.79E-14	1.00E-15	5E-17	3.49E-01	
16-Feb-88	1.07E-15	5E-18	2.14E-02	1.47E-16	5.00E-17	2E-17	4.90E-02	4.44E-16	5.00E-17	3E-17	2.22E-02	4.01E-14	2.00E-16	5E-17	5.01E-01	
18-Mar-88	1.98E-15	3E-18	3.96E-02	1.25E-15	1.00E-16	2E-17	4.17E-01	6.40E-16	7.00E-17	1E-17	3.20E-02	1.07E-14	1.00E-16	3E-17	1.34E-01	
15-Aug-88	2.06E-15	3E-18	4.12E-02	3.41E-15	2.00E-16	1E-17	1.14E+00	5.08E-16	6.00E-17	2E-17	2.54E-02	1.62E-14	3.00E-16	2E-17	2.03E-01	
14-Nov-88	3.94E-15	3E-18	7.88E-02	2.12E-15	1.00E-16	1E-17	7.07E-01	1.01E-15	5.00E-17	1E-17	5.05E-02	2.47E-14	1.00E-16	3E-17	3.09E-01	
13-Feb-89	1.99E-15	4E-17	3.98E-02	5.73E-16	7.88E-17	1E-16	1.91E-01	5.99E-16	3.49E-17	2E-16	3.00E-02	3.23E-14	2.36E-16	5E-16	4.04E-01	
15-Mar-89	1.70E-15	7E-18	3.40E-02	6.32E-16	7.00E-17	7E-18	2.11E-01	5.86E-16	5.00E-17	7E-18	2.93E-02	6.16E-15	1.00E-16	3E-17	7.70E-02	



TABLE 12

UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
AMBIENT AIR RADIONUCLIDE PARTICULATES

UCI/mi

LOCATION: BHV-2

Current Quarter 1st 2nd 3rd 4th  
% time operated 81.3% 91.2%  
Air Volume, SCF x 1e6 4.77 4.57

URANIUM NAT.

THORIUM- 230

RADIUM- 226

LEAD -210

PERIOD ENDING	GROSS CONC.	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (2E-15)	% MPC
28-Sep-81	1.39E-15	1E-16	2.78E-02	3.69E-16	2.00E-16	1E-16	1.23E-01	5.92E-16	1.35E-16	1E-16	2.96E-02	1.67E-14	1.21E-15	2E-15	2.09E-01
14-Dec-81	4.62E-16	1E-16	9.24E-03	8.03E-16	3.02E-16	1E-16	2.68E-01	3.62E-16	1.72E-16	1E-16	1.81E-02	1.33E-14	2.28E-15	2E-15	1.66E-01
29-Mar-82	7.07E-16	9E-16	1.41E-02	1.10E-15	6.49E-16	3E-15	3.67E-01	7.27E-16	3.96E-16	4E-15	3.64E-02	1.52E-14	3.63E-15	2E-14	1.90E-01
30-Jun-82	8.84E-16	7E-17	1.77E-02	7.73E-16	2.39E-16	8E-17	2.58E-01	4.78E-16	1.69E-16	3E-16	2.39E-02	1.98E-14	1.79E-15	2E-15	2.48E-01
27-Sep-82	1.23E-15	1E-16	2.46E-02	3.60E-16	1.35E-16	1E-16	1.20E-01	8.73E-16	2.71E-16	1E-16	4.37E-02	2.35E-14	5.43E-15	2E-15	2.94E-01
03-Jan-83	2.64E-15	5E-17	5.28E-02	2.55E-16	1.03E-16	5E-17	8.50E-02	1.98E-16	5.66E-17	5E-17	9.90E-03	2.85E-14	2.50E-15	2E-15	3.56E-01
04-Adt-83	2.14E-16	5E-17	4.28E-03	1.02E-16	3.96E-17	5E-17	3.40E-02	1.57E-16	7.63E-17	5E-17	7.85E-03	2.48E-14	1.19E-15	8E-16	3.10E-01
30-Jun-83	2.85E-16	5E-17	5.70E-03	2.06E-16	5.05E-17	8E-17	6.87E-02	2.24E-16	8.68E-17	1E-16	1.12E-02	2.48E-14	9.94E-16	8E-16	2.24E-01
03-Oct-83	2.70E-16	5E-17	5.40E-03	3.36E-16	6.49E-17	4E-17	1.12E-01	4.37E-16	9.81E-17	5E-17	2.19E-02	1.78E-14	1.09E-15	4E-16	2.23E-01
03-Jan-84	2.78E-15	1E-16	5.56E-02	1.20E-16	1.11E-16	1E-16	4.00E-02	6.64E-17	4.52E-18	6E-17	3.32E-03	9.14E-15	1.46E-15	2E-15	1.14E-01
02-Adt-84	4.28E-16	5E-17	8.56E-03	1.75E-16	5.18E-17	5E-17	5.83E-02	4.57E-17	5.03E-17	8E-17	2.29E-03	3.55E-14	1.79E-15	2E-15	4.44E-01
02-Jul-84	2.78E-15	5E-17	5.56E-02	8.12E-16	3.35E-16	0E+00	2.71E-01	1.98E-16	1.00E-16	1E-16	9.90E-03	1.68E-14	1.20E-01	1E-15	2.10E-01
01-Oct-84	2.69E-16	5E-17	5.38E-03	2.66E-17	8.02E-17	1E-16	8.87E-03	0.00E+00	1.17E-16	1E-16	0.00E+00	1.77E-14	1.22E-15	9E-16	2.21E-01
02-Jan-85	2.15E-16	5E-16	4.30E-03	7.55E-16	2.03E-16	9E-17	2.52E-01	2.87E-16	1.14E-16	1E-16	1.44E-02	3.19E-14	1.55E+00	1E-15	3.99E-01
01-Adt-85	0.00E+00	5E-17	0.00E+00	1.67E-16	1.75E-16	3E-17	5.7E-02	6.75E-17	7.69E-17	8E-17	3.38E-03	7.56E-15	8.83E-16	8E-16	9.45E-02
01-Jul-85	3.70E-17	5E-17	7.40E-04	9.00E-16	4.76E-14	3E-16	3.00E-01	4.90E-17	1.05E-16	9E-17	2.45E-03	1.31E-14	1.32E-15	1E-15	1.64E-01
30-Sep-85	9.32E-17	5E-16	1.86E-03	2.18E-16	4.63E-17	3E-16	7.26E-02	3.71E-16	4.64E-17	7E-17	1.86E-02	3.64E-15	2.85E-16	2E-15	4.55E-02
02-Jan-86	1.56E-15	1E-15	3.12E-02	2.16E-16	1.12E-15	7E-16	7.20E-02	2.15E-17	2.31E-16	2E-16	1.08E-03	3.04E-16	1.71E-15	2E-15	3.80E-03
01-Adt-86	1.31E-15	2E-18	2.61E-02	1.50E-16	7.18E-17	5E-18	5.00E-02	3.71E-16	8.45E-17	4E-18	1.85E-02	2.90E-15	2.10E-16	9E-17	3.63E-02
30-Jun-86	2.23E-16	1E-17	4.47E-03	1.32E-16	4.32E-17	2E-17	4.39E-02	7.09E-17	8.61E-18	4E-18	3.55E-03	2.53E-14	2.60E-15	3E-15	3.16E-01
27-Oct-86	6.41E-16	1E-18	1.28E-02	1.74E-16	4.00E-17	2E-18	5.80E-02	3.67E-16	1.00E-16	1E-18	1.84E-02	1.04E-14	2.00E-16	3E-18	1.30E-01
15-Dec-86	3.56E-16	3E-18	7.12E-03	0.00E+00	2.00E-17	2E-17	0.00E+00	1.05E-16	5.00E-17	3E-17	5.25E-03	7.81E-15	1.00E-16	3E-17	9.76E-02
16-Mar-87	5.31E-16	3E-18	1.06E-02	1.30E-15	4.00E-17	5E-18	4.33E-02	7.74E-17	3.00E-17	4E-18	3.87E-03	3.80E-14	1.00E-15	6E-18	4.75E-01
11-May-87	4.06E-16	4E-18	8.12E-03	6.63E-17	7.00E-17	4E-18	2.21E-02	1.34E-16	4.09E-17	2E-17	6.70E-03	1.10E-14	3.00E-16	2E-17	1.38E-01
09-Sep-87	2.74E-16	8E-18	5.48E-03	2.38E-16	5.00E-17	6E-17	7.93E-02	1.38E-16	6.00E-17	4E-16	6.90E-03	1.04E-14	3.00E-16	1E-16	1.30E-01
02-Nov-87	3.73E-16	1E-17	7.46E-03	3.11E-16	8.00E-17	6E-18	1.04E-01	1.83E-16	7.00E-17	6E-17	9.15E-03	1.17E-14	3.00E-16	3E-17	1.46E-01
16-Feb-88	2.78E-15	5E-18	5.56E-02	2.31E-17	5.00E-17	2E-17	7.70E-03	1.20E-16	3.00E-17	3E-17	6.00E-03	3.55E-14	2.00E-16	5E-17	4.44E-01
18-May-88	4.63E-16	3E-18	9.26E-03	1.49E-16	5.00E-17	2E-17	4.97E-02	2.30E-16	6.00E-17	2E-17	1.15E-02	1.18E-14	2.00E-16	4E-17	1.48E-01
15-Aug-88	8.06E-16	3E-18	1.61E-02	8.69E-16	1.50E-16	1E-17	2.90E-01	1.80E-16	4.00E-17	1E-17	9.00E-03	1.42E-14	2.00E-16	2E-17	1.78E-01
14-Nov-88	4.34E-16	3E-18	8.68E-03	6.76E-16	6.00E-17	1E-17	2.25E-01	1.57E-16	3.00E-17	1E-17	7.85E-03	2.25E-14	2.00E-16	3E-17	2.81E-01
13-Feb-89	5.80E-16	4E-17	1.16E-02	2.85E-16	3.09E-17	4E-17	9.50E-02	1.55E-16	2.32E-17	2E-16	7.75E-03	2.80E-14	2.00E-16	5E-16	3.50E-01
15-May-89	5.06E-16	7E-18	1.01E-02	2.28E-16	7.00E-17	7E-18	7.60E-02	1.63E-16	3.00E-17	7E-18	8.15E-03	6.05E-15	1.00E-16	4E-17	7.56E-02

TABLE 13

UMETCO MINERALS CORPORATION  
 WHITE MESA MILL  
 AMBIENT AIR RADIONUCLIDE PARTICULATES  
 uCi/mi  
 LOCATION: BHV-3

Current Quarter  
 % time Operated 89.0% 87.3%  
 Air Volume, SCF x 1e6 5.20 4.29

PERIOD ENDING	URANIUM NAT.			THORIUM-230				RADIUM-226				LEAD-210			
	GROSS CONC.	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (2E-15)	% MPC
28-Sep-81	1.74E-15	1E-16	3.48E-02	9.02E-16	4.46E-16	1E-16	3.01E-01	2.87E-16	2.23E-16	1E-16	1.44E-02	1.54E-14	2.53E-15	2E-15	1.93E-01
14-Dec-81	1.59E-15	1E-16	3.18E-02	5.03E-16	3.09E-16	1E-16	1.68E-01	1.30E-16	1.38E-16	1E-16	6.50E-03	2.25E-14	2.13E-15	2E-15	2.81E-01
29-Mar-82	3.76E-16	9E-16	7.52E-03	5.25E-16	6.38E-16	3E-15	1.75E-01	4.08E-16	3.72E-16	4E-15	2.04E-02	1.96E-14	3.48E-15	2E-14	2.45E-01
30-Jun-82	3.83E-16	5E-17	7.65E-03	2.16E-16	2.24E-16	6E-17	7.20E-02	1.41E-15	1.03E-15	2E-16	7.05E-02	2.40E-14	2.10E-15	2E-15	3.00E-01
27-Sep-82	5.95E-16	1E-16	1.19E-02	1.44E-15	2.74E-16	1E-16	4.80E-01	5.36E-16	2.35E-16	1E-16	2.68E-02	1.43E-14	3.00E-15	2E-15	1.79E-01
03-Jan-83	2.05E-16	5E-17	4.10E-03	1.23E-16	3.11E-17	2E-17	4.10E-02	1.10E-16	5.52E-17	7E-17	5.50E-03	3.01E-14	2.10E-15	2E-15	3.76E-01
04-Apr-83	Lost in Lab			6.94E-17	2.31E-17	5E-17	2.31E-02	6.11E-17	5.95E-17	8E-17	3.06E-03	1.39E-14	1.00E-15	1E-15	1.74E-01
30-Jun-83	3.06E-16	1E-16	6.12E-03	9.59E-17	1.52E-16	2E-16	3.20E-02	2.08E-16	1.62E-16	2E-16	1.04E-02	1.70E-14	2.00E-15	2E-15	2.13E-01
03-Oct-83	1.91E-16	1E-16	3.82E-03	3.05E-16	4.98E-17	6E-18	1.02E-01	2.79E-16	5.73E-17	1E-17	1.40E-02	1.76E-14	4.83E-16	1E-16	2.20E-01
03-Jan-84	3.01E-16	1E-16	6.02E-03	9.51E-17	6.19E-17	1E-16	3.17E-02	0.00E+00	5.73E-17	1E-16	0.00E+00	9.17E-15	5.10E-16	5E-16	1.15E-01
02-Apr-84	8.22E-16	5E-17	1.64E-02	7.52E-16	1.72E-16	5E-17	2.51E-01	5.20E-17	4.89E-17	7E-17	2.60E-03	3.47E-14	1.70E-15	1E-15	4.34E-01
02-Jul-84	5.29E-16	5E-17	1.06E-02	6.18E-16	7.89E-16	8E-16	2.06E-01	1.40E-16	9.15E-17	1E-16	7.00E-03	1.32E-14	9.99E-16	1E-14	1.65E-01
01-Oct-84	1.74E-16	5E-17	3.48E-03	7.10E-17	6.16E-17	4E-17	2.37E-02	0.00E+00	9.15E-17	1E-16	0.00E+00	1.08E-14	1.22E-15	1E-15	1.35E-01
02-Jan-85	1.00E-17	5E-16	2.00E-04	7.10E-17	1.27E-16	7E-17	2.37E-02	7.80E-17	9.35E-17	7E-17	3.90E-03	2.73E-14	1.26E-15	8E-16	3.41E-01
01-Apr-85	0.00E+00	5E-17	0.00E+00	2.76E-16	2.02E-16	7E-17	9.20E-02	4.10E-17	6.82E-17	6E-17	2.05E-03	1.12E-14	9.33E-16	8E-16	1.40E-01
01-Jul-85	1.04E-16	5E-17	2.08E-03	0.00E+00	4.76E-14	4E-16	0.00E+00	0.00E+00	9.36E-17	6E-17	0.00E+00	1.64E-14	1.24E-15	8E-16	2.05E-01
30-Sep-85	0.00E+00	5E-16	0.00E+00	1.00E-15	1.31E-16	7E-17	3.34E-01	0.00E+00	4.66E-17	7E-17	0.00E+00	1.73E-14	1.01E-15	8E-16	2.16E-01
02-Jan-86	1.03E-15	1E-15	2.06E-02	3.17E-16	3.71E-15	4E-15	1.06E-01	1.25E-16	4.49E-16	3E-16	6.25E-03	1.21E-17	3.51E-15	4E-15	1.51E-04
01-Apr-86	8.04E-16	2E-18	1.61E-02	1.93E-17	6.94E-17	6E-18	6.42E-03	1.54E-16	8.33E-17	4E-18	7.71E-03	1.69E-14	4.07E-16	1E-16	2.12E-01
30-Jun-86	4.29E-16	2E-17	8.58E-03	1.77E-16	2.18E-17	1E-17	5.89E-02	2.83E-16	1.72E-17	5E-18	1.42E-02	1.97E-14	1.50E-15	2E-15	2.46E-01
27-Oct-86	6.45E-16	1E-18	1.29E-02	9.89E-17	4.00E-17	2E-18	3.30E-02	4.16E-15	1.00E-16	2E-18	2.08E-01	1.64E-14	2.00E-16	4E-18	2.05E-01
15-Dec-86	1.31E-16	3E-18	2.62E-03	0.00E+00	2.00E-17	2E-17	0.00E+00	4.16E-17	4.00E-17	3E-17	2.08E-03	4.60E-15	1.00E-16	3E-17	5.75E-02
16-Mar-87	2.01E-16	3E-18	4.02E-03	1.20E-16	4.00E-17	5E-18	4.00E-02	5.73E-17	3.00E-17	4E-18	2.87E-03	1.60E-14	1.00E-15	6E-18	2.00E-01
11-May-87	2.16E-16	4E-18	4.32E-03	1.96E-16	9.00E-17	4E-18	6.53E-02	7.38E-17	3.00E-17	4E-18	3.69E-03	1.59E-14	2.00E-16	2E-17	1.99E-01
09-Sep-87	2.41E-16	2E-17	4.82E-03	2.18E-16	1.50E-16	2E-16	7.27E-02	3.52E-17	1.10E-16	7E-17	1.76E-03	1.46E-14	1.00E-15	1E-16	1.83E-01
02-Nov-87	2.44E-16	4E-17	4.88E-03	2.32E-16	6.00E-17	4E-18	7.73E-02	2.37E-17	3.00E-17	4E-17	1.18E-03	2.48E-14	5.00E-16	2E-17	3.10E-01
16-Feb-88	8.08E-16	6E-18	1.62E-02	2.55E-16	6.00E-17	2E-17	8.50E-02	3.42E-16	5.00E-17	3E-17	1.71E-02	5.61E-14	3.00E-16	6E-17	7.01E-01
18-May-88	1.14E-16	3E-18	2.28E-03	4.14E-17	1.00E-16	1E-17	1.38E-02	0.00E+00	4.00E-17	1E-17	0.00E+00	1.20E-14	1.00E-16	4E-17	1.50E-01
15-Aug-88	2.08E-16	3E-18	4.16E-03	3.06E-16	8.00E-17	1E-17	1.02E-01	3.65E-17	3.10E-17	2E-17	1.83E-03	1.36E-14	2.00E-16	2E-17	1.70E-01
14-Nov-88	4.21E-16	3.00E-18	8.42E-03	2.93E-16	3.00E-17	1.00E-17	9.77E-02	1.09E-16	2.00E-17	1.00E-17	5.45E-03	2.48E-14	1.00E-16	3.00E-17	3.10E-01
13-Feb-89	4.45E-16	4.08E-17	8.90E-03	4.78E-17	1.65E-17	1.02E-16	1.59E-02	2.47E-17	1.65E-17	2.04E-17	1.24E-03	3.34E-14	3.29E-16	5.10E-16	4.18E-01
15-May-89	1.05E-16	1.00E-18	2.10E-03	0.00E+00	1.60E-17	7.00E-18	0.00E+00	2.45E-17	1.40E-17	7.00E-18	1.23E-03	6.56E-15	1.00E-16	3.00E-17	8.20E-02

TABLE 14

UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
AMBIENT AIR RADIONUCLIDE PARTICULATES  
UCI/mi

LOCATION: BHV-4

Current Quarter 1st 2nd 3rd 4th  
% time operated 87.1% 71.5%  
Air Volume, SCF x 10<sup>6</sup> 4.82 3.46

THORIUM- 230

URANIUM NAT.

