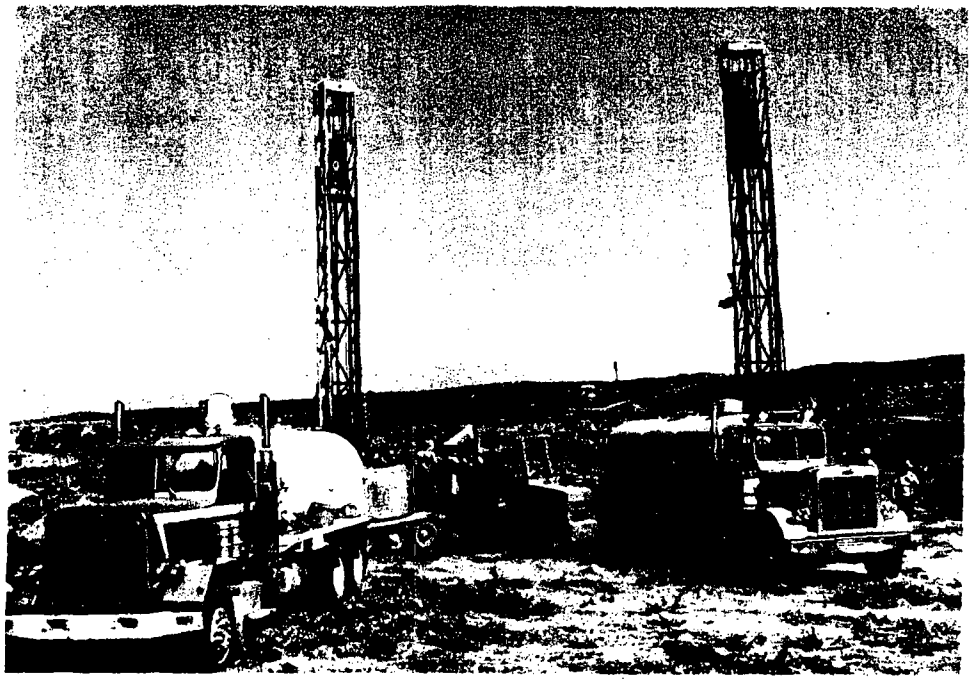
TOTAL

WELLFIELD DATA PACKAGE
UNIT 2 NORTH
CHRISTENSEN RANCH PROJECT
WDEQ PERMIT TO MINE NO. 478



PREPARED BY
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WELLFIELD DATA PACKAGE
CHRISTENSEN RANCH - UNIT 2 NORTH

1.0 Introduction

Section 5.7.10.3 of WDEQ Permit to Mine No. 478 requires Total Minerals Corporation (TOMIN) to submit to the regulatory agencies, for their review and approval, a Wellfield Data Package for each new production unit.

1.1 The Wellfield Data Package is to provide the following:

1.1.1 Results of a pumping test that demonstrates that the perimeter ore zone monitor wells are in communication with the production unit mineralized zone wells.

1.1.2 Potentiometric surface maps for the mineralized portion of the K sandstone, the overlying aquifer, and the underlying aquifer as developed from pre mining water levels.

1.1.3 Baseline water quality and proposed monitor well upper control limits.

1.1.4 Location and completion details for monitor wells and ore zone baseline water quality wells.

1.1.5 Average production unit baseline water quality and proposed restoration target values.

1.1.6 Production unit baseline data packages will be submitted as supplemental information to the permit in the form of a separate volume.

In addition to the listed requirements for a Wellfield Data Package, various representatives of the Land Quality Division of the Wyoming Department of Environmental Quality have stated that the following items are also required for approval of the Wellfield Data Package:

1.1.7 Typical completion methods for monitor and production wells.

1.1.8 An analysis that an excursion can be retrieved within 60 days.

1.1.9 A full aquifer characterization.

1.1.10 Aquiclude testing that demonstrates that the overlying and underlying aquicludes provide sufficient isolation from the production zone.

1.1.11 Water level measurements taken at the time of sampling events.

WELLFIELD DATA PACKAGE
UNIT 2 NORTH (Continued)

This submittal is for the extension of the previously submitted and approved Unit 2 South to include Module 4. Therefore issues such as the 60 day excursion retrieval study (point 1.1.8), the full aquifer characterization (point 1.1.9), and aquiclude testing (point 1.1.10) will be addressed by reference to the Unit 2 South submittal since most of this work has already been done for Unit 2. Of the total Unit 2 (North and South), this submittal represents 20.8 % of the total area.

The regional geological setting of the Christensen Ranch Project is discussed in detail in the Christensen Permit Application and will not be further elaborated in this Wellfield Data Package.

The geology specific to Unit 2, Module 4 (Unit 2 North) is essentially unchanged from that previously described for Unit 3 and for Modules 1-3 of Unit 2 (Unit 2 South). Ore occurs as a northerly continuation of the trend developed in previous units at Christensen. Stratigraphic and structural relationships, and the hydrogeological regime, are similar to previously developed areas. Figures 3, 4, 5, and 6 are cross sections within Unit 2 North and are an extension of the work done for the Unit 2 South Wellfield Data Package. The main north-south axis cross section contained herein (Figure 3) ends with a well which is common to the northern end of a similar cross section which was included in the Unit 2 South WDP.