LEAD -210

RADIUM- 226

PERIOD ENDING	GROSS CONC.	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (2E-15)	% MPC
28-SEP-81	5.20E-15	1E-16	1.04E-01	3.21E-15	5.70E-16	1E-16	1.07E+00	2.74E-15	6.15E-16	1E-16	1.37E-01	1.84E-14	2.72E-15	2E-15	2.30E-01
14-OCT-81	4.53E-15	1E-16	9.06E-02	2.93E-15	5.09E-16	1E-16	9.77E-01	2.29E-15	3.34E-16	1E-16	1.15E-01	2.54E-14	2.33E-15	2E-15	2.18E-01
29-MAR-82	1.06E-15	9E-16	2.12E-02	1.78E-15	1.12E-15	3E-15	5.93E-01	1.07E-15	4.71E-16	4E-15	5.35E-02	2.31E-14	4.16E-15	2E-14	2.89E-01
30-JUN-82	6.03E-15	6E-17	1.21E-01	1.43E-14	1.19E-15	6E-17	4.73E+00	2.63E-15	3.09E-16	3E-16	1.31E-01	2.25E-14	3.00E-15	2E-15	2.81E-01
27-SEP-82	1.26E-14	1E-16	2.52E-01	1.57E-14	7.17E-15	1E-16	5.23E+00	5.35E-15	5.47E-16	1E-16	2.68E-01	2.68E-14	3.69E-15	2E-15	3.35E-01
03-JAN-83	4.33E-15	5E-17	8.66E-02	7.58E-16	1.16E-16	5E-17	2.53E-01	6.04E-16	9.13E-17	6E-17	3.02E-02	2.57E-14	1.90E-15	2E-15	3.21E-01
04-APR-83	1.25E-15	5E-17	2.50E-02	6.52E-16	5.55E-17	5E-17	2.17E-01	4.76E-16	1.36E-16	1E-16	3.38E-02	2.00E-14	1.09E-15	9E-16	2.50E-01
30-JUN-83	3.73E-16	1E-16	7.46E-03	7.17E-16	2.14E-16	2E-16	2.39E-01	4.13E-16	1.88E-16	2E-16	2.07E-02	1.20E-14	2.00E-15	2E-15	1.50E-01
03-OCT-83	2.54E-16	4E-17	5.08E-03	9.43E-16	1.13E-16	2E-17	3.14E-01	2.65E-16	5.73E-17	3E-17	1.33E-02	2.50E-14	1.14E-15	4E-16	3.13E-01
03-JAN-84	2.76E-15	1E-16	5.52E-02	1.51E-16	3.92E-17	4E-17	5.03E-02	1.05E-16	6.79E-17	9E-17	5.25E-03	1.59E-16	8.00E-16	6E-16	1.99E-03
02-APR-84	4.27E-16	5E-17	8.54E-03	1.60E-16	9.05E-17	1E-16	5.33E-02	6.28E-16	9.83E-17	8E-17	3.14E-02	3.67E-14	1.79E-05	1E-15	4.59E-01
02-JUL-84	2.57E-15	5E-17	5.14E-02	2.33E-16	1.03E-16	8E-17	7.77E-02	1.11E-16	7.93E-17	1E-16	5.55E-03	1.58E-14	1.09E-15	1E-15	1.98E-01
02-JAN-85	4.18E-16	5E-17	8.36E-03	1.36E-16	6.57E-17	4E-17	4.53E-02	1.10E-17	9.55E-17	8E-17	5.50E-04	9.83E-15	1.43E-15	2E-15	1.23E-01
02-JAN-85	5.30E-17	5E-17	1.06E-03	3.54E-16	1.60E-16	5E-17	1.18E-01	7.00E-18	8.98E-17	7E-17	3.50E-04	2.57E-14	1.46E-15	1E-15	3.21E-01
01-APR-85	0.00E+00	5E-17	0.00E+00	3.55E-17	1.97E-16	1E-16	1.18E-02	4.35E-17	6.66E-17	7E-17	2.18E-02	7.48E-15	1.08E-15	9E-16	9.35E-02
01-JUL-85	9.36E-16	5E-17	1.87E-02	6.00E-16	4.76E-14	6E-16	2.00E-01	2.36E-16	1.14E-16	7E-17	1.18E-02	5.02E-15	8.76E+00	9E-16	6.28E-02
30-SEP-85	1.46E-15	6E-16	2.91E-02	2.33E-16	8.01E-17	7E-17	7.78E-02	5.38E-16	1.09E-16	9E-17	2.69E-02	7.86E-15	7.50E-16	8E-16	9.83E-02
02-JAN-86	8.40E-15	2E-15	1.68E-01	7.69E-16	1.80E-15	1E-15	2.56E-01	2.99E-16	8.13E-16	3E-16	1.50E-02	2.12E-14	2.60E-14	5E-15	2.65E-01
15-APR-86	5.79E-15	2E-18	1.16E-01	7.60E-16	9.96E-17	5E-18	2.53E-01	1.34E-15	5.50E-17	4E-18	6.71E-02	1.33E-14	3.08E-16	1E-16	1.66E-01
30-JUN-86	5.19E-15	1E-17	1.04E-01	5.80E-16	3.73E-17	4E-18	1.93E-01	2.20E-15	4.00E-17	5E-18	1.10E-01	7.14E-16	7.89E-16	1E-15	8.93E-03
17-OCT-86	4.60E-15	1E-18	9.20E-02	4.67E-16	1.10E-16	2E-18	2.61E-01	2.37E-15	1.00E-16	1E+16	1.19E-01	1.13E-14	2.00E-16	3E-18	1.41E-01
25-DEC-86	2.75E-15	3E-18	5.50E-02	4.67E-16	9.00E-17	2E-17	1.56E-01	9.39E-16	1.00E-16	4E-17	4.70E-02	5.89E-14	2.00E-16	4E-17	1.50E-01
16-MAR-87	4.64E-15	3E-18	9.78E-02	5.90E-16	1.20E-16	8E-18	1.97E-01	4.97E-16	1.00E-16	6E-18	2.49E-02	2.80E-14	1.00E-15	1E-17	7.36E-01
11-MAY-87	4.35E-15	6E-18	8.70E-02	1.18E-15	2.00E-16	6E-18	3.93E-01	1.13E-15	1.00E-16	6E-17	5.65E-02	2.21E-14	6.00E-16	3E-17	2.76E-01
09-SEP-87	6.39E-15	8E-18	1.28E-01	1.23E-14	1.00E-15	1E-16	4.10E+00	2.26E-15	2.00E-16	4E-17	1.13E-01	1.57E-14	1.00E-15	1E-15	1.96E-01
12-NOV-87	6.72E-15	6E-18	1.34E-01	1.50E-14	1.00E-15	4E-18	5.00E+00	2.20E-15	2.00E-16	6E-18	1.10E-01	2.55E-14	1.00E-15	3E-17	3.19E-01
16-FEB-88	1.91E-15	5E-18	3.82E-02	4.53E-16	7.00E-17	2E-17	1.51E-01	4.42E-16	6.00E-16	2E-17	2.21E-02	4.44E-14	2.00E-16	5E-17	5.55E-01
18-MAY-88	1.78E-14	3E-18	3.56E-01	1.35E-14	3.00E-16	2E-17	4.50E+00	4.92E-16	8.00E-17	2E-17	2.46E-02	1.38E-14	2.00E-16	4E-17	1.73E-01
15-AUG-88	7.56E-15	4E-18	1.51E-01	4.39E-14	1.00E-15	1E-17	1.46E-01	1.51E-15	1.00E-16	2E-17	7.55E-02	1.97E-14	2.00E-16	2E-17	2.46E-01
14-NOV-88	1.47E-14	4E-18	2.94E-01	3.31E-14	3.00E-16	1E-17	1.10E-01	2.57E-15	1.00E-16	1E-17	1.29E-01	2.12E-14	2.00E-16	3E-17	2.65E-01
13-FEB-89	2.47E-15	4.08E-17	4.94E-02	1.56E-15	1.02E-16	1.02E-16	5.20E-01	6.94E-16	5.10E-17	2.04E-16	3.47E-02	2.12E-14	3.06E-16	5.10E-16	2.65E-01
15-MAY-89	2.50E-16	1E-18	5.00E-03	3.14E-15	1.00E-16	7E-18	1.05E+00	9.03E-16	7.00E-17	7E-18	4.52E-02	8.05E-16	1.00E-16	4E-17	1.01E-01

TABLE 15

UMETCO MINERALS CORPORATION  
WHITE MESA MILL  
AMBIENT AIR RADIONUCLIDE PARTICULATES  
uCi/mi

LOCATION: BHV-5

Current Quarter  
% time operated 96.3% 99.9%  
Air Volume, SCF x 1e6 5.53 5.05

1st 2nd 3rd 4th

URANIUM NAT.

THORIUM- 230

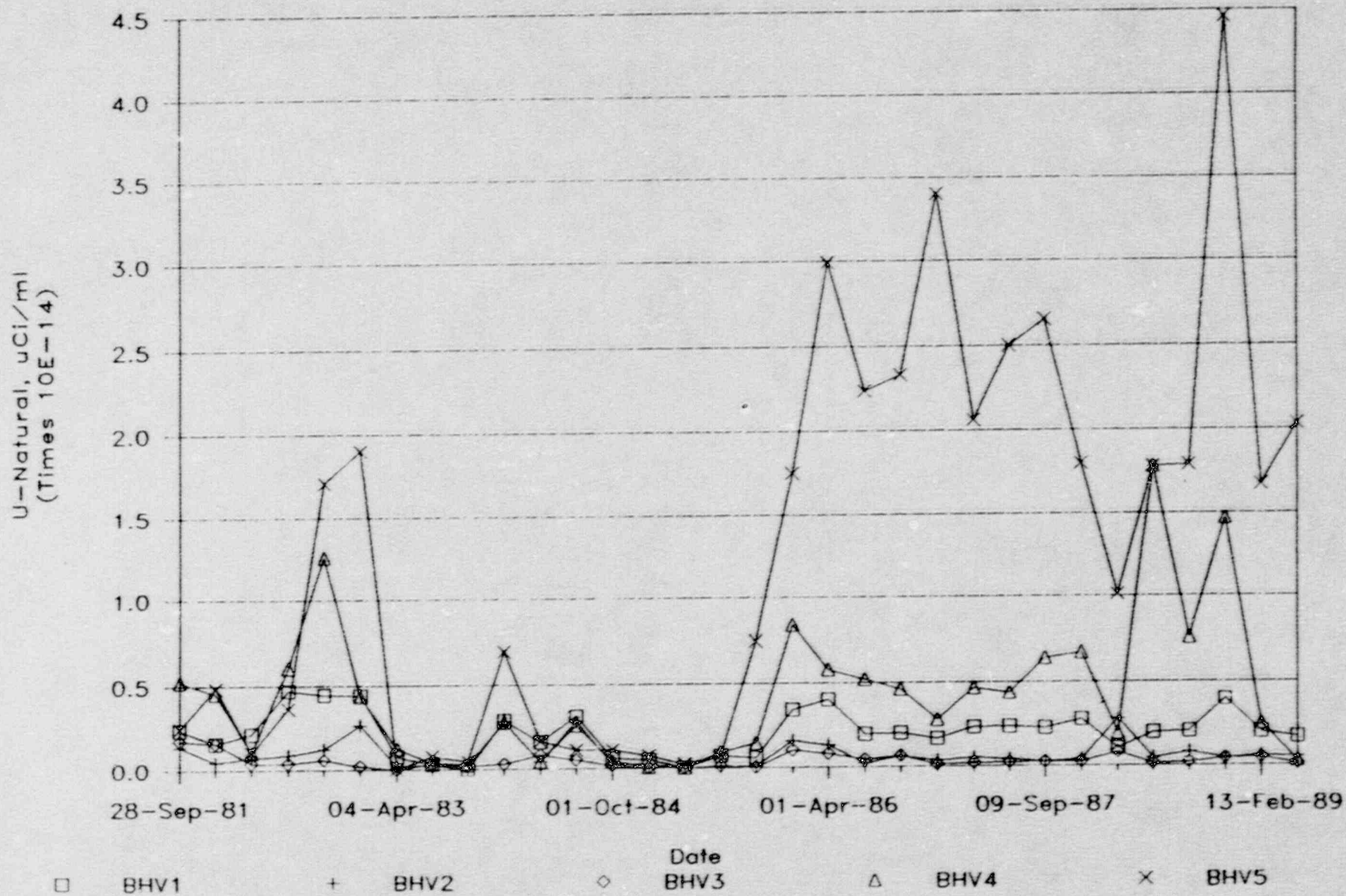
RADIUM- 226

LEAD -210

PERIOD ENDING	GROSS CONC.	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (1E-16)	% MPC	GROSS CONC.	COUNTING ERROR	LLD (2E-15)	% MPC
28-Sep-81	2.44E-15	1E-16	4.88E-02	1.53E-15	4.11E-16	1E-16	5.10E-01	7.54E-16	4.31E-16	1E-16	3.77E-02	1.69E-14	2.57E-15	2E-15	2.11E-01
14-Dec-81	4.84E-15	1E-16	9.68E-02	2.78E-15	3.56E-16	1E-16	9.27E-01	1.84E-15	2.84E-16	1E-16	9.20E-02	1.53E-14	2.28E-15	2E-15	1.91E-01
29-Mar-82	1.04E-15	9E-16	2.08E-02	2.62E-15	9.49E-16	3E-15	8.73E-01	1.11E-15	4.82E-16	4E-15	5.55E-02	2.98E-14	8.16E-15	7E-14	3.73E-01
30-Jun-82	3.61E-15	5E-17	7.22E-02	7.61E-15	9.40E-16	7E-17	2.54E+00	1.39E-15	2.19E-16	2E-16	6.95E-02	1.80E-15	1.89E-15	2E-15	2.25E-02
27-Sep-82	1.71E-14	1E-16	3.42E-01	9.46E-15	6.02E-16	1E-16	3.15E+00	3.80E-15	4.68E-16	1E-16	1.90E-01	2.35E-14	4.65E-15	2E-15	2.94E-01
03-Jan-83	1.90E-14	5E-17	3.80E-01	5.77E-15	1.99E-16	3E-17	1.92E+00	9.34E-17	3.10E-16	6E-17	4.67E-03	4.32E-14	2.80E-15	2E-15	5.40E-01
04-Apr-83	Lost in Lab														
30-Jun-83	7.62E-16	5E-17	1.52E-02	3.25E-15	1.70E-16	6E-17	1.08E+00	6.28E-15	3.59E-16	1E-16	3.14E-01	2.69E-14	1.00E-15	9E-16	3.76E-01
03-Oct-83	4.86E-16	1E-16	9.72E-03	1.10E-15	3.09E-16	1E-16	3.67E-01	3.63E-16	1.08E-16	1E-16	1.82E-02	2.08E-14	1.13E-15	9E-16	2.60E-01
03-Jan-84	6.96E-15	1E-16	1.39E-01	9.69E-16	9.66E-17	5E-17	3.23E-01	9.60E-16	6.53E-17	1E-16	4.80E-02	1.83E-14	2.92E-15	2E-15	2.29E-01
02-Apr-84	1.64E-15	5E-17	3.28E-02	1.34E-15	1.20E-16	7E-17	4.47E-01	3.88E-15	2.29E-16	5E-17	1.94E-01	4.67E-14	2.10E-01	1E-15	5.84E-01
02-Jul-84	1.12E-15	5E-17	2.24E-02	1.92E-15	1.69E-16	7E-17	6.40E-01	3.31E-15	2.70E-16	1E-16	1.66E-01	2.21E-14	1.20E-15	1E-16	2.76E-01
01-Oct-84	1.11E-15	5E-17	2.22E-02	3.13E-16	1.26E-16	5E-17	1.04E-01	4.21E-16	1.34E-16	1E-16	2.11E-02	1.57E-14	1.39E-15	1E-15	1.96E-01
02-Jan-85	7.32E-16	6E-16	1.46E-02	6.71E-16	1.66E-16	5E-17	2.24E-01	4.94E-16	1.35E-16	1E-16	2.47E-02	2.47E-14	1.76E-15	9E-16	3.03E-01
01-Apr-85	2.36E-16	5E-17	4.72E-03	5.43E-16	2.18E-16	1E-16	1.81E-01	2.71E-16	9.00E-17	7E-17	1.36E-02	1.25E-14	1.02E-15	8E-16	1.56E-01
01-Jul-85	7.58E-16	5E-17	1.52E-02	4.00E-16	9.43E-16	5E-16	1.33E-01	6.90E-16	1.50E-16	9E-17	3.45E-02	2.15E-14	1.42E-15	9E-16	2.69E-01
30-Sep-85	7.47E-15	7E-16	1.49E-01	1.16E-15	1.42E-16	8E-17	3.87E-01	2.19E-15	2.21E-15	1E-16	1.10E-01	9.20E-15	1.11E-15	1E-15	1.15E-01
02-Jan-86	1.75E-14	6E-16	3.50E-01	7.24E-15	2.20E-15	1E-15	2.41E+00	3.83E-15	3.83E-15	4E-18	7.57E-01	2.22E-14	1.00E-15	1E-15	1.41E-03
01-Apr-86	2.99E-14	2E-18	5.98E-01	7.64E-15	6.30E-17	4E-18	2.55E+00	1.51E-14	5.02E-16	4E-18	5.24E-01	2.22E-14	5.04E-16	9E-17	2.78E-01
30-Jun-86	2.23E-14	1E-17	4.47E-01	5.19E-15	3.20E-16	2E-17	1.73E+00	1.05E-14	1.00E-16	1E-18	8.00E-01	2.16E-14	2.00E-15	2E-15	2.70E-01
15-Oct-86	2.33E-14	1E-18	4.66E-01	7.78E-15	3.00E-16	2E-18	2.59E+00	1.60E-14	1.00E-15	1E-18	7.35E-01	2.02E-14	2.00E-16	3E-18	2.53E-01
27-Oct-86	3.40E-14	3E-17	6.80E-01	5.35E-15	2.00E-16	2E-17	1.78E+00	1.47E-14	5.00E-16	4E-17	3.37E-01	2.82E-14	2.00E-16	3E-17	3.53E-01
16-Mar-87	2.06E-14	3E-18	4.12E-01	4.50E-15	3.00E-16	5E-18	1.50E+00	6.74E-15	2.00E-16	4E-18	4.09E-01	3.29E-14	1.00E-15	7E-18	9.11E-01
11-May-87	2.50E-14	5E-18	5.00E-01	8.54E-15	2.00E-16	5E-18	2.85E+00	8.15E-15	3.00E-16	5E-18	4.67E-01	2.77E-14	4.00E-16	2E-17	4.10E-01
09-Sep-87	2.65E-14	5E-18	5.30E-01	6.62E-15	3.00E-16	7E-17	2.21E+00	9.34E-15	3.00E-16	2E-17	4.67E-01	2.77E-14	4.00E-16	1E-16	3.46E-01
02-Nov-87	1.80E-14	4E-18	3.60E-01	7.09E-15	3.00E-16	4E-18	2.36E+00	7.20E-15	3.00E-16	4E-18	3.60E-01	1.77E-14	5.00E-16	2E-17	2.21E-01
16-Feb-88	1.03E-14	5E-18	2.02E-01	2.96E-15	1.00E-16	2E-17	9.93E-01	3.93E-15	1.00E-16	2E-17	1.97E-01	3.36E-14	2.00E-16	5E-17	4.20E-01
18-May-88	1.78E-14	3E-18	3.56E-01	8.14E-15	3.00E-16	2E-17	2.71E+00	7.43E-15	3.00E-16	2E-17	3.72E-01	2.82E-14	2.00E-16	4E-17	2.65E-01
15-Aug-88	1.79E-14	3E-18	3.58E-01	1.49E-14	1.00E-15	1E-17	4.97E+00	5.34E-15	2.00E-16	2E-17	2.67E-01	2.45E-14	3.00E-16	2E-17	3.06E-01
14-Nov-88	4.46E-14	3E-18	8.92E-01	1.39E-14	2.00E-16	1E-17	4.63E+00	1.17E-14	2.00E-16	1E-17	5.85E-01	3.43E-14	2.00E-16	3E-17	4.29E-01
13-Feb-89	1.67E-14	4E-17	3.34E-01	5.54E-15	1.02E-16	1E-16	1.85E+00	7.20E-15	1.40E-16	2E-16	3.60E-01	5.02E-14	2.10E-16	5E-16	6.28E-01
15-May-89	2.03E-14	1E-18	4.06E-01	7.05E-15	2.00E-16	6E-17	2.35E+00	9.56E-15	2.00E-16	6E-18	4.78E-02	1.43E-14	1.00E-16	3E-17	1.79E-01

# UMETCO MINERALS CORPORATION

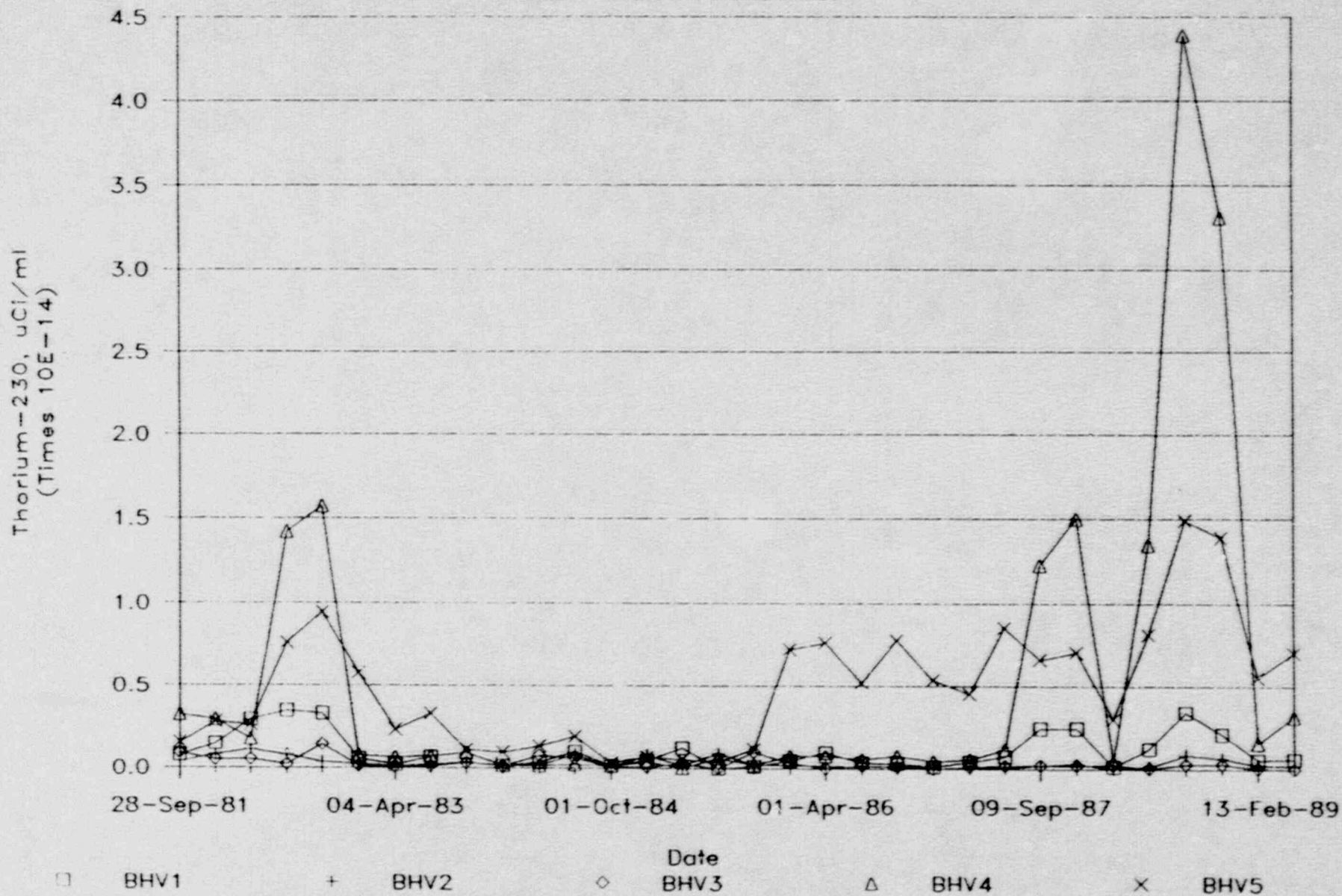
## Particulate Radionuclides



Graph 11

# UMETCO MINERALS CORPORATION

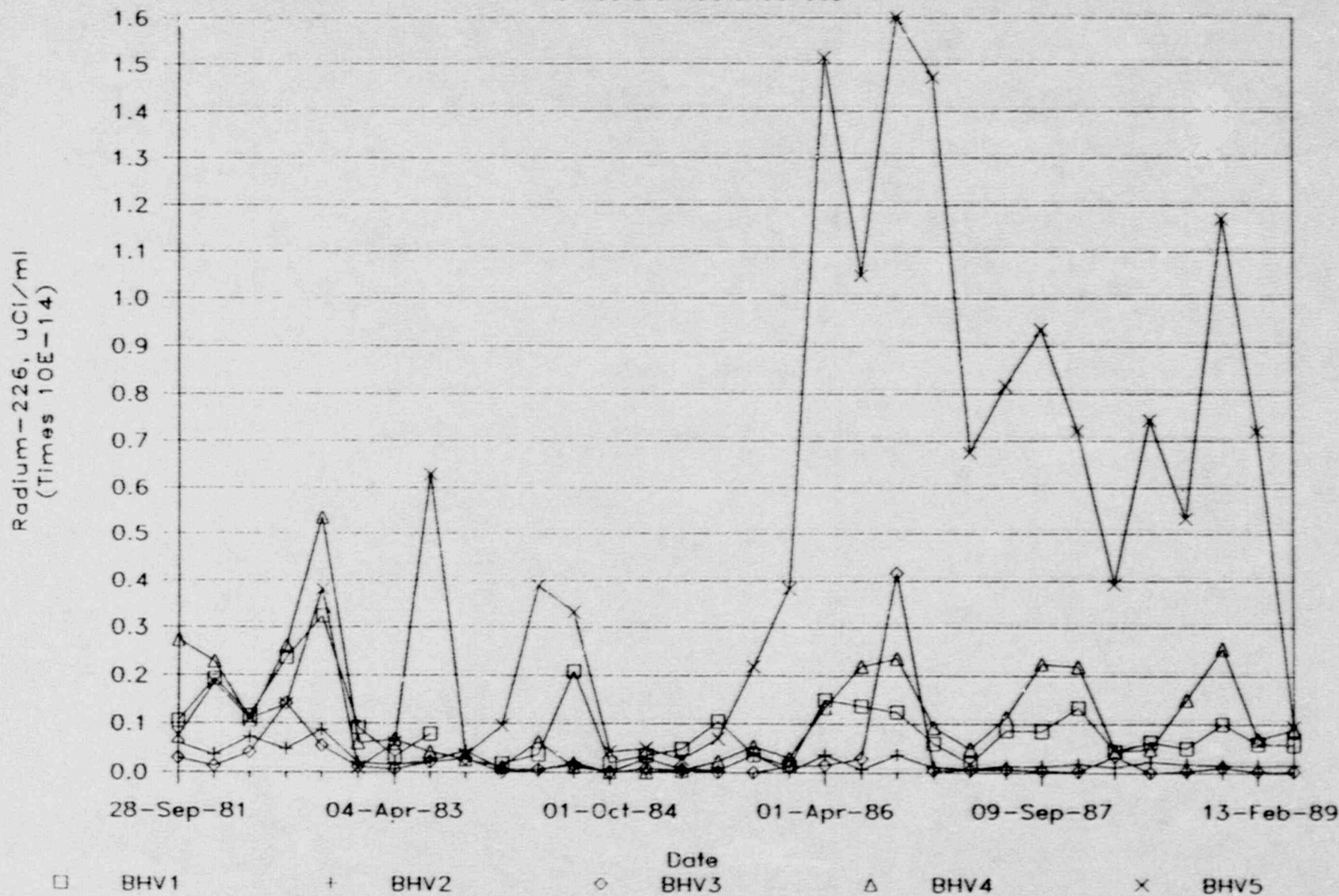
## Particulate Radionuclides



Graph 12

# UMETCO MINERALS CORPORATION

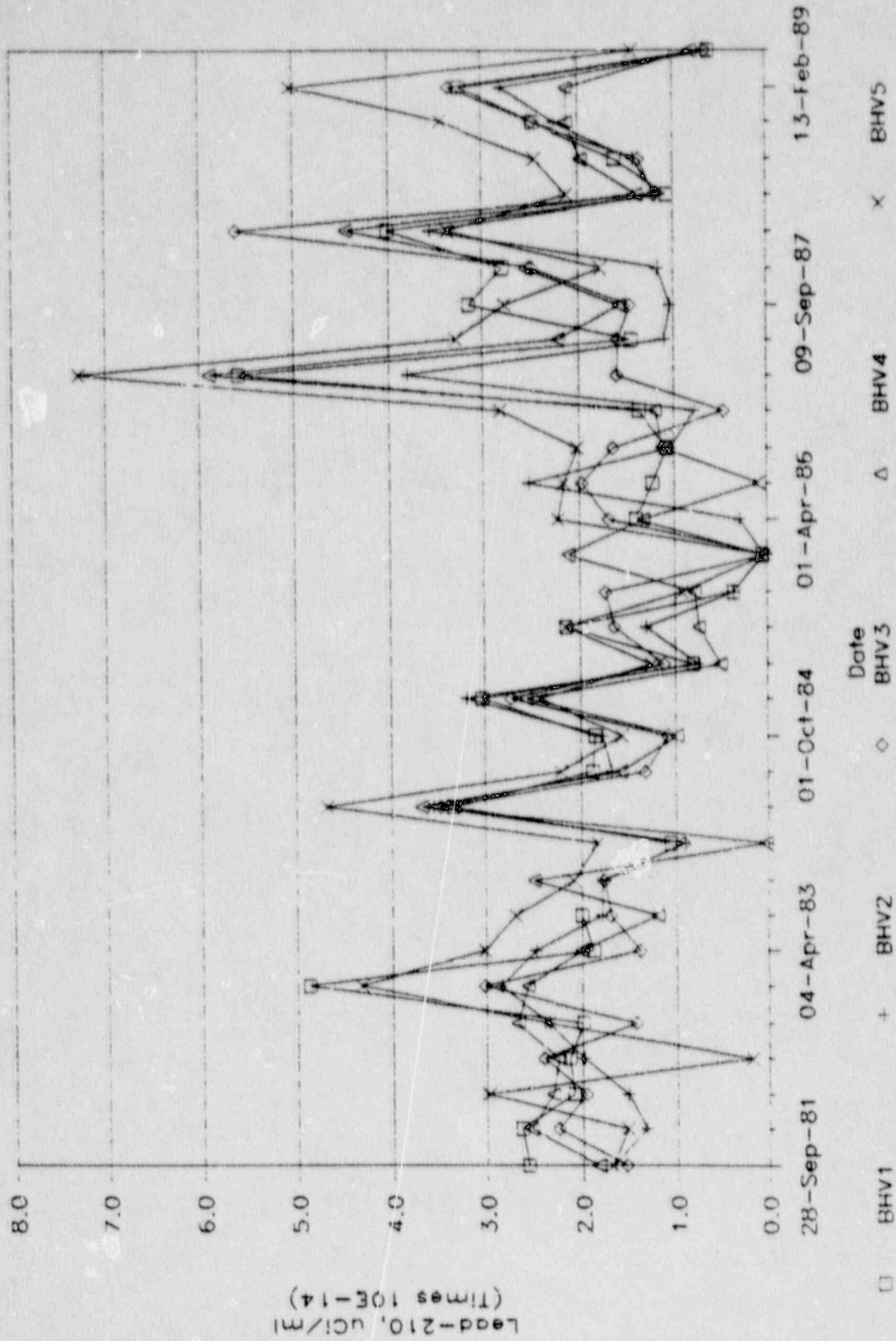
## Particulate Radionuclides



Graph 13

# UMETCO MINERALS CORPORATION

Particulate Radionuclides



Graph 14



TABLE 16

UMETCO MINERALS CORPORATION  
 WHITE MESA URANIUM MILL  
 SEMIANNUAL EFFLUENT AND MONITORING REPORT  
 Source Material License No. SUA-1358 Docket No. 40-8681

## AIR PARTICULATES

Sampling Period and Location	Radionuclide	Net Release From		Sampling Period	Radionuclide	Net Release From
		Site(Background Subtracted) uCi/ml				Site(Background Subtracted) uCi/ml
11/15/88 - 2/13/89 Met. Station BHV-1	U-Nat.	1.55E-15		2/14/89 - 5/15/89	U-Nat.	1.60E-15
	Th-230	5.25E-16		Met. Station	Th-230	6.32E-16
	Ra-226	5.74E-16		BHV-1	Ra-226	5.62E-16
	Pb-210	1.10E-15		Pb-210	Pb-210	4.00E-16
11/15/88 - 2/13/89 Nearest Residence BHV-2	U-Nat.	1.35E-16		2/14/89 - 5/15/89	U-Nat.	4.01E-16
	Th-230	2.37E-16		Nearest Residence	Th-230	2.28E-16
	Ra-226	1.30E-16		BHV-2	Ra-226	1.39E-16
	Pb-210	5.40E-15		Pb-210	Pb-210	5.10E-16
11/15/88 - 2/13/89 South Tailing Area BHV-4	U-Nat.	2.03E-15		2/14/89 - 5/15/89	U-Nat.	1.45E-16
	Th-230	1.51E-15		South Tailing Area	Th-230	3.14E-15
	Ra-226	6.69E-16		BHV-4	Ra-226	8.79E-16
	Pb-210	1.22E-14		Pb-210	Pb-210	1.49E-15
11/15/88 - 2/13/89 S.E. Tailing Area BHV-5	U-Nat.	1.63E-14		2/14/89 - 5/15/89	U-Nat.	2.02E-14
	Th-230	5.49E-15		S.E. Tailing Area	Th-230	7.05E-15
	Ra-226	7.18E-15		BHV-5	Ra-226	9.32E-16
	Pb-210	1.68E-14		Pb-210	Pb-210	7.74E-15

TABLE 17

UMETCO MINERALS CORPORATION  
 WHITE MESA URANIUM MILL  
 SEMI-ANNUAL EFFLUENT AND MONITORING REPORT  
 Source Material License No. SUA-1358 Docket No. 40-8681

RADIOLOGICAL 50 YEAR DOSE COMMITMENT  
 TO THE NEAREST RESIDENT FROM THE  
 INHALATION OF AIRBORNE PARTICULATES  
 FIRST QUARTER

Radio-nuclide	Net Concentration (Background Subtracted) uCi/ml	Dose mrem/Year		
		WHOLE BODY	BONE	LUNG
U-238	1.34E-16	0.0005	0.0138	0.1035
U-234	9.45E-19	0.0000	0.0001	0.0007
Th-230	2.37E-16	0.0009	0.0244	0.1830
Ra-226	1.30E-16	0.0005	0.0134	0.1004
Pb-210	0.00E+00	0.0000	0.0000	0.0000
TOTAL		0.0018	0.0516	0.3875

## SECOND QUARTER

Radio-nuclide	Net Concentration (Background Subtracted) uCi/ml	Dose mrem/Year		
		WHOLE BODY	BONE	LUNG
U-238	3.98E-16	0.0001	0.0021	0.0629
U-234	2.81E-18	0.0000	0.0000	0.0005
Th-230	2.28E-16	0.0001	0.0001	0.0001
Ra-226	1.39E-16	0.0043	0.0430	0.9188
Pb-210	0.00E+00	0.0000	0.0000	0.0000
TOTAL		0.0045	0.0451	0.9823



TABLE 19

Umetco MINERALS CORPORATION  
 WHITE MESA URANIUM MILL  
 SEMI-ANNUAL EFFLUENT AND MONITORING REPORT  
 Source Material License No. SUA-1358 Docket No. 40-8681

MONITOR WELLS  
 WATER QUALITY ANALYSIS  
 SECOND QUARTER  
 GROUNDWATER

PARAMETER	MW#1	MW#2	MW#3	MW#4	MW#5	MW#11	MW#12	CULINARY
DATE OF SAMPLE	06/21/89	06/21/89	06/22/89	06/21/89	06/22/89	06/22/89	06/22/89	06/22/89
CASING ELEVATION, feet	5648.22	5613.49	5555.32	5622.57	5609.33	5611.08	5609.45	N/A
PHREATIC ELEVATION, feet	5572.12	5503.19	5471.62	5529.34	5501.24	5508.59	5500.22	N/A
pH FIELD	7.98	7.08	6.71	6.86	7.38	7.78	6.80	7.70
FIELD SP. COND. (umhos@T)	1694	3660	5660	3690	2710	2520	4000	550
TDS, (mg/l)	1280	3210	5450	3580	2020	1750	4030	316
CHLORIDE (mg/l)	11.3	6.4	66.9	45.9	54.6	32.4	60.8	5.2
SULFATES (mg/l)	718	2040	3500	2180	1180	1020	2500	65
ARSENIC (mg/l)	0.004	0.014	0.033	0.017	0.01	0.005	0.021	0.015
SELENIUM (mg/l)	0.001	0.002	0.003	0.003	0.004	0.004	0.001	0.001
U-NAT. (uCi/ml)	2.0E-09	6.8E-09	2.3E-08	1.2E-09	6.0E-10	8.0E-10	1.1E-08	6.0E-10
U-NAT. LLD. (uCi/ml)	2.0E-10	2.0E-10	2.0E-10	2.0E-10	2.0E-10	2.0E-10	2.0E-10	2.0E-10

Monitor Well 13 removed second quarter due to facility expansion.