Stratigraphy/Hydrogeology

The production aquifer, and dominant stratigraphic unit, is a major sand designated the K Sand. Nomenclature further subdivides it into the K2 and K3 Sands. These are generally separated by a claystone-siltstone unit 5-25 feet thick. Locally, this intervening bed is absent. Where this occurs the K2-K3 represents a single, thick sand. Depth to the top of the K Sand is generally between 250 to 300 feet. Thickness of the K Sand ranges from 120 to 180 feet. Lithology is dominated by clean, fine to coarse, tightly compacted, moderately sorted, arkosic sand.

As in Modules 1-3 of Unit 2, the K Sand is overlain by a thick sequence of claystone-mudstone-siltstone from 130 to 150 thick. Occurring within this sequence is a persistent lignite bed which serves as a reliable stratigraphic marker. In addition, erratic thin sands may occur locally scattered within the claystone sequence. These are found on a limited scale and are not considered significant from a stratigraphic or hydrogeological viewpoint. A minimum of 20 feet of dense claystone separates the top of the K Sand from any of these localized sands.

The shallowest sand of significance has been informally designated the #1 Sand. The top of this sand is at a depth of roughly 60-90 feet. Thickness varies from 25 to 50 feet. The base of the sand lies 130-150 feet above the top of the K2 Sand. Lithology is dominantly fine to medium sand. It occurs throughout Module 4. As in Modules 2 and 3, the #1 Sand is being utilized as the Shallow Monitor Sand.

Underlying the K Sand is a unit of dense claystone and mudstone which ranges from 25 to 50 feet thick. This unit separates the base of the K Sand from the Deep Monitor Sand. The Deep Monitor Sand in Module 4 is the same sand unit as utilized for this purpose in Modules 1-3. The top of the sand is typically 480-510 feet deep. Thickness is approximately 60 feet.

Structure

As in the other production units, structural variation is very limited and dominated by very gently dipping sedimentary units. Regional dip is to the northwest. Very minor fluctuations in dip may occur on a localized scale, but are insignificant to hydrogeological relationships.

Mineralization

Ore occurs in the K3 Sand in classical roll-front configuration. Multiple horizons are common. Depth to top of the ore ranges from 350 to 440 feet. Typical completion interval per well is approximately 12 feet in thickness.

2.0 Pump Test Results (Item 1.1.1)

The submittal of information relative to point 1.1.1 (pumping test), is provided in Appendix 7 and is entitled "SUMMARY PUMP TEST ANALYSIS, MINE UNIT 2 (NORTH), CHRISTENSEN RANCH PROJECT, JOHNSON COUNTY, WYOMING, February, 1993". This material was prepared by Hydro Restoration Corporation and is dated February, 1993.

In the referenced materials, the analysis concludes that the perimeter ore zone monitor wells are in communication with the production unit mineralized zone wells. The analysis also concludes that the shallow and deep zone monitor wells are effectively isolated from the mineralized zone.

Tables 2 through 6 in Appendix 7 provide the supplemental information and basic data for the MU 2 NORTH pumping test:

Appendix 7, Table 2: Water level and drawdown summary for pumping wells, perimeter ore zone wells, interior deep zone wells, and interior shallow zone wells.

Appendix 7, Table 3: Fluid levels for pumping well 2R108-1

Appendix 7, Table 4: Fluid levels for pumping well 2T92-2

Appendix 7, Table 5: Observation well fluid levels for the ore zone, deep zone, and shallow zone.

Appendix 7, Table 6: Barometric pressure readings for site location and Gillette airport.

3.0 Potentiometric Surface Maps (Item 1.1.2)

Potentiometric surface maps for the mineralized portion of the K sandstone, the

overlying aquifer, and the underlying aquifer as developed from pre-mining water levels can be found in Appendix 8, Figures 7 through 10. The data used to generate the potentiometric surface maps is included in Appendix 7, Table 2. The maps are based on a set of water level measurements taken immediately prior to the pump test.

4.0 Baseline Water Quality and Proposed Monitor Well Upper Control Limits (Item 1.1.3)

4.1 Description of Baseline Water Quality Sampling Locations

The location of the northern portion of Unit 2 in relationship to the southern portion of Unit 2 is given in Figure 1 of Appendix 8. The location of Unit 2 North in relation to the ion exchange satellite plant, evaporation and storage ponds, backwash pond and access roads can be inferred using Figure 1 of Appendix 8 of this submittal in conjunction with Figure 1 of Appendix 8 in the Unit 2 South submittal. Figure 2 of Appendix 8 shows the locations of all monitor wells and the production wells which were used for obtaining ore zone baseline water quality. Figure 2 also indicates the locations of wells used to produce cross sections of the area.

Monitor well baseline water quality has been established in the ore zone outside of the proposed wellfield (perimeter monitor wells), the aquifer overlying the ore zone within the wellfield (shallow monitor wells), and the aquifer underlying the ore zone within the wellfield (deep monitor wells).

4.1.1 Perimeter Ore Zone - Perimeter Ore Zone monitor wells are completed in the K sandstone on the perimeter of Unit 2 North. These wells are completed in the same stratigraphic interval as the production zone wells within the wellfield.