TABLE 20  
 UMETCO MINERALS CORPORATION  
 WHITE MESA MILL  
 QUALITY CONTROL DUPLICATE SAMPLES  
 FIRST QUARTER 1989

	Monitor Well 2	Blind Duplicate	Per Cent Difference		Monitor Well 4	Blind Duplicate	Per Cent Difference
Arsenic	0.032	0.03	6.25%		0.033	0.027	18.18%
Selenium	0.017	0.019	-11.76%		0.019	0.02	-5.26%
Sodium	464	506	-9.05%		275	260	5.45%
TDS	3140	3140	0.00%		3530	3450	2.27%
Sulfate	1990	2010	-1.01%		2070	2160	-4.35%
Chloride	7.6	7.6	0.00%		45	44.4	1.33%
U-Natural	6	6.6	-10.00%		1.4	1.2	14.29%
Ra-226	0.2	0.2	0.00%		0.1	0.1	0.00%
Th-230	0	0.0	0.00%		0.1	0.3	-200.00%
Pb-210	0.8	0.2	75.00%		0.5	0.9	-80.00%

SECOND QUARTER 1989

	Monitor Well 11	Blind Duplicate	Per Cent Difference		Monitor Well 5	Blind Duplicate	Per Cent Difference
Arsenic							
Selenium							
Sodium							
TDS	1750	1770	-1.14%		2020	2010	0.50%
Sulfate	1020	1020	0.00%		1180	1190	-0.85%
Chloride	32.4	32.4	0.00%		54.6	54.6	0.00%
U-Natural	0.8	0.6	25.00%		0.6	0.4	33.33%
Ra-226							
Th-230							
Pb-210							

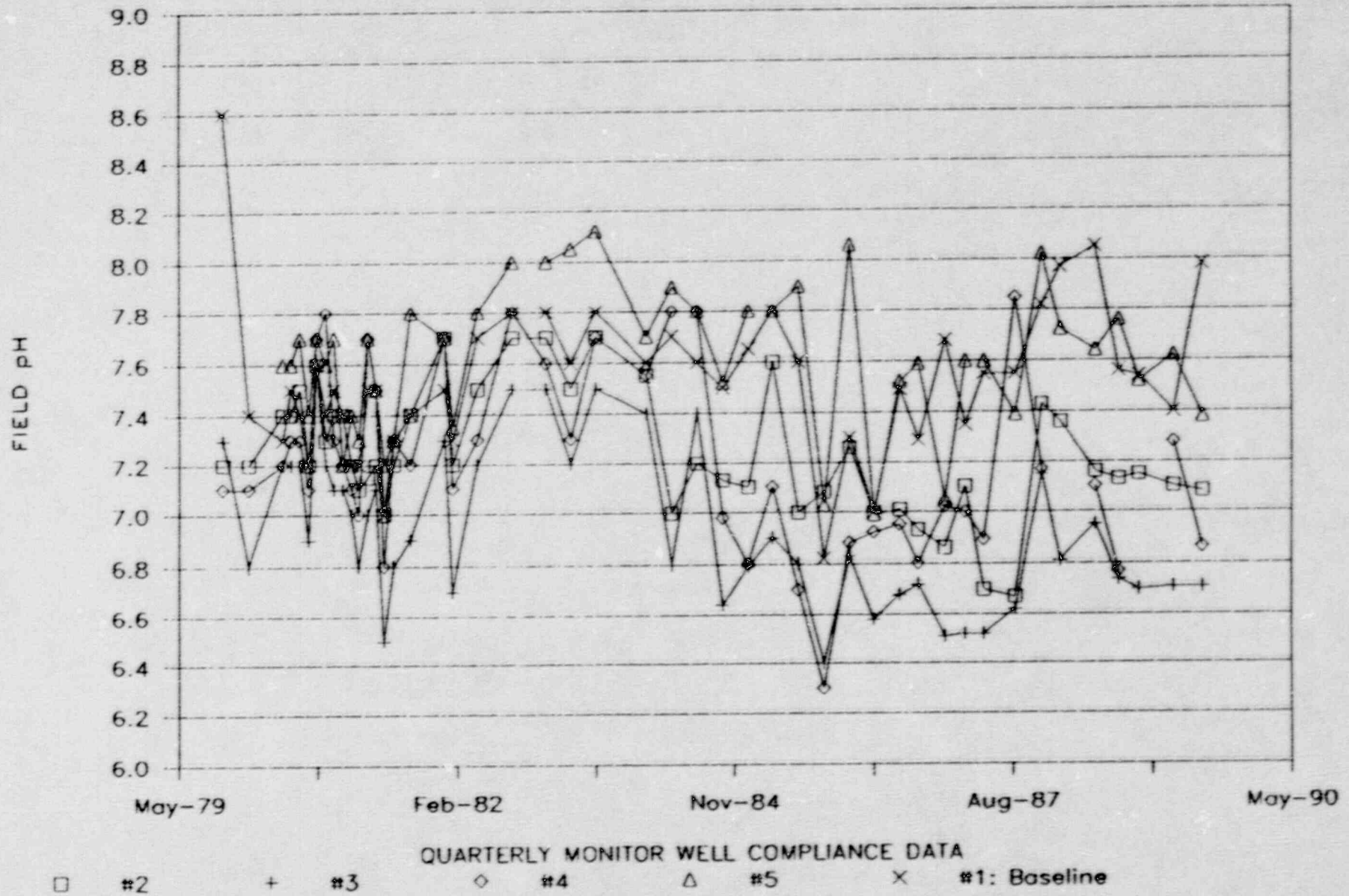
TABLE 21

UMETCO MINERALS CORPORATION  
 WHITE MESA MILL  
 SURFACE WATER ANALYSIS  
 SEMIANNUAL EFFULENT REPORT

	Cottonwood		Westwater	
	1st 89	2nd 89	1st 89	2nd 89
Date of Sample	03/13/89	06/13/89	03/13/89	06/13/89
Field Temperature, C	9.0	22.4	DRY	DRY
Field pH	8.8	7.93	DRY	DRY
Field Sp. Cond. (umhos)	400	270	DRY	DRY
TDS (mg/l)	343	266	DRY	DRY
TSS (mg/l)	22	4720	DRY	DRY
Gross Alpha (pCi/l)	2.6	5.0	DRY	DRY
LLD (pCi/l)	1.0	1.0	DRY	DRY
Ra-226 dissolved (pCi/l)	0.1	na	DRY	DRY
Ra-226 suspended (pCi/l)	0.2	na	DRY	DRY
Ra-226 LLD (pCi/l)	0.2	na	DRY	DRY
Th-230 dissolved (pCi/l)	0.1	na	DRY	DRY
Th-230 suspended (pCi/l)	0.8	na	DRY	DRY
Th-230 LLD (pCi/l)	0.2	na	DRY	DRY
U-nat dissolved (mg/l)	0.0093	na	DRY	DRY
U-nat suspended (mg/l)	0.0023	na	DRY	DRY
U-nat LLD (ug/l)	0.3	na	DRY	DRY

# UMETCO MINERALS CORPORATION

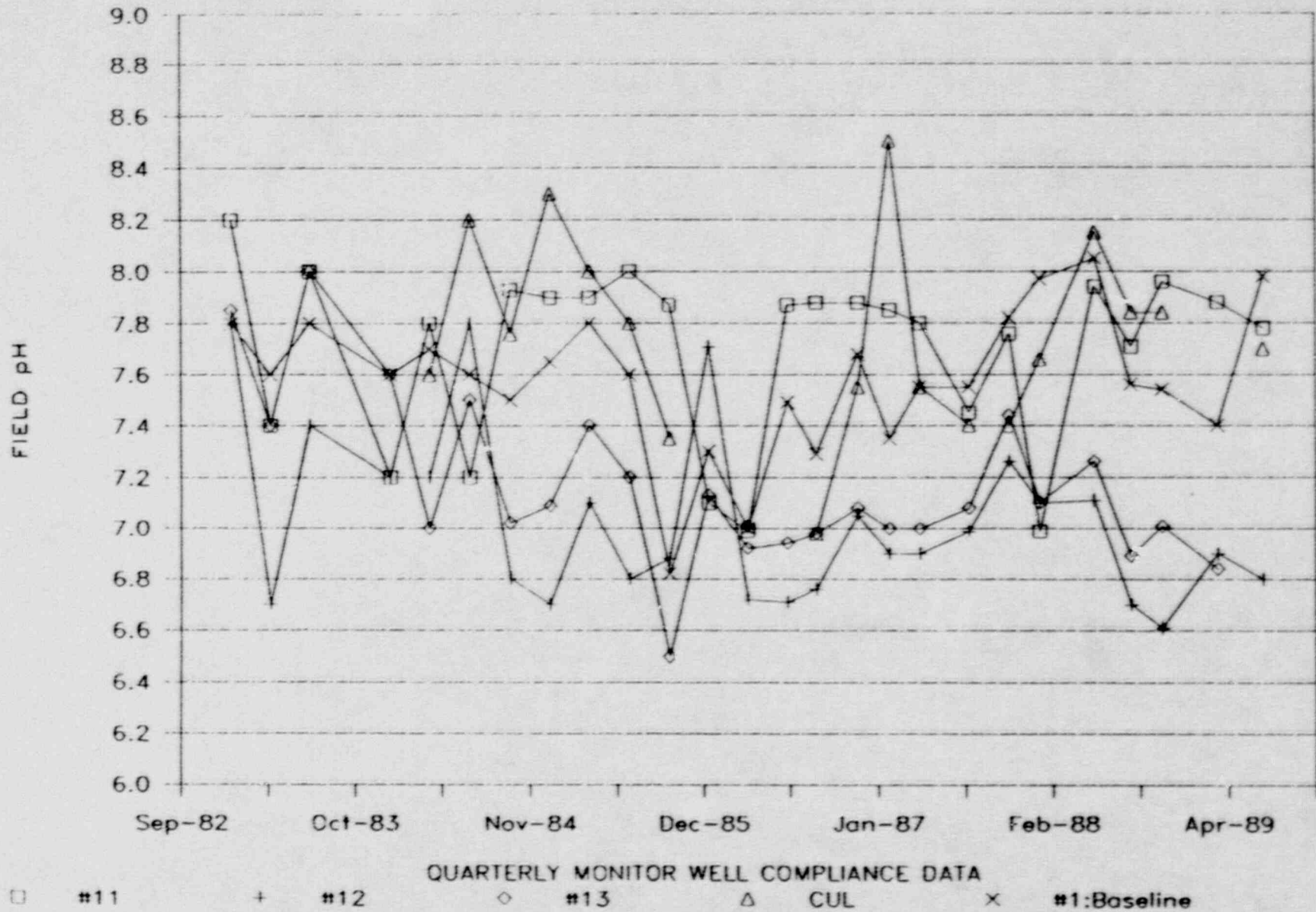
## WHITE MESA MILL



Graph 15

# UMETCO MINERALS CORPORATION

## WHITE MESA MILL

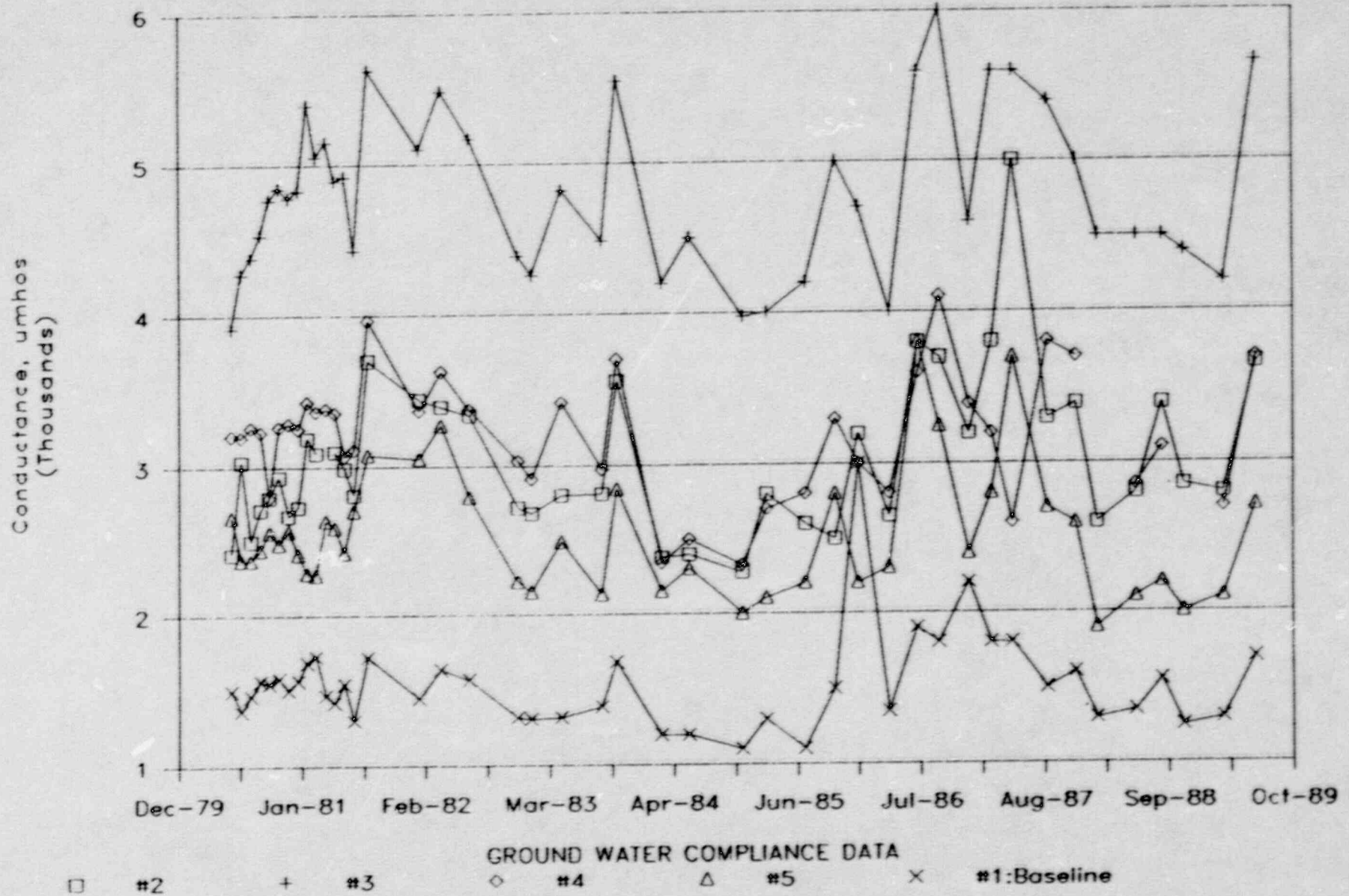


Graph 16



# UMETCO MINERALS CORPORATION

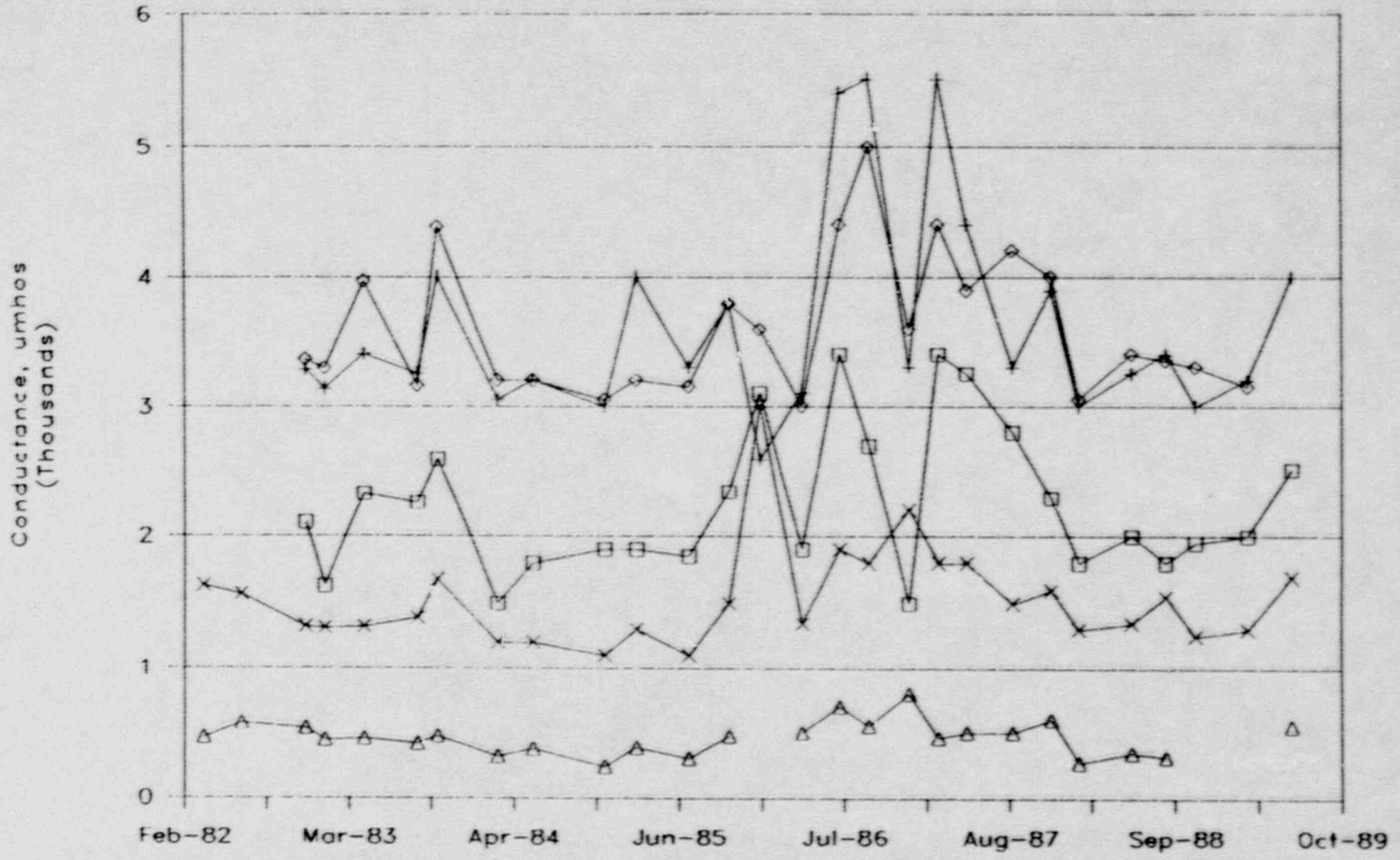
## WHITE MESA MILL



Graph 17

# UMETCO MINERALS CORPORATION

## WHITE MESA MILL



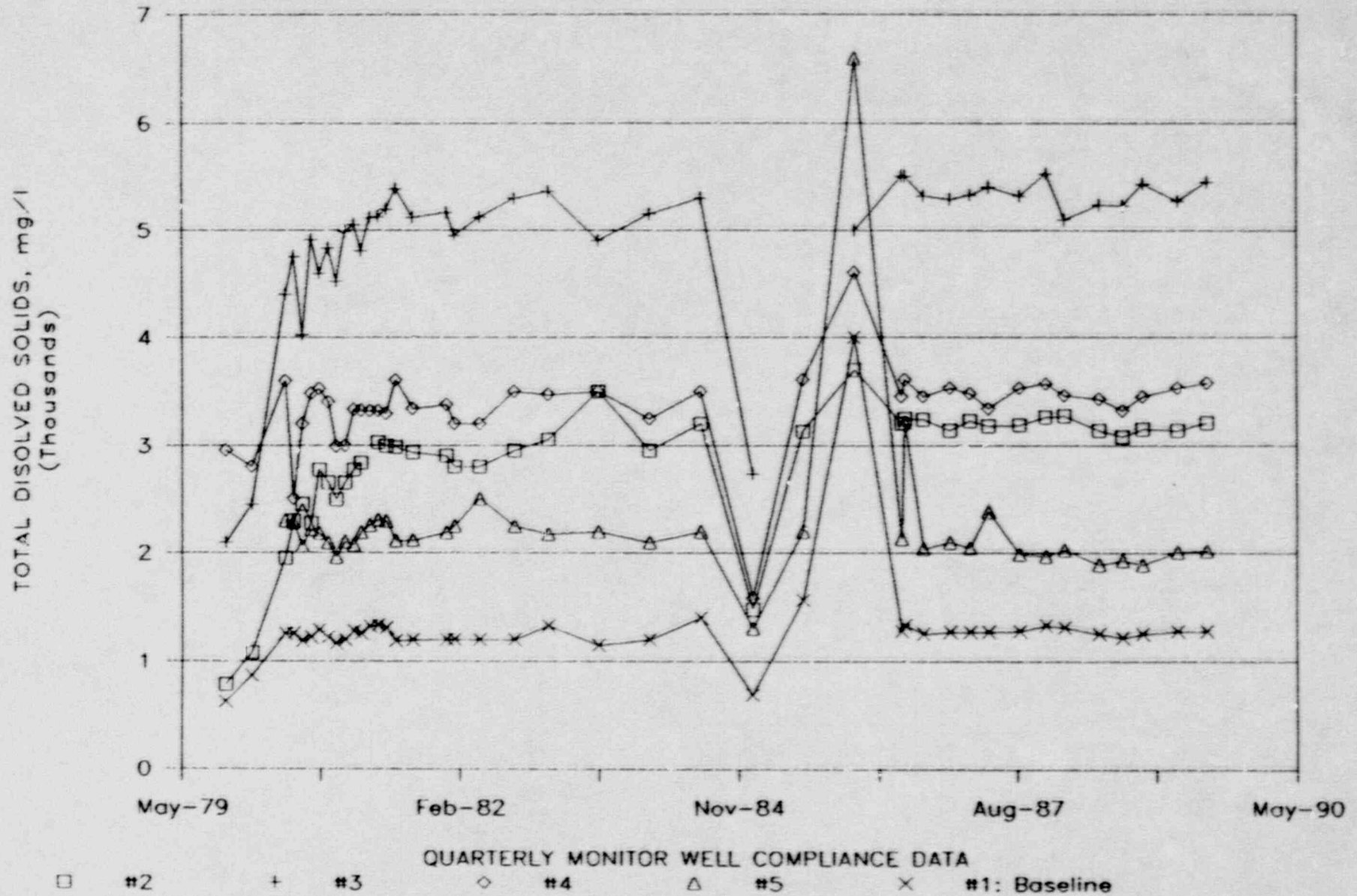
GROUND WATER COMPLIANCE DATA

□ #11      + #12      ◇ #13      △ Cul      × #1:Baseline

Graph 18

# UMETCO MINERALS CORPORATION

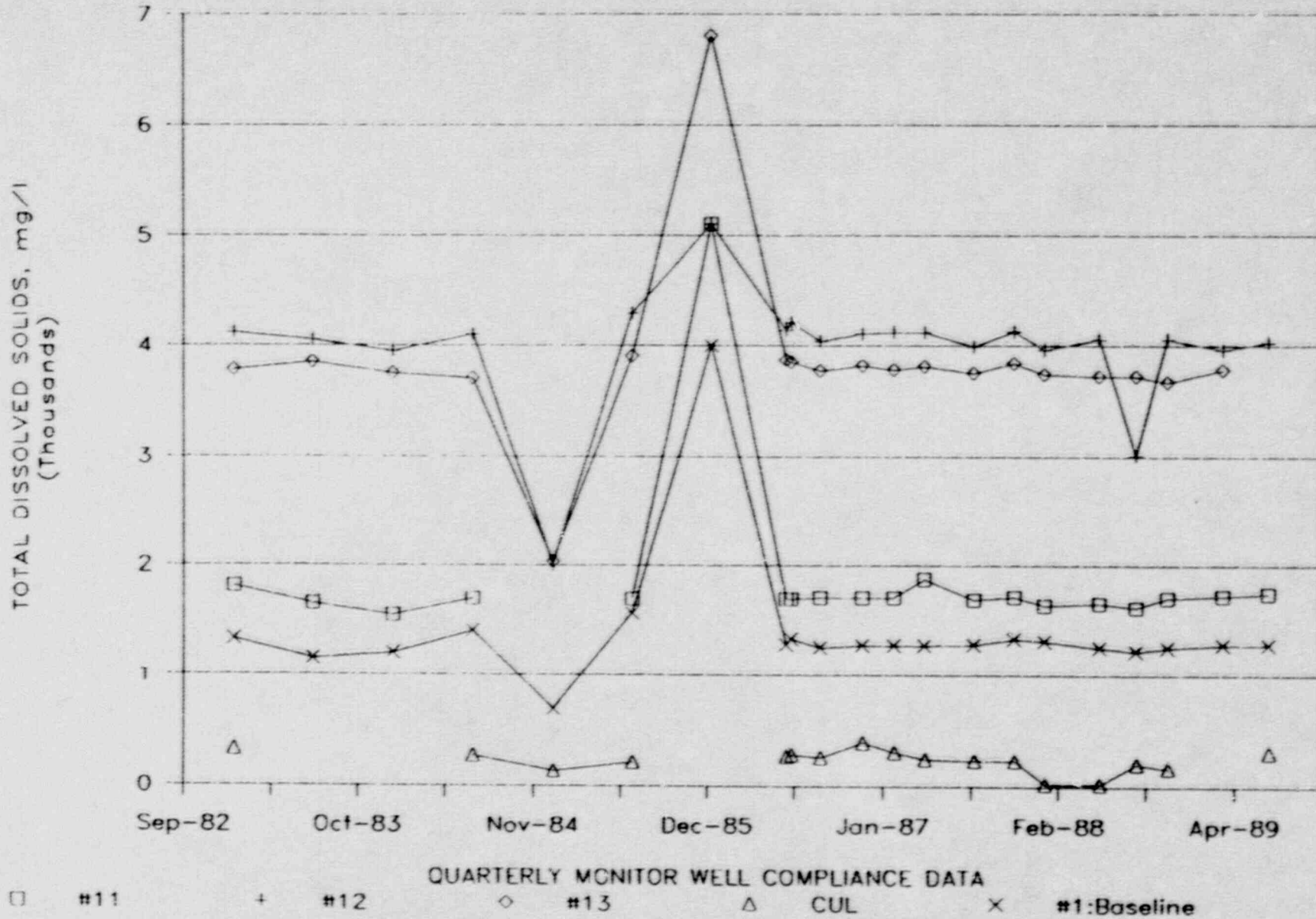
## WHITE MESA MILL



Graph 19

# UMETCO MINERALS CORPORATION

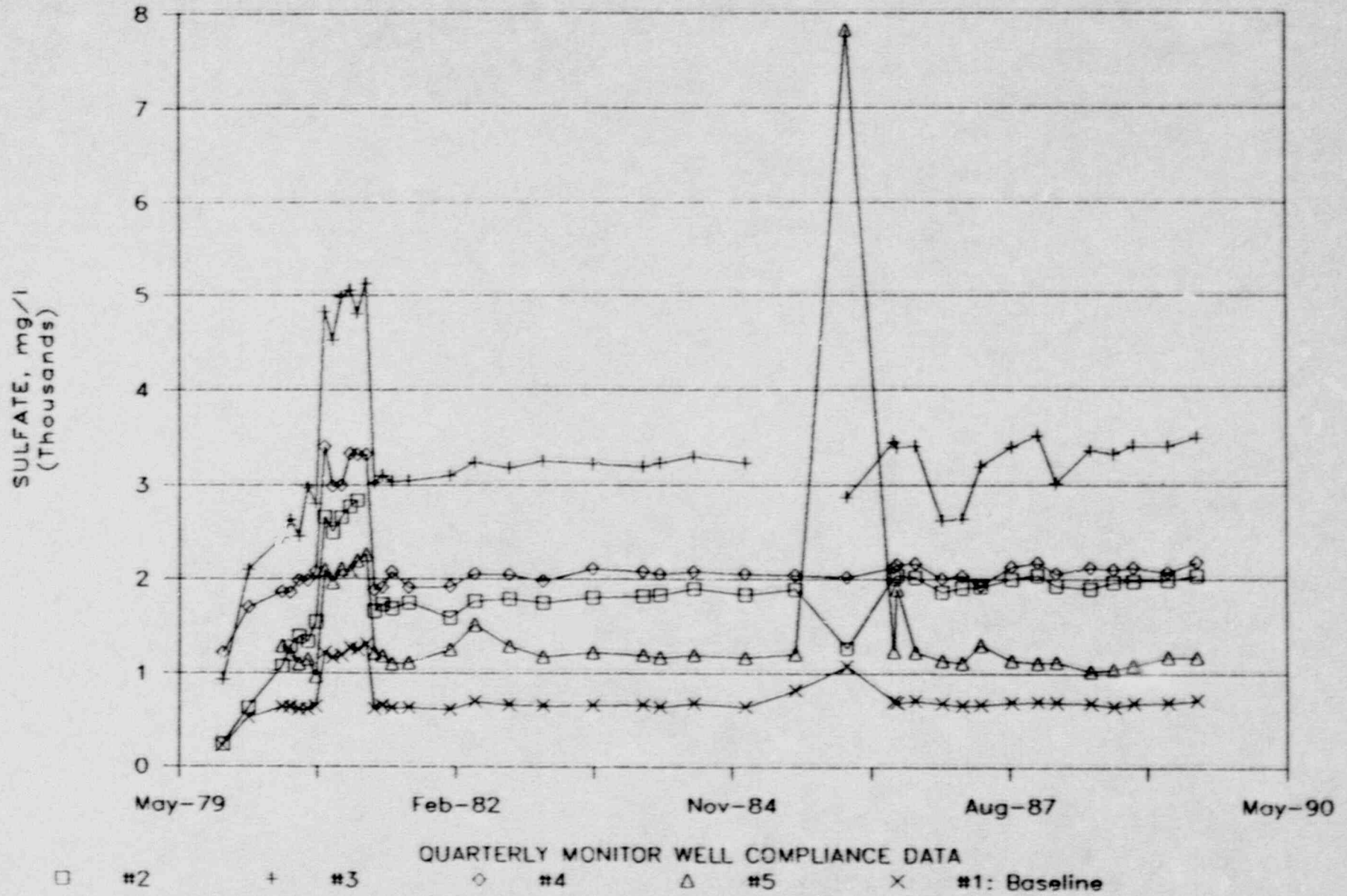