The perimeter monitor wells are located at a maximum distance of 300 feet from the wellfield and 300 feet between wells for those wells which are on the down-gradient end of the wellfield. Perimeter wells along the East and West sides, and on the up-gradient end of the wellfield, are located a maximum distance of 500 feet from the wellfield and 500 feet apart.

The eleven perimeter ore zone monitor wells for Unit 2 North are MW101, MW102, MW103, MW104, MW105, MW106, MW107, MW108, MW109, MW110, MW111. Monitor wells MW82, and MW90 will be shared with Unit 2 South but will retain the Upper Control Limits established for them in the Unit 2 South submittal. Temporary monitor well 2V76-2 will be dropped from the monitor well ring in Unit 2 South upon acceptance of this Unit 2 North Wellfield Data Package by the WDEQ and NRC.

4.1.2 Interior Shallow Zone - Monitor wells have been completed in the aquifer overlying the K sandstone to intercept and detect any upward migration of mining solutions. Shallow monitor wells are required at a frequency of at least one well per 3.5 acres. Three Shallow monitor wells have been installed within the wellfield pattern area at a frequency of one well per 1.9 acres. The shallow zone monitor wells sampled for baseline water quality in Mine Unit 2 are MW98S, MW100S, MW112S.

The cross sections in Appendix 8 (Figure 3,4,5, and 6) through Unit 2 North indicate that the shallow sand is more continuous than in Unit 2 South. The locations of the wells and exploration holes used in the cross section are shown on Figure 2 in Appendix 8.

4.1.3 Interior Deep Zone - Monitor wells have also been completed in the aquifer underlying the K sandstone to intercept and detect any downward migration of lixiviant. Deep monitor wells are required at a frequency of a minimum of one well per 3.5 acres.

Deep monitor wells have been installed adjacent to the shallow monitor wells, at the frequency of one well for every 1.9 acres of wellfield pattern area. The deep zone monitor wells for Mine Unit 2 are MW97D, MW99D, MW113D.

4.2 Baseline Water Quality

4.2.1 Perimeter Ore Zone Monitor Wells Baseline water quality has been established for the perimeter ore zone monitor wells by collecting and analyzing four samples, on two week sampling intervals, from the 11 monitor wells. For each monitor well, three of the samples were analyzed for the short constituent list and one for the WDEQ Guideline 8 suite (as per Table 5.2, page 5-31, of the Christensen Ranch Amendment Application). In addition, splits of the four samples were taken for the analysis of the excursion indicator parameters (ie. conductivity, alkalinity, and chloride) in the Irigaray Mine laboratory.

The purpose for establishing baseline water quality in all three Mine Unit 2 monitor zones is to provide a basis for the detection of excursions by establishing upper control limits.

Analytical results from the four samples from each of the perimeter ore zone monitor wells have been combined and treated form outliers along with the Irigaray Mine laboratory sample split results to provide a data base for the definition of overall water quality and for the calculation of upper control limits (UCL's) for excursion detection.

Table 3 on Page 14 provides a summary of the combined analytical results from the 11 perimeter ore zone monitor wells. A complete set of the water quality data for the perimeter monitor wells in included as Appendix 2.

4.2.2 Interior Shallow Zone Monitor Wells Baseline water quality of the shallow monitor zone within the wellfield interior has been established by collecting and analyzing four samples from each of the three shallow monitor wells. Sampling frequency and analyses performed are the same as described for the perimeter ore zone monitor wells. Sample splits were also collected for the analysis of the excursion indicator parameters (conductivity, alkalinity, and chloride) at the Irigaray Mine laboratory.

Analytical results from the four samples from each shallow zone monitor well have been combined and treated for outliers along with the Irigaray Mine laboratory sample split results to provide the data base for the definition of the overall water quality and for the calculation of UCL's in the shallow zone. Table 4 on Page 15 provides a summary of the combined analytical results from the three shallow zone monitor wells.

As was the case in the Unit 2 South submittal, The shallow zone well sampling results exhibited significant variability. Therefore, as was the case for Unit 2 South, the shallow zone wells have been separated into two groups for the purposes of calculating UCL's.

It is possible that the water quality of the shallow zone wells will change over time which would effect the validity of the upper control limits as calculated in this submittal. Therefore, as in Unit 2 South, it is proposed that the quality of the shallow zone be monitored and reported as part of the semi-annual report. If warranted, the upper control limits would be adjusted to reflect changes in the water quality.

A complete set of the water quality data for the shallow zone monitor wells is included as Appendix 3.

4.2.3 Deep Zone Monitor Wells Baseline water quality of the deep monitor zone within the wellfield interior has been established by collecting and analyzing four samples and sample splits from each of the three deep monitor wells. Sampling frequency and analyses performed are the same as those described for the perimeter ore zone monitor wells.

Analytical results from the four samples and splits from each deep zone monitor well have been combined and treated for outliers along with the

Irigaray Mine laboratory sample split results to provide a data base for the definition of overall water quality and for the calculation of UCL's in the deep zone. Table 5 on Page 16 provides a summary of the combined analytical results from the three deep zone monitor wells.

A complete set of the water quality data for the deep zone monitor wells is included as Appendix 4.

4.3 Monitor Well Upper Control Limits (UCL's)

The constituents which were used for indicators of lixiviant migration and for which upper control limits (UCL's) have been set for all zones are chloride, conductivity, and total alkalinity. Excursion indicator baseline data from the respective ore, shallow, and deep wells have been combined, treated for outliers, and averaged arithmetically to provide a database for the calculation of upper control limits.

Eight data points are available from each well for chloride, conductivity, alkalinity and pH. The eight data points are the four baseline samples analyzed by an outside commercial laboratory, and the four baseline splits analyzed at the Irigaray Mine laboratory.

Tables of the individual well data for the excursion indicator species are provided in Appendix 5 of this submittal and are entitled "Excursion Indicator Data."

All monitor well baseline data for the respective excursion indicator species were treated for the removal of outliers by the tolerance test described on page 5-34a of the Christensen Ranch Amendment Application. Data points deleted from the data base used for UCL and restoration target calculations are listed in Table 7.

UCL's for chloride, conductivity and total alkalinity for all monitored zones were calculated as the baseline mean plus five standard deviations.

Proposed UCL's for all monitor zones associated with Mine Unit 2 are provided in Table 6 on Page 17.

Please note that results from the four sample splits analyzed at the Irigaray Mine laboratory have been included for the three excursion indicator species (chloride, conductivity and total alkalinity).

As in Unit 2 South, the samples that were collected and analyzed for the shallow sand wells in Unit 2 North indicate that there is a distinct disparity between the results of MW100S and those of MW98S and MW112S. In order to maintain continuity in the assignment of upper control limits for the shallow wells throughout Unit 2 (North and South), the shallow wells of Unit 2 North have

been assigned upper control limits according to their similarity to the grouping of shallow wells in Unit 2 South (Group 1, Group 2). The Tables for Shallow Wells in Appendix 6 describe this rationale.

Because the results of the Upper Control Limits based on the classical parameters for one of the groups of shallow zone wells are above the levels of the respective parameters in the mining lixiviant, uranium has been added as an added excursion determination parameter for this group. This is consistent with the methodology used in the approved Unit 2 South Wellfield Data Package.

As proposed for MW70S and MW72S in Unit 2 South, TOMIN will reevaluate the excursion control parameters in well MW98S and MW112S at six month intervals to establish whether or not there is a need to recalculate and possibly re-establish the upper control limits for these wells in the northern portion of Mine Unit 2.

5.0 Location and Completion Details for Monitor Wells and Ore Zone Baseline Water Quality Wells (Item 1.1.4)

Location and completion details for the interior ore zone wells are provided in Table 1 on Page 11.

Location and completion details for the perimeter ore zone monitor wells, interior deep zone monitor wells, and interior shallow zone monitor wells are provided in Table 1 on Page 12.

6.0 Average Production Unit Baseline Water Quality and Proposed Restoration Target Values (Item 1.1.5)

As a basis for determining the baseline water quality in the production unit water samples were collected and analyzed from production wells at a density of at least one sampling well for every acre of wellfield pattern area. The wellfield pattern area has been estimated at 5.6 acres. A total of 8 ore zone baseline wells were drilled and sampled.

The 8 wells sampled to establish the baseline water quality in this zone were well numbers 2U84-1, 2S88-1, 2T92-2, 2T95-1, 2S100-2, 2S104-1, 2R108-1, 2R114-1 .

All interior ore zone wells are completed in one or more of the upper K2 and middle and lower K3 mineralized intervals of the host K sandstone.

Baseline water quality was established in the ore zone within Mine Unit 2 by collecting and analyzing four samples from each of the 8 wells designated above. Sampling events were spaced two weeks apart. For each well, two of

the four samples were analyzed for the Wyoming Department of Environmental Quality Guideline No. 8 suite of chemical constituents, while the remaining two samples were analyzed for a shorter constituent list. Table 5.2 (page 5-31) of the Christensen Ranch Amendment Application provides the details of the approved sampling and analytical program.

The purpose for establishing baseline water quality within the Mine Unit 2 ore zone is to define target values for the groundwater restoration phase of operations. Analytical results from the four samples from each interior ore zone well have been combined and treated for outliers to provide a data base for definition of the overall wellfield water quality and establishment of the target restoration values.

Table 2, Page 13 provides the summary of the analytical results from the four samples from the 8 interior ore zone wells. The target restoration values are determined by the addition of the mean baseline value (arithmetic average) and the variance, these values are provided in Table 2 for each parameter. The R.T.V for Radium 226 has been changed to the 100 pCi/L treatability limit because the calculated value was 214.04 pCi/L.

Secondary target restoration values are a function of the pre-mining use suitability criteria as established by Wyoming Department of Environmental Quality (WDEQ), Water Quality Division. As can be seen from Table 2, the water quality constituents on average, appear to meet the WDEQ Class I Domestic use suitability standards (Water Quality Rules and Regulations, Chapter VIII) with the exception of Radium 226 (Mean of 22.7, WDEQ Class I = 5). The water quality analytical results from the eight individual interior ore zone baseline wells are provided in Appendix 1.

7.0 Typical Completion Methods for Monitor and Production Wells (Item 1.1.7)

Attached as Pages 19 and 20 are schematics regarding well completion methods 1 and 2. Typically, Method 1 is for production wells and Method 2 is for monitor wells.