## WHITE MESA MILL



Graph 20

# UMETCO MINERALS CORPORATION

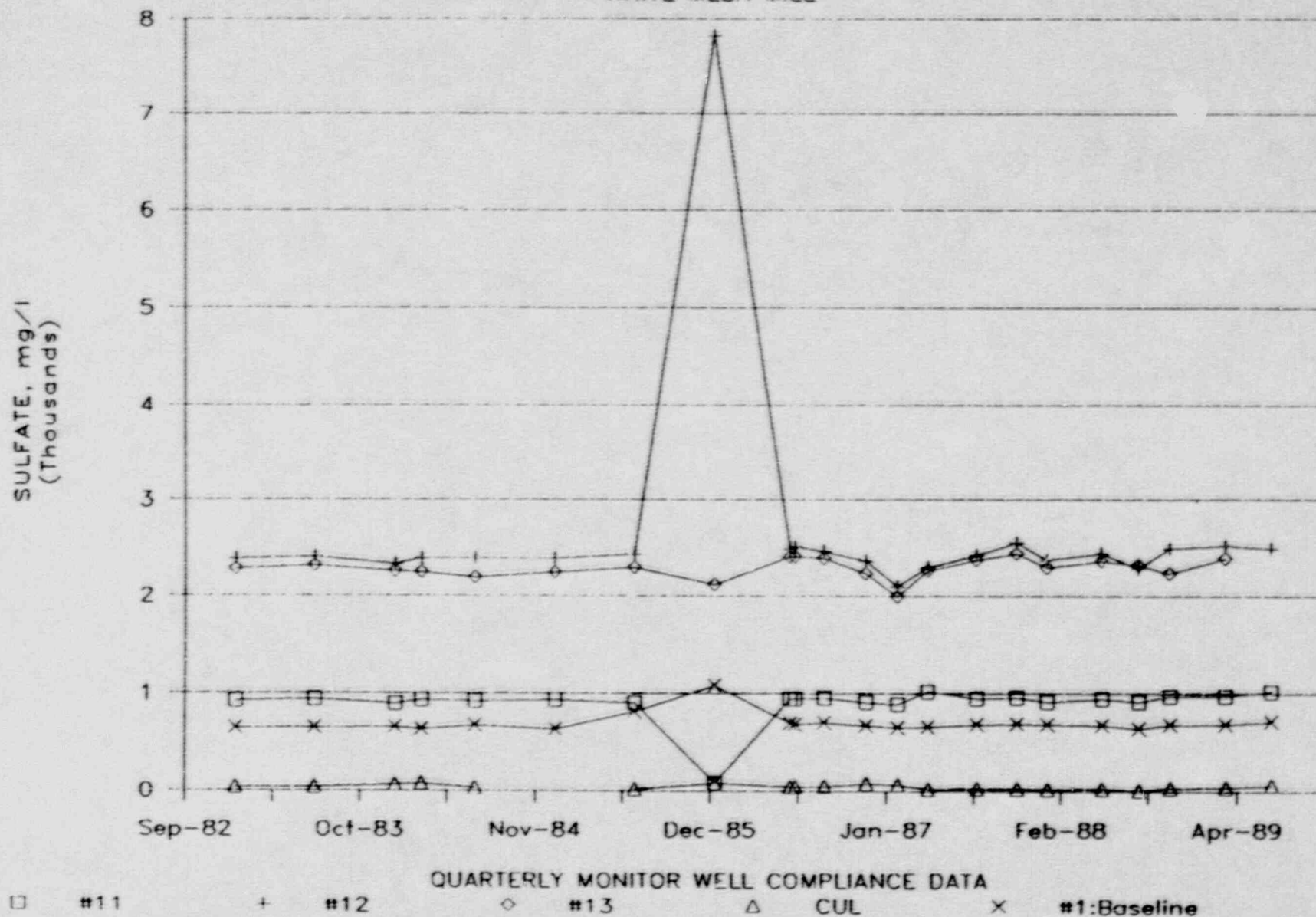
WHITE MESA MILL



Graph 21

# UMETCO MINERALS CORPORATION

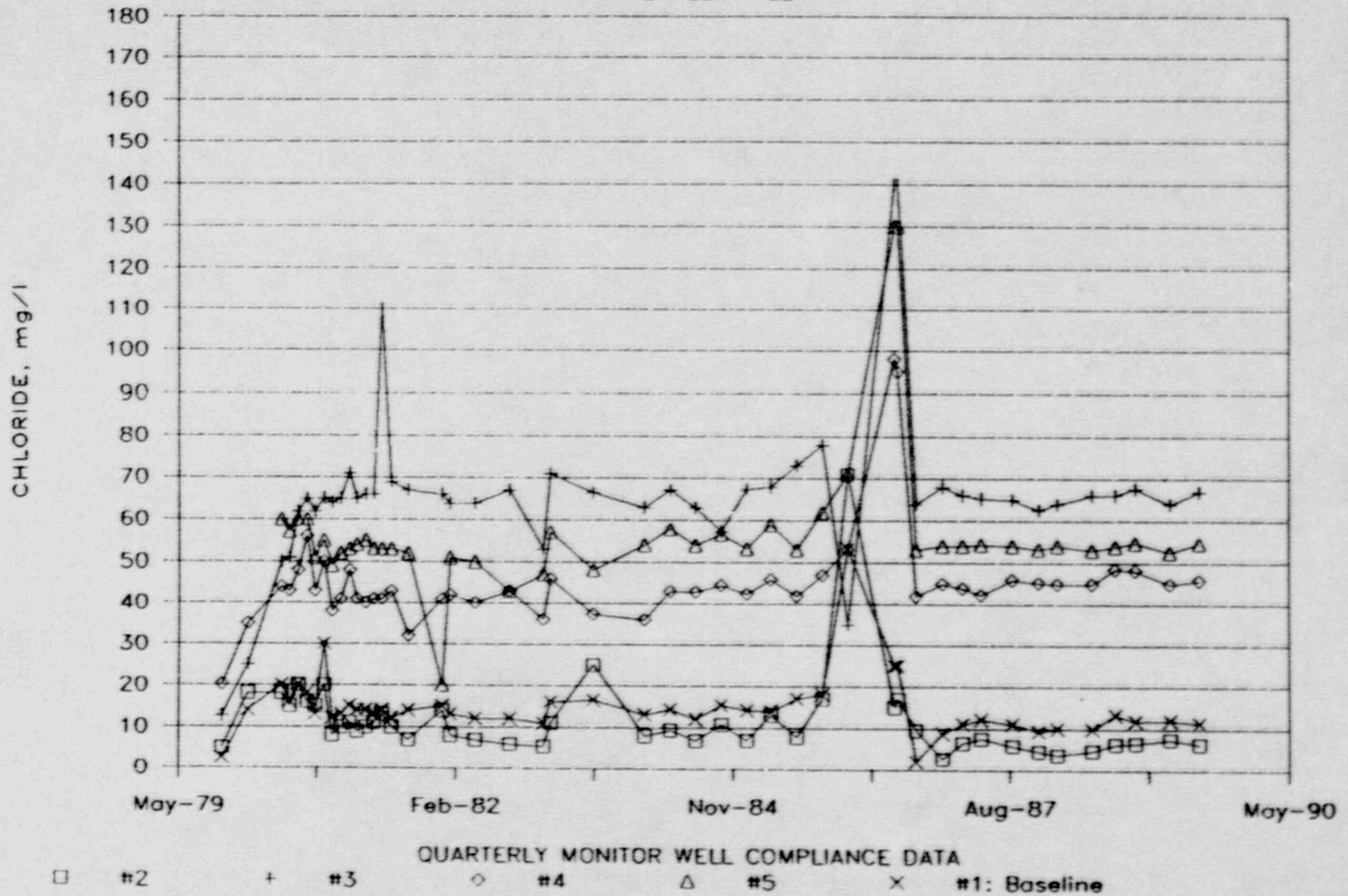
## WHITE MESA MILL



Graph 22

# UMETCO MINERALS CORPORATION

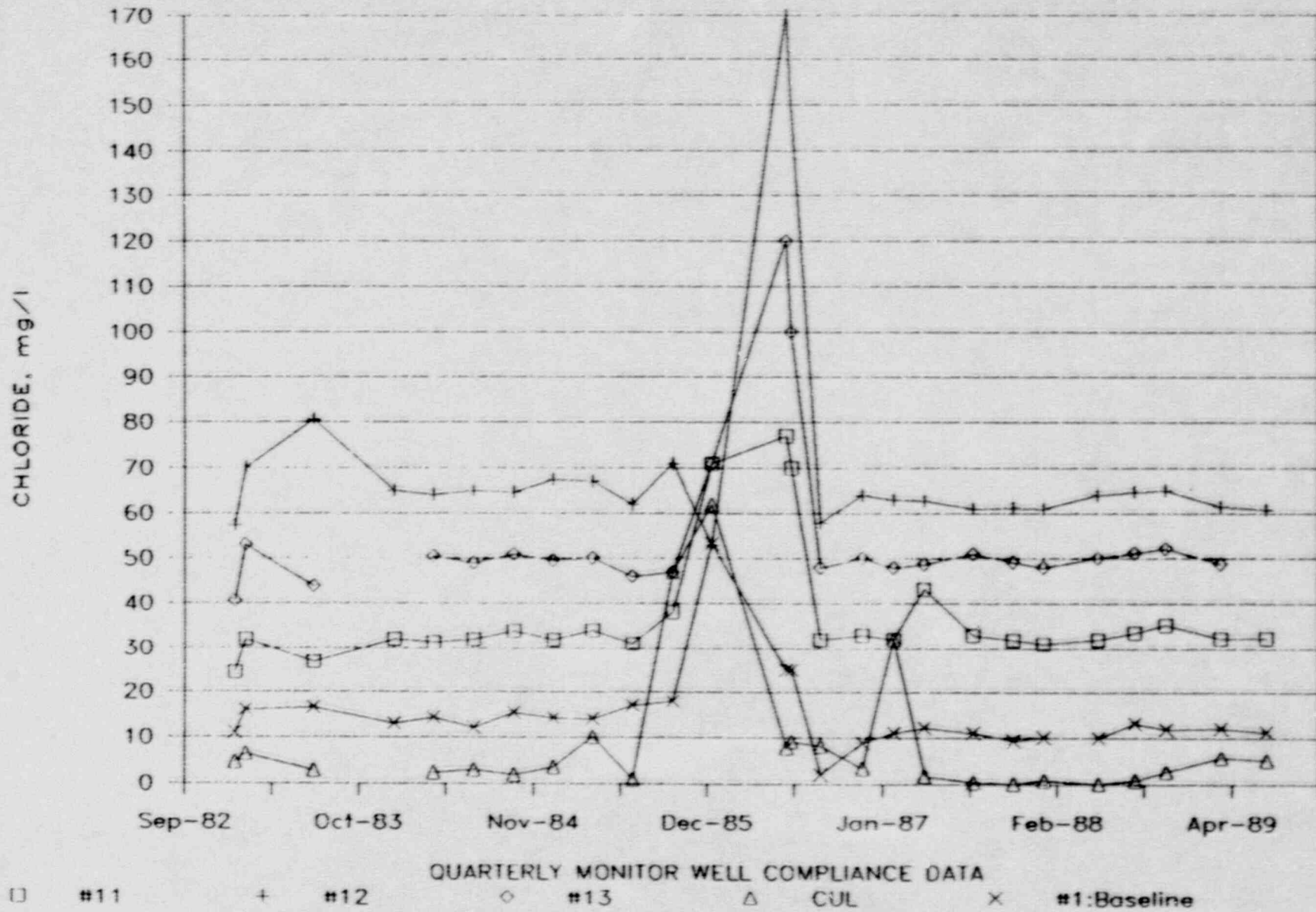
## WHITE MESA MILL



Graph 23

# UMETCO MINERALS CORPORATION

## WHITE MESA MILL

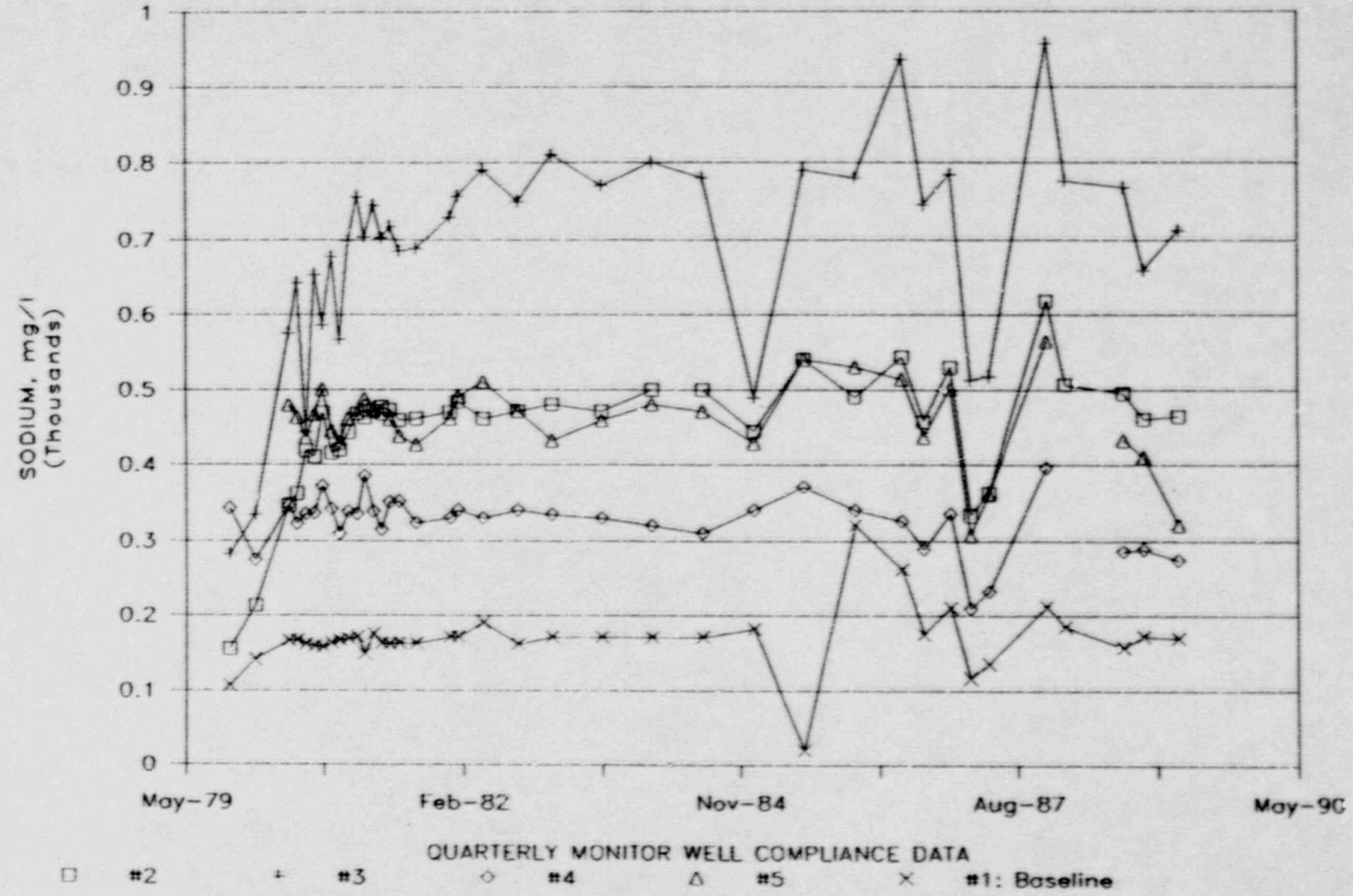


Graph 24



# UMETCO MINERALS CORPORATION

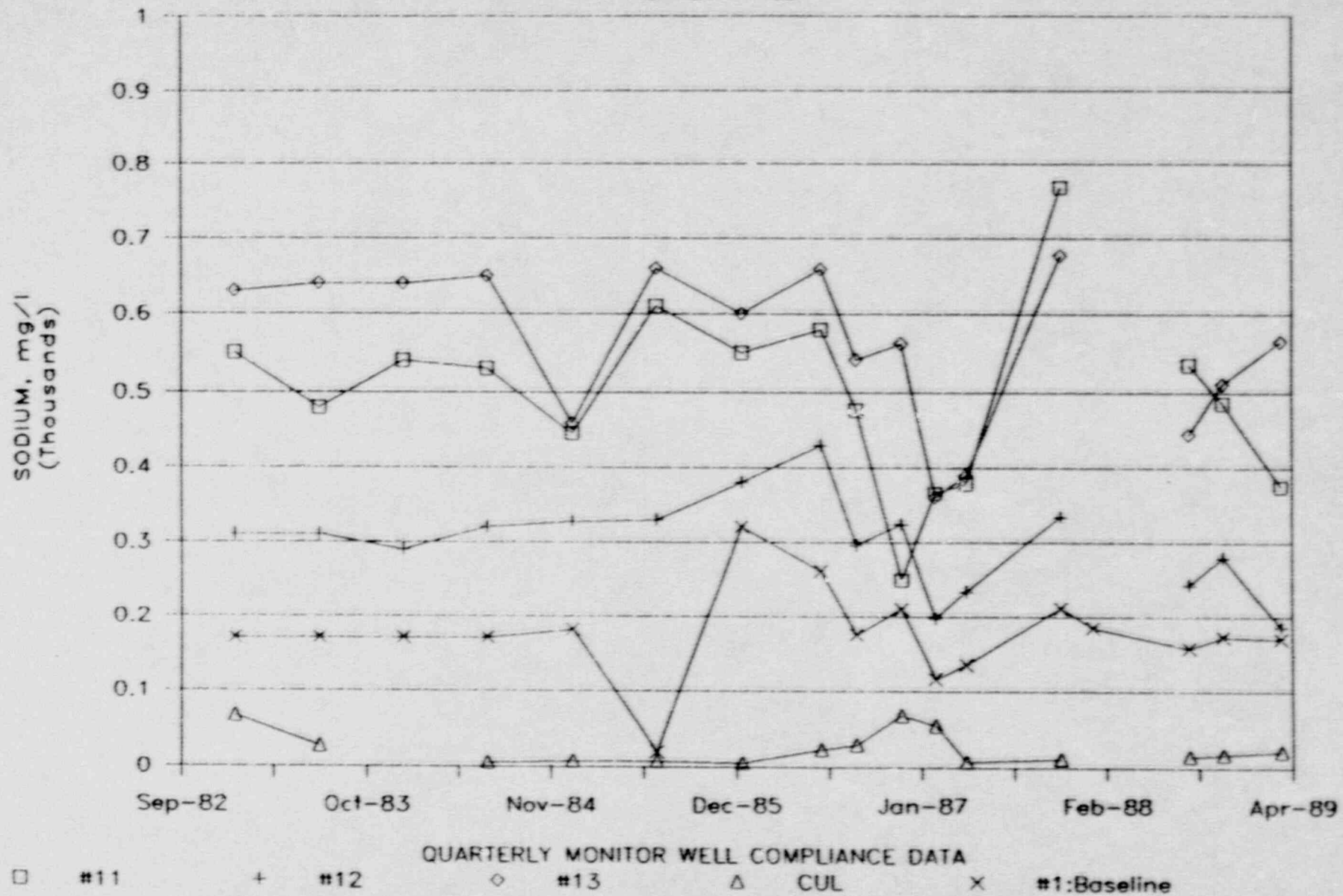
WHITE MESA MILL



Graph 25

# UMETCO MINERALS CORPORATION

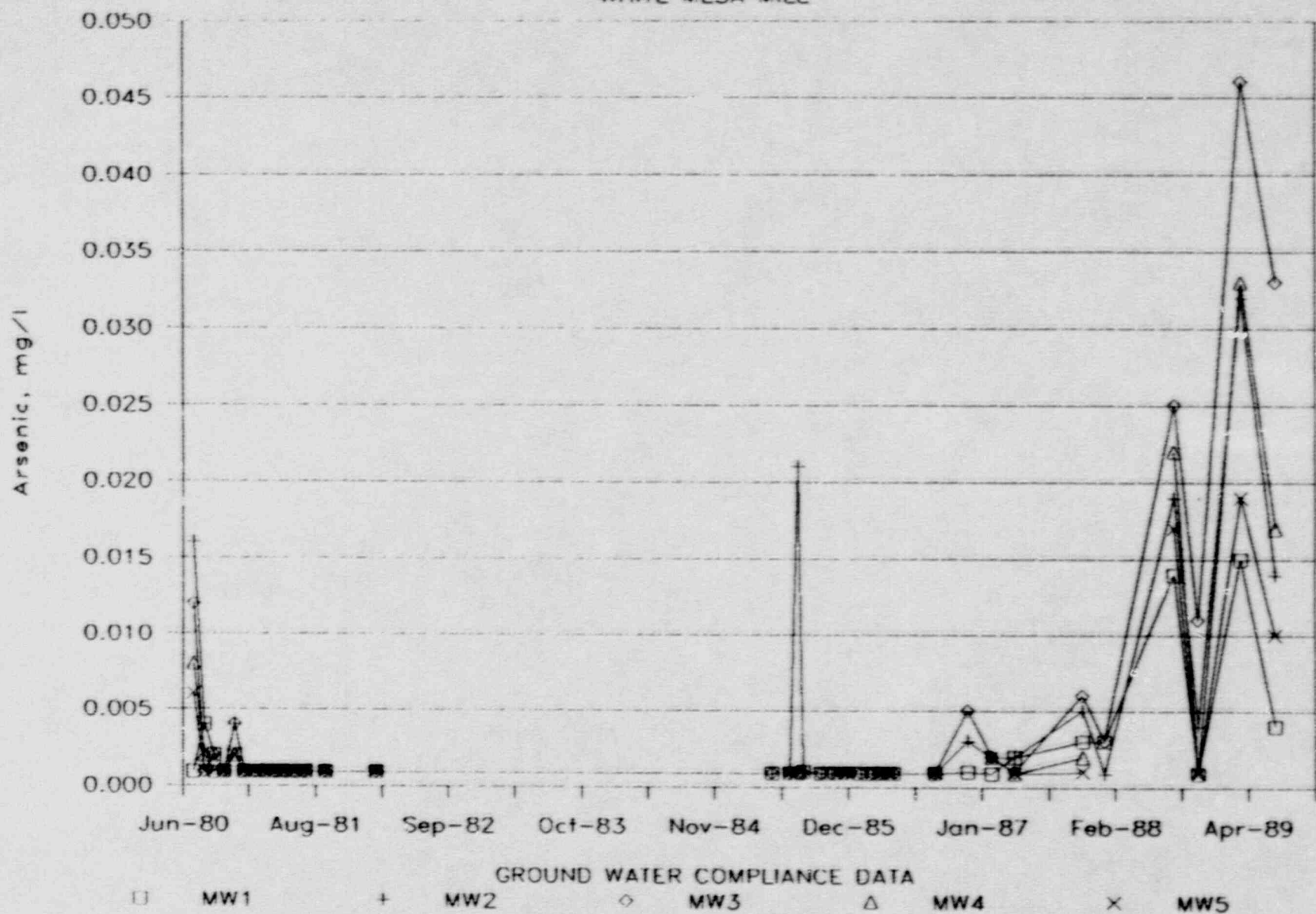
WHITE MESA MILL



Graph 26

# Umetco MINERALS CORPORATION

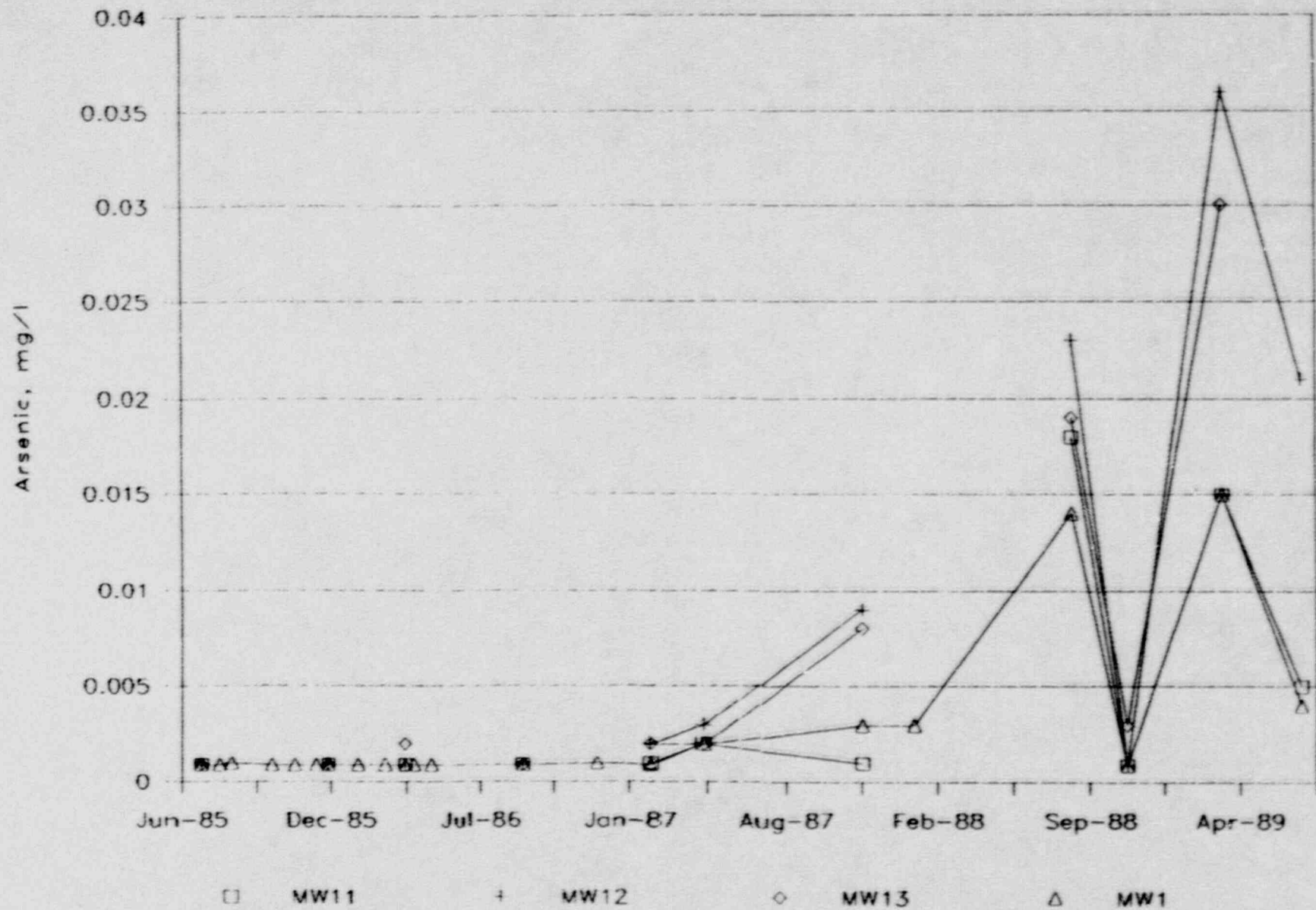
WHITE MESA MILL



Graph 27

# UMETCO MINERALS CORPORATION

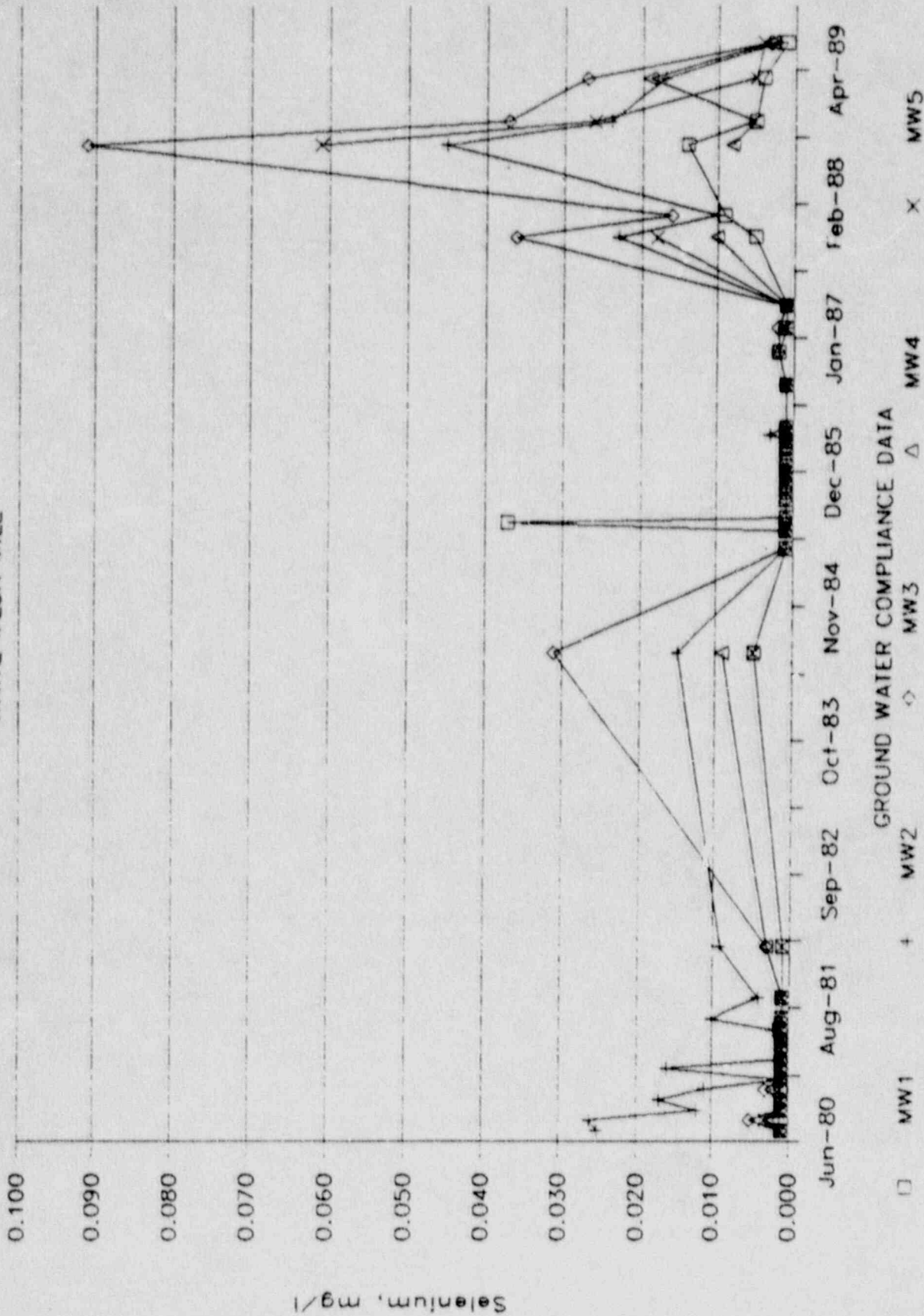
White Mesa Mill



Graph 28

# Umetco MINERALS CORPORATION

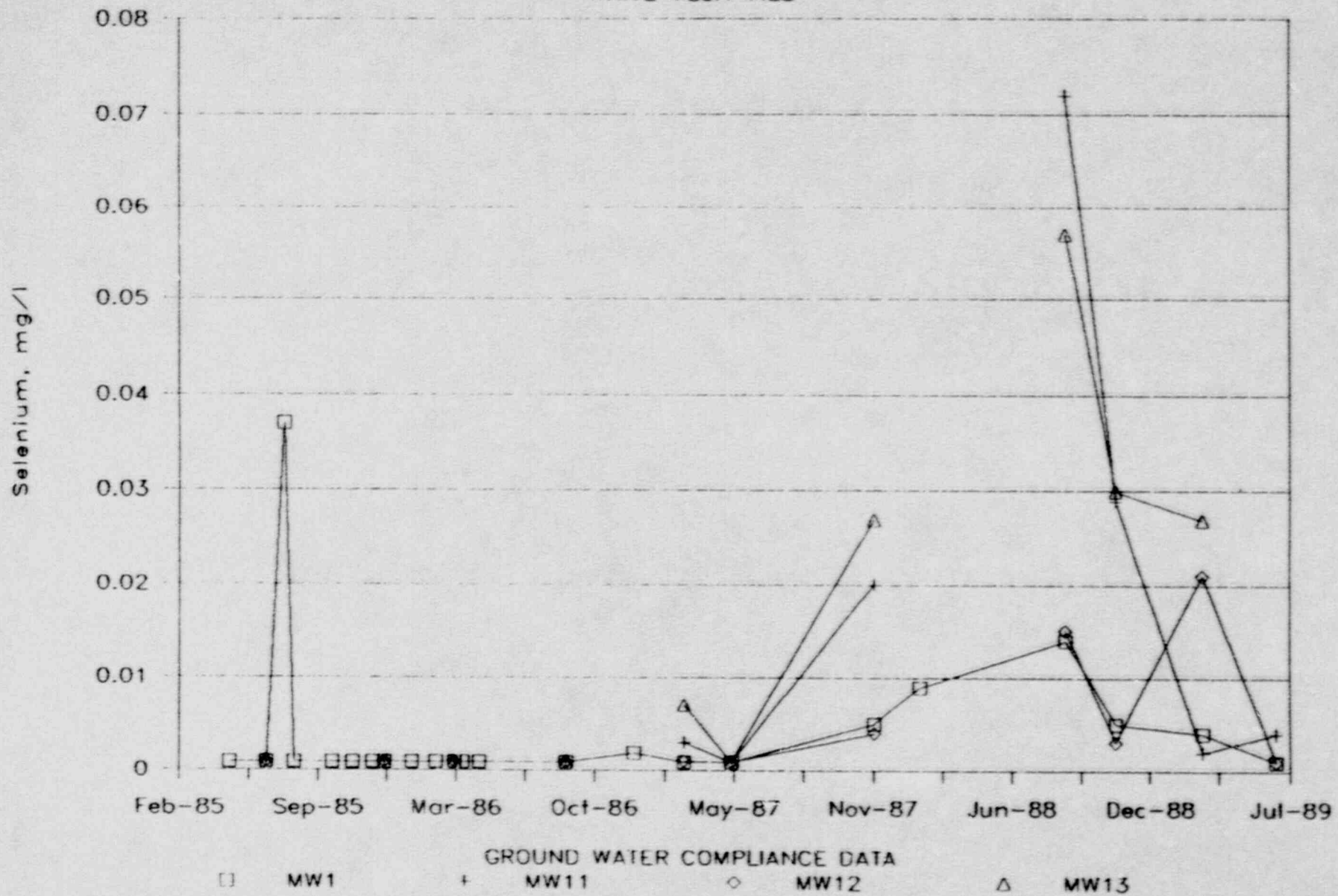
WHITE MESA MILL



Graph 29

# Umetco MINERALS CORPORATION

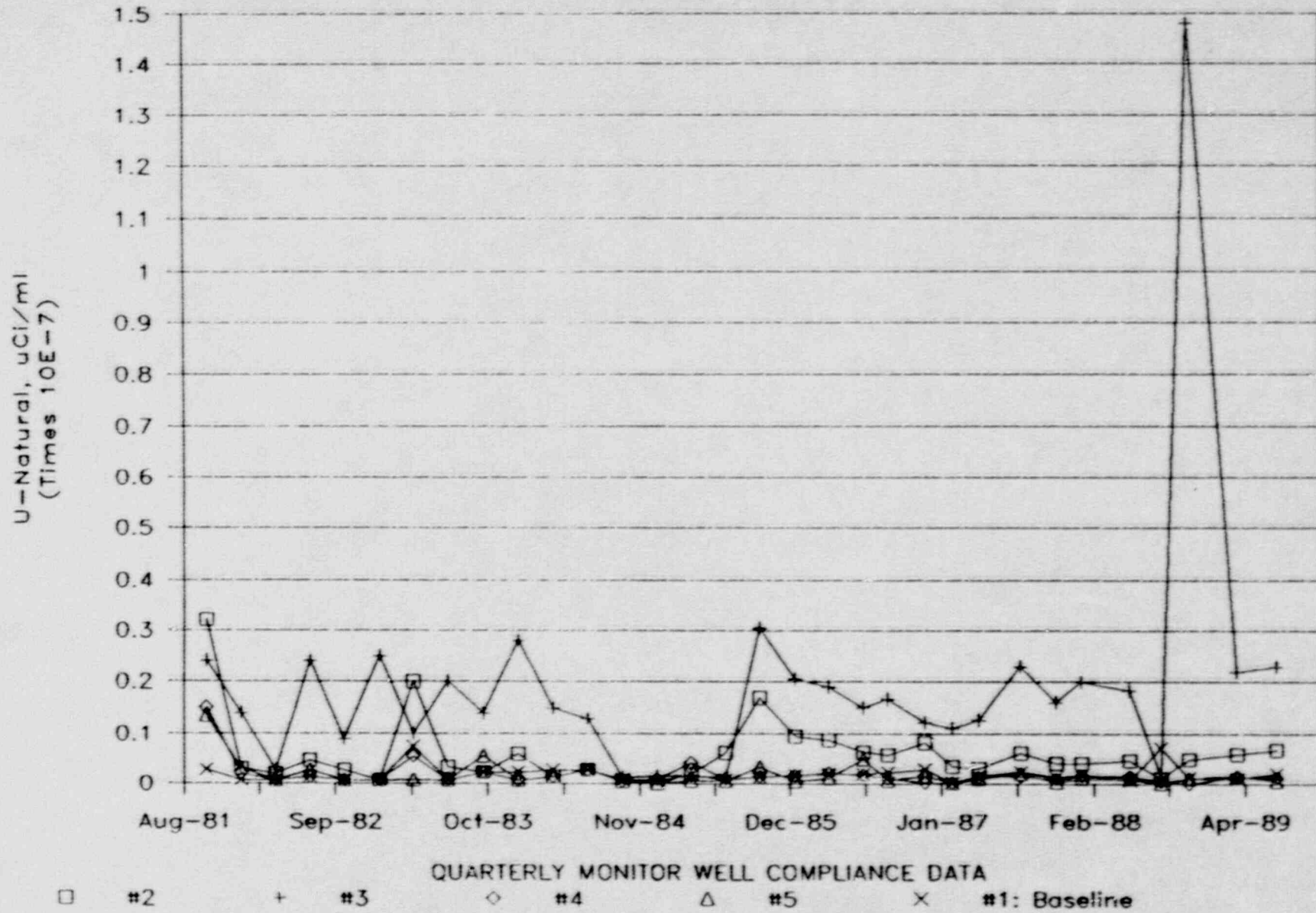
## WHITE MESA MILL



Graph 30

# UMETCO MINERALS CORPORATION

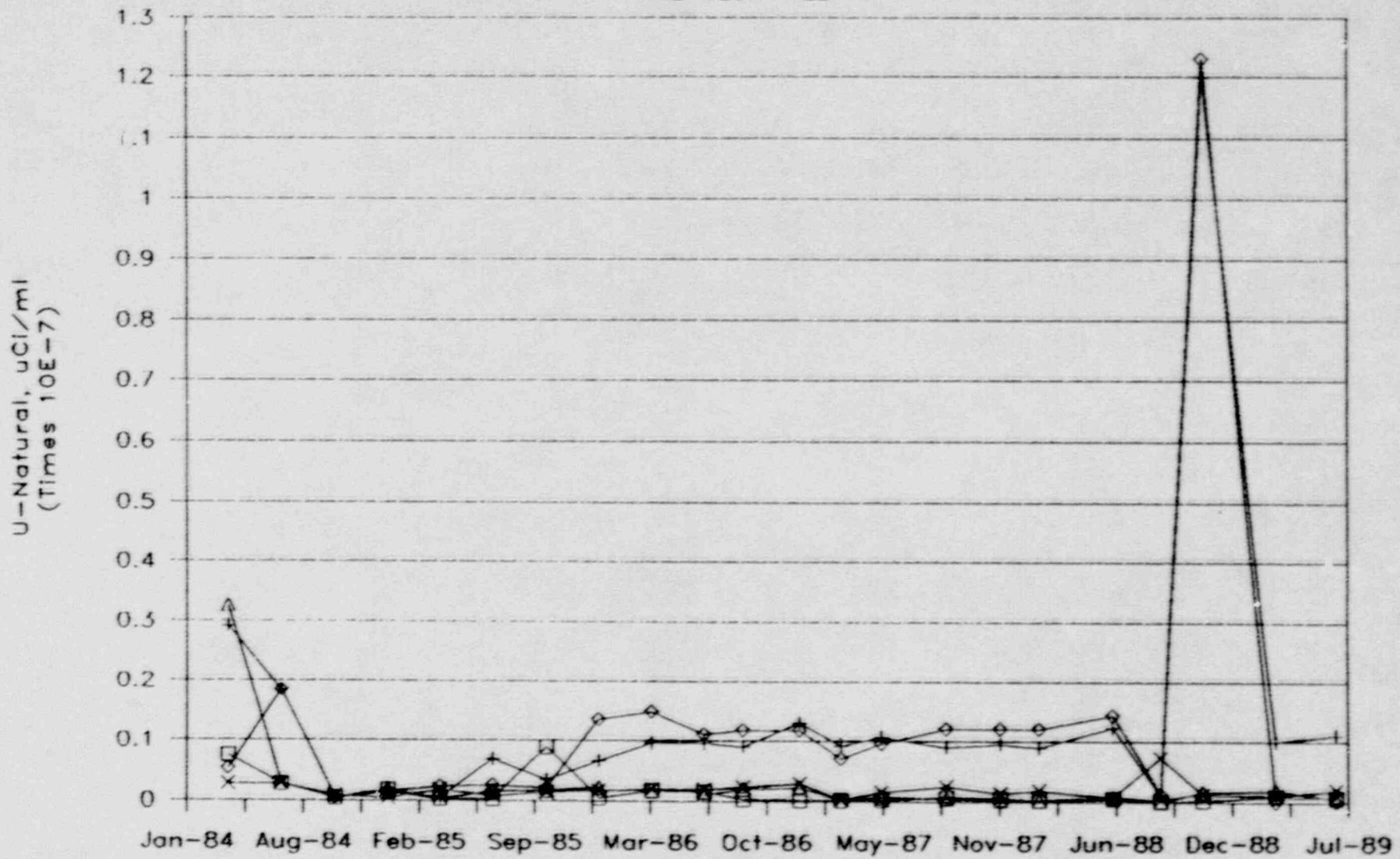
WHITE MESA MILL



Graph 31

# UMETCO MINERALS CORPORATION

WHITE MESA MILL



QUARTERLY MONITOR WELL COMPLIANCE DATA

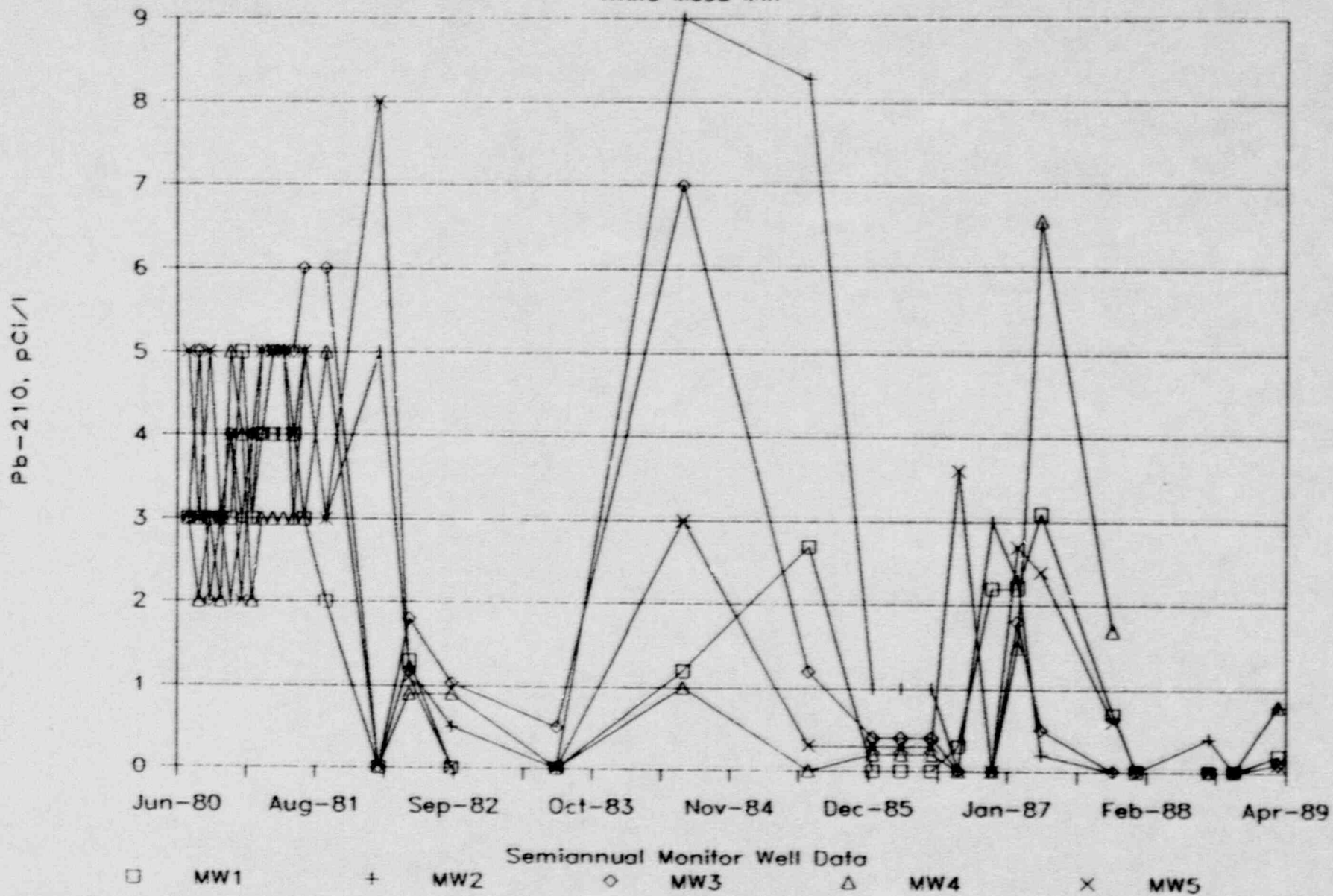
□ #11      + #12      ◇ #13      △ CUL      × #1:Baseline