8.0 Analysis of Excursion Recovery (Item 1.1.8)

Hydro Restoration Corporation performed and analysis of excursion recovery entitled "EXCURSION CONTROL STUDY, MINE UNIT 2 - SOUTHERN PORTION, CHRISTENSEN RANCH PROJECT, JOHNSON COUNTY, WYOMING" dated January 26, 1993, which was included in the submittal for the south portion of Mine Unit 2. A supplement to the original study was completed in March 1993. The study as amended demonstrates that the flow of solutions for the test well is toward the ore zone, thereby satisfying the requirements of the DEQ staff.

This study has already been conducted for Unit 2. Furthermore, Unit 2 North is adjacent to and part of the rest of Unit 2 to the south. Therefore, the Excursion Recovery analysis performed for Unit 2 is incorporated by reference as an applicable and relevant portion of this submittal.

The entire analysis by Hydro restoration in included as Appendix 7 in the Wellfield Data Package for Unit 2 South.

9.0 Aquifer Characterization (Item 1.1.9)

As noted in section 2.0 of this submittal, Hydro Restoration Corporation conducted an analysis of the pump test in the northern portion of Mine Unit 2. This analysis can be found in Appendix 7 of this submittal.

A full characterization of the aquifer has already been performed for Unit 2 and submitted with the Unit 2 South Wellfield Data Package.

10.0 Aquiclude Testing (Item 1.1.10)

A part of the requirements for permitting a new wellfield at the Christensen Ranch Project, it was necessary to determine the horizontal and vertical permeability and porosity of the upper and lower aquitards. The results were submitted with the Mine Unit 2 South Wellfield Data Package. The results are as follows:

	Porosity %	Permeability Horizontal (cm/sec)	Permeability Vertical (cm/sec)
Upper Confinement	5.3	1.93×10^{-8}	4.83×10^{-8}
Lower Confinement	6.3	1.93×10^{-8}	1.93×10^{-8}

Due to the close proximity of Mine Unit 2 North to the southern portion of Mine Unit 2 where the study was conducted, it is reasonable to consider that the upper and lower confining beds in the north have similar porosities and permeabilities.

11.0 Water level Measurements (Item 1.1.11)

Water level measurements were taken prior to each baseline water sampling event and are available in each of the individual well baseline tables in Appendices 1, 2, 3,and 4.

TABLE 1
MONITOR WELL LOCATIONS AND COMPLETION DATA
CHRISTENSEN UNIT 2 NORTH

DESIGNATED USE	WELL NO.	COORDINATES		SURFACE ELEVATION (FT)	(2) AVERAGE PIEZOMETRIC ELEVATION (FT)	SCREENED OR OPEN HOLE INTERVAL (FT)	
		EAST	NORTH			FROM	TO
INTERIOR ORE ZONE BASELINE WATER QUALITY	2U84–1	842218.5	1150892.0	4678.6	4553.6	4256.6	4251.6
	(1)					4274.6	4269.6
	2S88–1	842017.5	1151092.2	4671.2	4552.1	4254.2	4250.2
	(1)					4273.2	4269.2
	(1)					4262.2	4259.2
	2T92–2	842097.7	1151268.7	4672.2	4549.6	4281.2	4270.2
	2T95–1	842067.3	1151396.9	4671.2	4551.0	4253.2	4248.2
	(1)					4266.2	4263.2
	2S100–2	842022.8	1151613.5	4660.8	4549.3	4265.8	4250.8
	2S104–1	842027.6	1151778.3	4664.8	4549.6	4291.8	4286.8
	2R108–1	841909.4	1151949.1	4649.2	4550.7	4234.2	4226.2
	2R114–1	841937.9	1152204.7	4650.1	4551.5	4270.1	4261.1
	(1)					4253.1	4248.1

(1) Well has dual completion intervals.
(2) Piezometric elevations are the calculated average of the four water level measurements taken before each of the four baseline samples.

C:\MU2NORTH\NBSLINE\TABLE1.WK3

TABLE 1
MONITOR WELL LOCATIONS AND COMPLETION DATA
CHRISTENSEN UNIT 2 NORTH

DESIGNATED USE	WELL NO.	COORDINATES EAST	COORDINATES NORTH	SURFACE ELEVATION (FT)	(2) AVERAGE PIEZOMETRIC ELEVATION (FT)	SCREENED OR OPEN HOLE INTERVAL (FT) FROM	SCREENED OR OPEN HOLE INTERVAL (FT) TO
PERIMETER ORE ZONE MONITORS	MW-101	842627.0	1151375.6	4701.2	4561.8	4379.2	4252.2
	MW-102	842535.4	1151818.1	4694.4	4558.4	4392.4	4252.4
	MW-103	842481.6	1152267.7	4698.3	4559.1	4389.3	4208.3
	MW-104	842229.7	1152642.8	4629.1	4554.7	4380.1	4209.1
	MW-105	841785.4	1152691.2	4622.8	4551.6	4380.8	4232.8
	MW-106	841612.7	1152472.8	4595.5	4550.2	4401.5	4235.5
	MW-107	841486.7	1152218.1	4590.2	4550.0	4395.2	4233.2
	MW-108	841468.8	1151917.3	4637.1	4550.8	4393.1	4222.1
	MW-109	841396.6	1151559.7	4628.4	4550.1	4388.4	4218.4
	MW-110	841503.9	1151119.8	4639.3	4552.2	4384.3	4249.3
	MW-111	841678.6	1150701.0	4647.9	4553.6	4361.9	4247.9
INTERIOR SHALLOW ZONE MONITORS	MW-98S	842314.7	1150878.1	4677.5	4560.0	4584.5	4523.5
	MW-100S	842069.7	1151577.7	4659.4	4556.0	4571.4	4520.4
	MW-112S	841942.5	1152194.0	4650.0	4553.8	4565.0	4535.0
INTERIOR DEEP ZONE MONITORS	MW-97D	842315.8	1150898.0	4678.0	4552.2	4166.0	4106.0
	MW-99D	842066.7	1151597.7	4661.6	4547.7	4171.6	4126.6
	MW-113D	841942.6	1152214.4	4649.8	4548.8	4166.8	4107.8

(1) Well has dual completion intervals.
(2) Piezometric elevations are the calculated average of the four water level measurements taken before each of the four baseline samples.

TABLE 2

INTERIOR ORE ZONE BASELINE WATER QUALITY SUMMARY
AND PROPOSED RESTORATION TARGET VALUES
CHRISTENSEN UNIT 2 NORTH

	No. of Samples*	Mean	Std.Dev.	Var.	Max.	Min.	RESTORATION TARGET	D.L.
MAJOR IONS mg/l:								
Ca	32	8.15	0.94	0.891	10.10	5.70	9.04	0.05
Mg	32	0.53	0.18	0.033	0.80	0.15	0.56	0.1
Na	32	135.78	4.44	19.671	147.00	125.00	155.45	0.05
K	32	3.52	1.49	2.230	8.30	0.90	5.75	0.1
CO3	16	10.91	4.69	21.951	19.30	3.80	32.86	0.1
HCO3	16	100.64	12.71	161.417	118.00	78.10	262.06	0.1
SO4	32	213.78	6.30	39.671	227.00	204.00	253.45	0.5
Cl	32	8.87	0.91	0.828	10.30	7.08	9.69	0.1
NH4 (N)	15	0.08	0.03	0.001	0.12	0.05	0.08	0.05
NO2 (N)	16	0.10	0.00	0.000	0.10	0.10	0.10	0.1
NO3 (N)	16	0.10	0.00	0.000	0.10	0.10	0.10	0.1
F	16	0.27	0.05	0.003	0.45	0.21	0.28	0.1
SIO2	16	8.40	0.61	0.373	9.60	7.60	8.77	1
TDS @ 180 C	32	427.25	19.19	368.375	464.00	387.00	795.63	1
Cond-umho/cm	32	709.97	19.50	380.280	770.00	680.00	1090.25	1
Alk-CaCO3	32	100.00	5.24	27.457	110.00	84.60	127.46	0.1
pH units	32	9.13	0.31	0.094	9.62	8.05	9.23	1-14
TRACE METALS mg/l:								
Al	16	0.100	0.000	0.000	0.100	0.100	0.100	0.1
As	31	0.002	0.002	0.000	0.008	0.001	0.002	0.001
Ba	16	0.100	0.000	0.000	0.100	0.100	0.100	0.1
B	16	0.100	0.000	0.000	0.100	0.100	0.100	0.1
Cd	16	0.010			0.010	0.010	0.010	0.01
Cr	16	0.050	0.000	0.000	0.050	0.050	0.050	0.05
Cu	16	0.010			0.010	0.010	0.010	0.01
Fe	16	0.050	0.000	0.000	0.050	0.050	0.050	0.05
Pb	16	0.050	0.000	0.000	0.050	0.050	0.050	0.05
Mn	16	0.010			0.010	0.010	0.010	0.01
Hg	16	0.001	0.000	0.000	0.001	0.001	0.001	0.001
Mo	16	0.100	0.000	0.000	0.100	0.100	0.100	0.1
Ni	16	0.050	0.000	0.000	0.050	0.050	0.050	0.05
Se	31	0.004	0.003	0.000	0.010	0.001	0.004	0.001
V	16	0.100	0.000	0.000	0.100	0.100	0.100	0.1
Zn	16	0.010			0.010	0.010	0.010	0.01
RADIOMETRIC pCi/l:								
U mg/l	32	0.041	0.034	0.001	0.164	0.000	0.04	0.0003
Ra226	32	22.741	13.831	191.303	54.500	1.400	100 **	0.2

Restoration Target Values are calculated based on Mean value plus Variance after outlier treatment as descrinbed in Section 6.1.3.2, Page 6-23 of the Christensen Ranch Amendment Application

* Samples taken from wells 2U84-1, 2S88-1, 2T95-1, 2S100-2, 2S104-1, 2R108-1, 2T92-2 and 2R114-1

** The calculated Radium 226 Restoration Target Value (214.04 pCi/L) exceeds Class of Use (5 pCi/L). Therefore, the 100 pCi/L treatability standard is assigned as the Restoration Target Value.