Graph 32



# UMETCO MINERALS CORPORATION

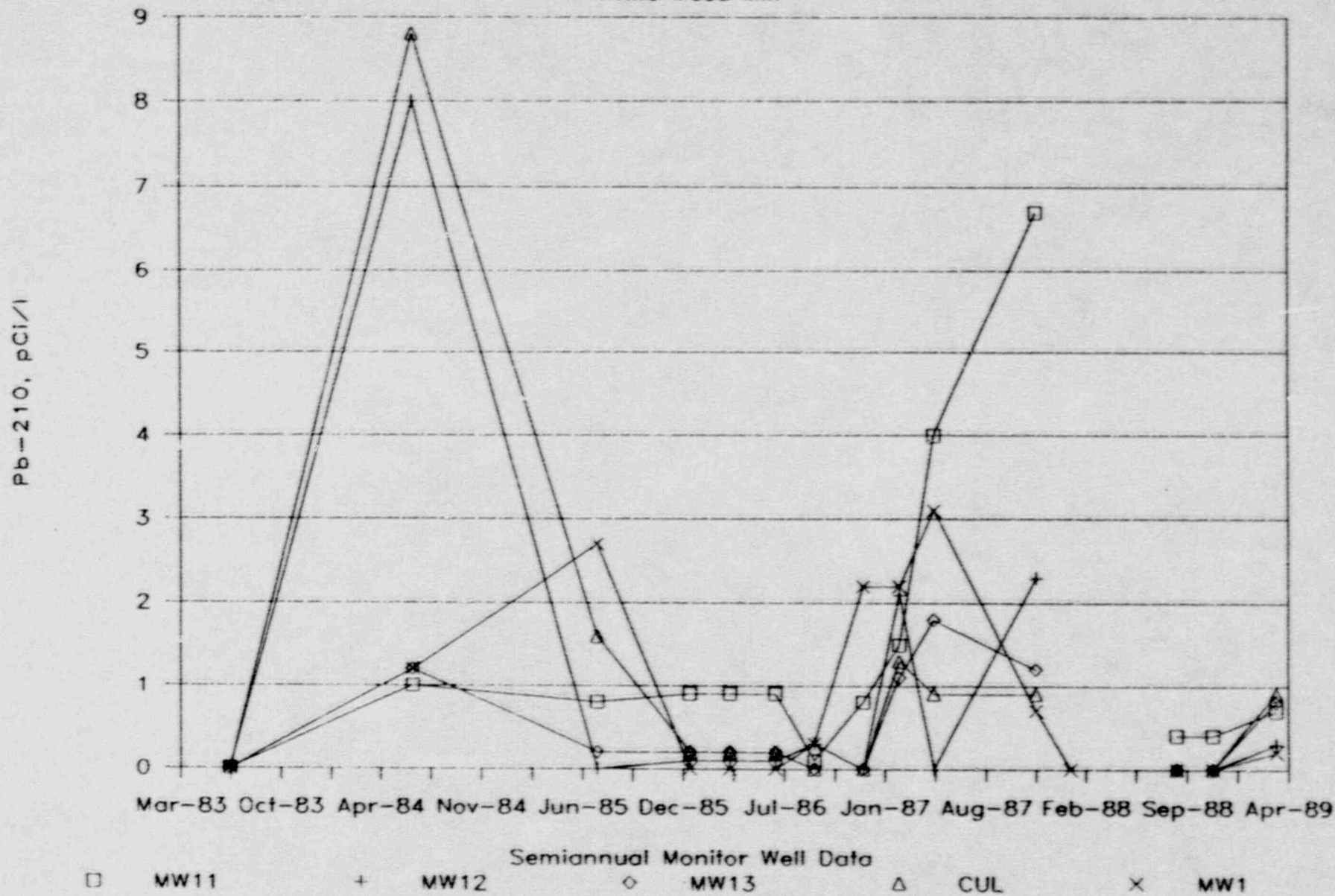
White Mesa Mill



Graph 33

# UMETCO MINERALS CORPORATION

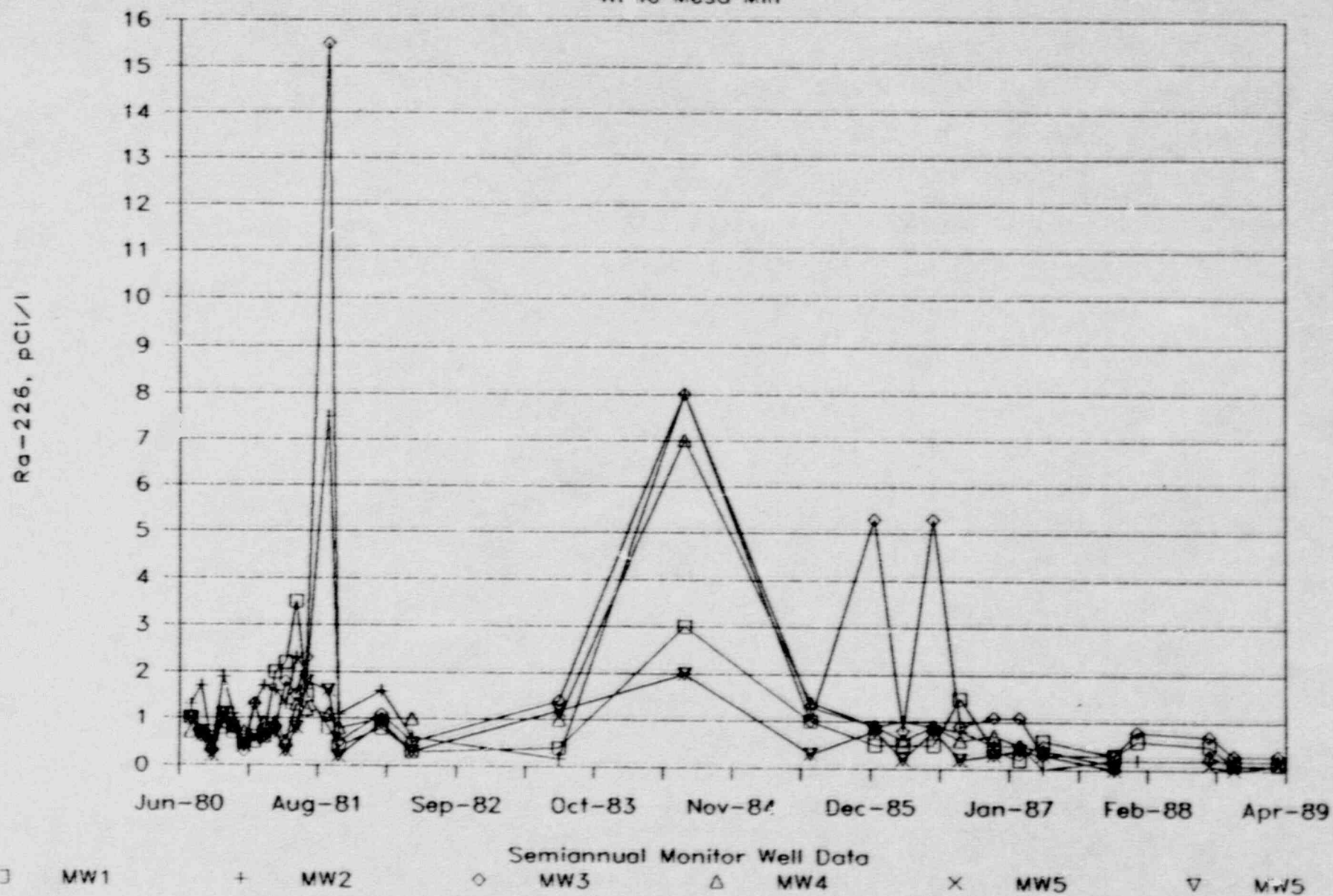
White Mesa Mill



Graph 34

# UMETCO MINERALS CORPORATION

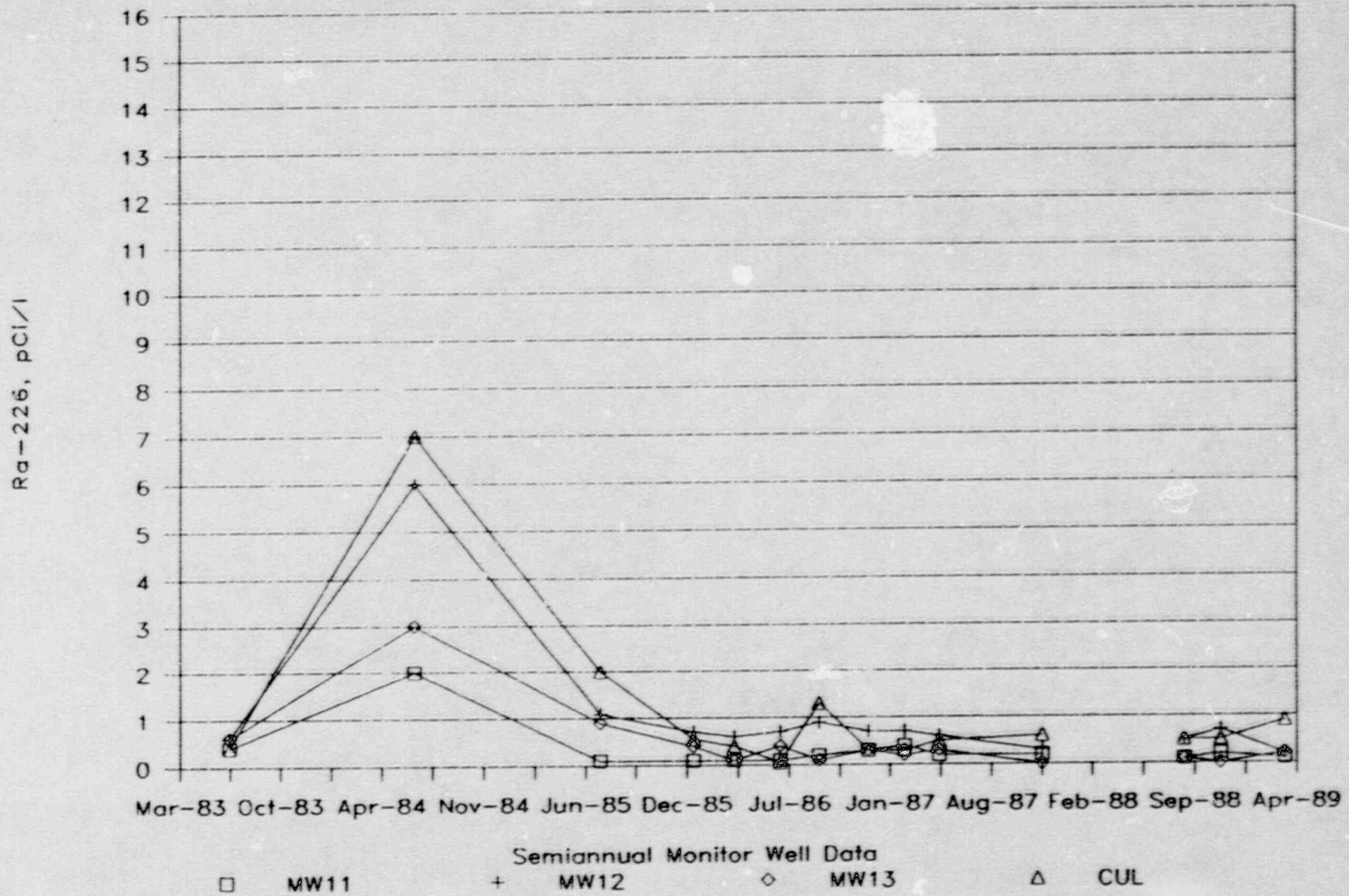
White Mesa Mill



Graph 35

# UMETCO MINERALS CORPORATION

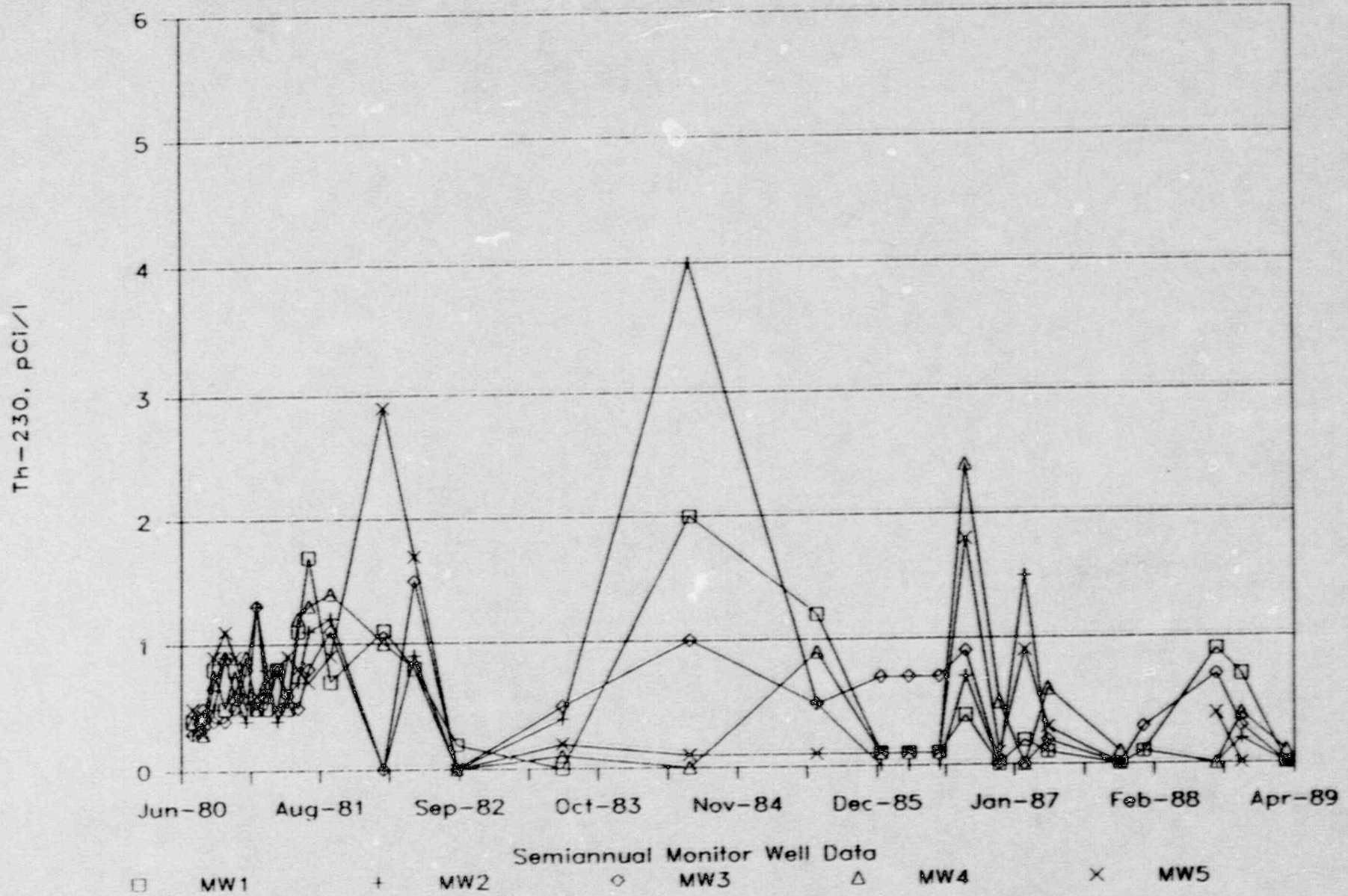
White Mesa Mill



Graph 36

# UMETCO MINERALS CORPORATION

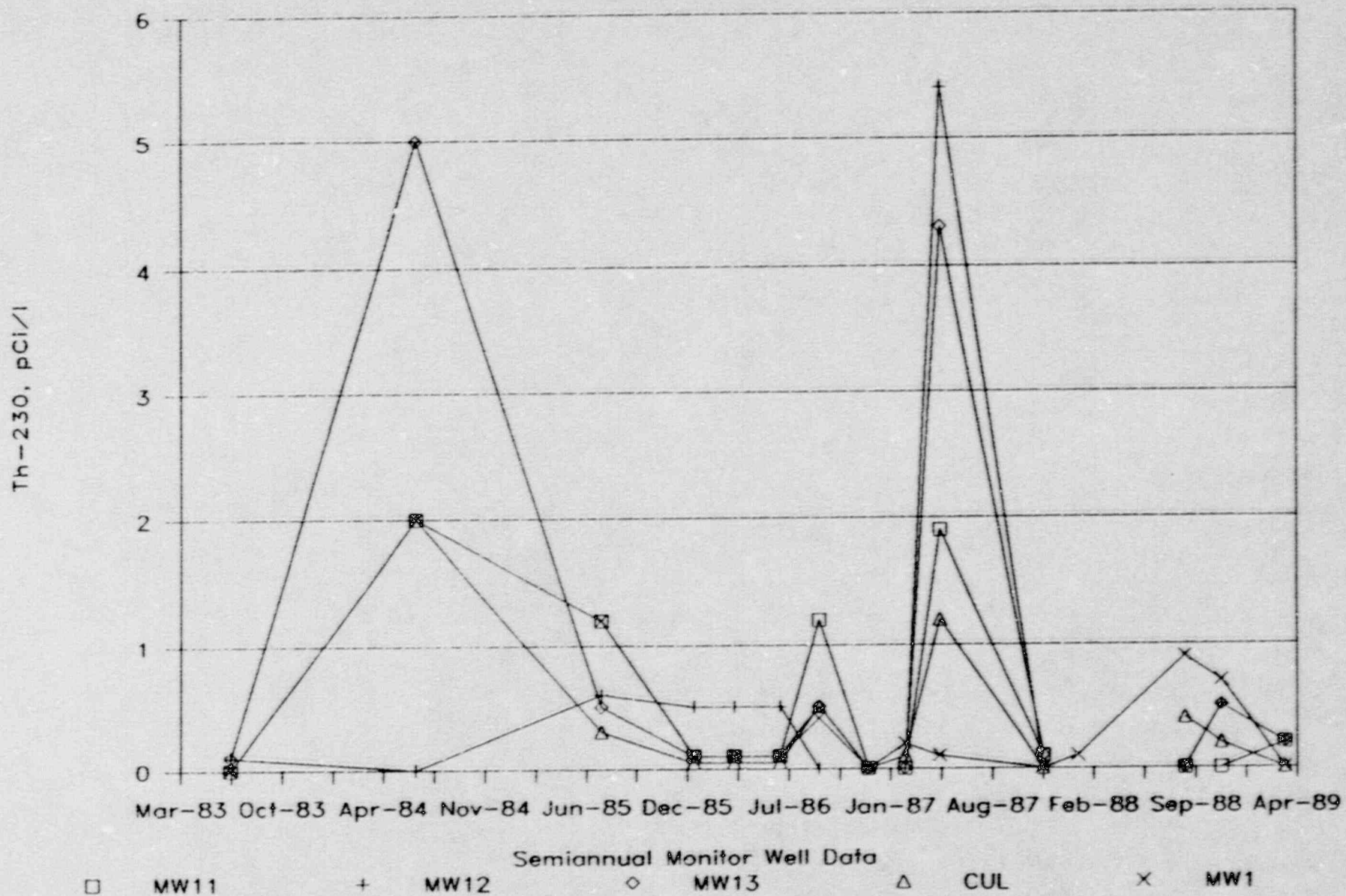
White Mesa Mill



Graph 37

# UMETCO MINERALS CORPORATION

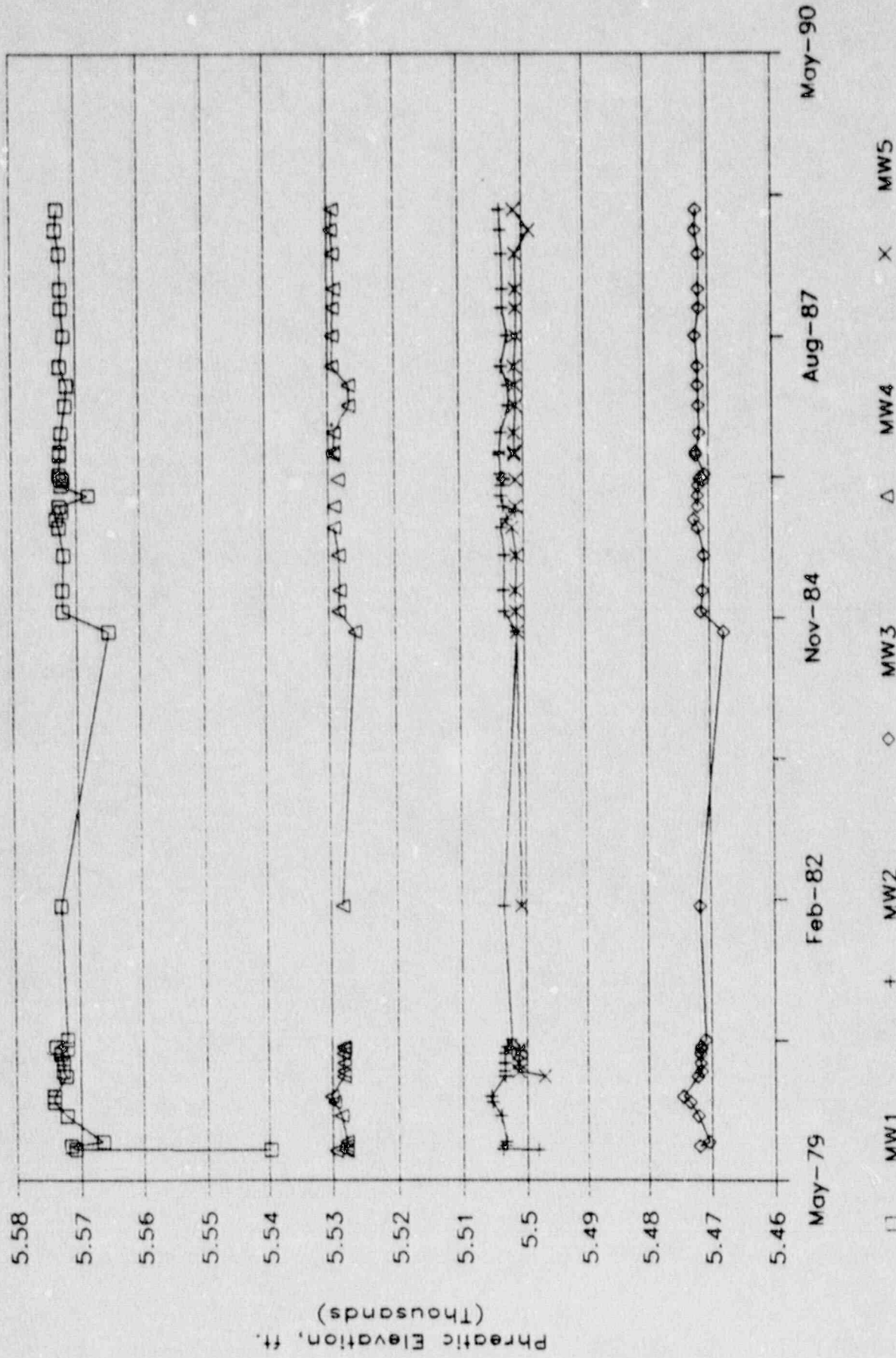
White Mesa Mill



Graph 38

# Umetco Minerals Corporation

White Mesa Mill



Graph 39





APPENDIX A