TABLE 3

PERIMETER MONITOR WELL BASELINE WATER QUALITY SUMMARY
CHRISTENSEN UNIT 2 NORTH

	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	PROPOSED U.C.L.	D.L.
MAJOR IONS mg/l:								
Ca	44	7.47	1.50	2.240	12.00	4.70		0.05
Mg	44	0.53	0.18	0.033	0.84	0.14		0.1
Na	44	135.77	5.04	25.357	149.00	126.00		0.05
K	44	3.29	1.30	1.689	7.50	1.40		0.10
CO3	11	15.49	7.33	53.741	31.20	4.30		0.1
HCO3	11	84.79	13.96	194.981	102.00	49.30		0.1
SO4	44	204.70	5.09	25.890	214.00	195.00		0.5
Cl	84	9.136	0.486	0.236	10.30	7.80	11.57	0.10
NH4 (N)	11	0.050	0.000	0.000	0.05	0.05		0.05
NO2 (N)	11	0.100	0.000	0.000	0.10	0.10		0.10
NO3 (N)	11	0.100	0.000	0.000	0.10	0.10		0.10
F	11	0.805	0.053	0.003	0.93	0.74		0.10
SiO2	11	8.527	0.409	0.167	9.30	7.90		1.00
TDS @ 180 C	44	411.14	12.83	164.709	443.00	386.00		1
Cond-umho/cm	88	685.06	18.61	346.235	728.00	650.00	778.09	1
Alk-CaCO3	88	92.36	6.44	41.432	105.10	82.20	124.55	0.1
pH units	88	9.36	0.34	0.118	10.10	8.67	11.08	1-14
TRACE METALS mg/l:								
Al	11	0.100	0.000	0.000	0.100	0.100		0.10
As	39	0.001	0.000	0.000	0.002	0.001		0.001
Ba	11	0.100	0.000	0.000	0.100	0.100		0.10
B	11	0.100	0.000	0.000	0.100	0.100		0.10
Cd	11	0.010	0.000	0.000	0.010	0.010		0.01
Cr	11	0.050	0.000	0.000	0.050	0.050		0.05
Cu	11	0.010	0.000	0.000	0.010	0.010		0.01
Fe	11	0.050	0.000	0.000	0.050	0.050		0.05
Pb	11	0.050	0.000	0.000	0.050	0.050		0.05
Mn	11	0.010	0.000	0.000	0.010	0.010		0.01
Hg	11	0.001	0.000	0.000	0.001	0.001		0.001
Mo	11	0.100	0.000	0.000	0.100	0.100		0.10
Ni	11	0.050	0.000	0.000	0.050	0.050		0.05
Se	42	0.008	0.002	0.000	0.013	0.003		0.001
V	11	0.100	0.000	0.000	0.100	0.100		0.10
Zn	11	0.010	0.000	0.000	0.010	0.010		0.01
RADIOMETRIC pCi/l:								
U mg/l	43	0.016	0.014	0.0002	0.053	0.0003		0.0003
Ra226	44	0.861	1.035	1.071	4.300	0.200		0.2

* Samples taken from wells MW-101, MW-102, MW-103, M1-104, MW-105, MW-106, MW-107, MW-108, MW-109, MW-110, and MW-111

TABLE 4

INTERIOR SHALLOW ZONE MONITOR WELL BASELINE WATER QUALITY SUMMARY
AND PROPOSED UPPER CONTROL LIMITS

	No. of Samples*	Mean	Std.Dev.	Var.	Max.	Min.	PROPOSED U.C.L	D.L.
MAJOR IONS mg/l:								
Ca	12	400.00	108.04	11671.833	532.00	271.00		0.05
Mg	12	16.98	23.88	570.376	51.60	0.10		0.1
Na	12	248.00	41.99	1762.833	298.00	154.00		0.05
K	12	38.88	29.01	841.655	97.20	5.50		0.1
CO3	2	564.50	203.50	41412.250	768.00	361.00		0.1
HCO3	3	75.13	95.38	9096.436	210.00	6.00		0.1
SO4	12	703.60	548.95	301349.893	1379.00	88.20		0.5
Cl	16	11.06	2.11	4.470	13.20	5.16	SEE NOTE	0.1
NH4 (N)	3	0.36	0.28	0.078	0.75	0.11		0.05
NO2 (N)	3	0.10			0.10	0.10		0.1
NO3 (N)	3	0.10			0.10	0.10		0.1
F	3	0.22	0.07	0.005	0.31	0.14		0.1
SiO2	3	5.40	5.17	26.780	12.70	1.30		1
TDS @ 180 C	12	1986.08	277.31	76902.743	2395.00	1444.00		1
Cond-umho/cm	24	5174.58	2070.03	4285027.826	8366.00	2456.00	SEE NOTE	1
Alk-CaCO3	24	974.77	637.10	405901.094	1918.90	173.00	SEE NOTE	0.1
pH units	24	10.79	2.19	4.782	12.60	7.50	21.72	1-14
TRACE METALS mg/l:								
Al	3	0.110	0.014	0.000	0.130	0.100		0.1
As	12	0.001	0.001	0.000	0.005	0.001		0.001
Ba	3	0.433	0.340	0.116	0.900	0.100		0.1
B	3	0.100			0.100	0.100		0.1
Cd	3	0.010			0.010	0.010		0.01
Cr	3	0.050			0.050	0.050		0.05
Cu	3	0.010			0.010	0.010		0.01
Fe	3	0.060	0.014	0.000	0.080	0.050		0.05
Pb	3	0.050			0.050	0.050		0.05
Mn	3	0.110	0.141	0.020	0.310	0.010		0.01
Hg	3	0.001			0.001	0.001		0.001
Mo	3	0.133	0.047	0.002	0.200	0.100		0.1
Ni	3	0.050			0.050	0.050		0.05
Se	12	0.014	0.013	0.000	0.048	0.001		0.001
V	3	0.100			0.100	0.100		0.1
Zn	3	0.010			0.010	0.010		0.01
RADIOMETRIC pCi/l:								
U mg/l	12	0.017	0.038	0.001	0.140	0.000		0.0003
Ra226	11	46.500	74.056	5484.325	202.000	1.300		0.2

NOTE – THE WELLS USED IN THESE CALCULATIONS HAVE BEEN ASSIGNED U.C.L.'S ACCORDING TO THE GROUPINGS IN UNIT 2 SOUTH. REFER TO APPENDIX VI, INTERIOR SHALLOW ZONE MONITOR WELLS

* Samples taken from monitor wells MW-98S, MW-100S, MW-112S

TABLE 5

INTERIOR DEEP ZONE MONITOR WELL BASELINE WATER QUALITY SUMMARY
AND PROPOSED UPPER CONTROL LIMITS

	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	PROPOSED U.C.L	D.L.
MAJOR IONS mg/l:								
Ca	12	6.63	1.17	1.377	8.50	4.40		0.05
Mg	12	0.72	0.82	0.670	2.60	0.03		0.1
Na	12	123.50	3.38	11.417	132.00	119.00		0.05
K	12	2.76	1.52	2.319	7.20	1.30		0.1
CO3	3	6.03	3.68	13.549	11.00	2.20		0.1
HCO3	3	119.67	12.55	157.556	130.00	102.00		0.1
SO4	12	169.25	7.34	53.854	188.00	158.00		0.5
Cl	24	10.08	0.74	0.549	11.00	7.68	13.78	0.1
NH4 (N)	3	0.34	0.16	0.027	0.48	0.11		0.05
NO2 (N)	3	0.10			0.10	0.10		0.1
NO3 (N)	3	0.10			0.10	0.10		0.1
F	3	0.40	0.10	0.010	0.53	0.29		0.1
SiO2	3	9.37	0.66	0.436	10.10	8.50		1
TDS @ 180 C	12	373.58	21.29	453.243	426.00	340.00		1
Cond–umho/cm	24	637.54	17.18	295.082	671.00	610.00	723.43	1
Alk–CaCO3	24	109.37	6.79	46.109	130.00	91.00	143.32	0.1
pH units	24	9.13	0.42	0.176	9.90	8.47	11.23	1–14
TRACE METALS mg/l:								
Al	3	0.100			0.100	0.100		0.1
As	12	0.001	0.001	0.000	0.003	0.001		0.001
Ba	3	0.100			0.100	0.100		0.1
B	3	0.100			0.100	0.100		0.1
Cd	3	0.010			0.010	0.010		0.01
Cr	3	0.050			0.050	0.050		0.05
Cu	3	0.010			0.010	0.010		0.01
Fe	3	0.050			0.050	0.050		0.05
Pb	3	0.050			0.050	0.050		0.05
Mn	3	0.010			0.010	0.010		0.01
Hg	3	0.001			0.001	0.001		0.001
Mo	3	0.100			0.100	0.100		0.1
Ni	3	0.050			0.050	0.050		0.05
Se	12	0.005	0.002	0.000	0.009	0.001		0.001
V	3	0.100			0.100	0.100		0.1
Zn	3	0.010			0.010	0.010		0.01
RADIOMETRIC pCi/l:								
U mg/l	12	0.005	0.007	0.0001	0.021	0.0003		0.0003
Ra226	12	3.617	2.694	7.258	8.600	0.200		0.2

* Samples taken from monitor wells MW–97D, MW–99D, MW–113D

TABLE 6

PROPOSED UPPER CONTROL LIMITS
CHRISTENSEN UNIT 2 NORTH

	CHLORIDE (mg/l)			CONDUCTIVITY (UMHOS/CM)			TOTAL ALKALINITY (mg/l as CaCO3)			URANIUM (mg/l) *
	Average Baseline (x)	Standard Deviation (On −1)	UCL (x + 5 STD)	Average Baseline (x)	Standard Deviation (On −1)	UCL (x + 5 STD)	Average Baseline (x)	Standard Deviation (On −1)	UCL (x + 5 STD)	UCL (D.L.)
Perimeter Ore Zone Monitor (TABLE 3)	9.14	0.49	11.6	685	18.6	778	92.4	6.4	124.6	N/A
Interior Shallow Zone Monitor **GROUP 1** (TABLE 4)	12.30	2.2	23.5	2,094	293.2	3,560	72.1	46.4	304	N/A
Interior Shallow Zone Monitor **GROUP 2** (TABLE 4)	21.7	8.3	63.4	6,390	2,887	21,365	1,522.6	867.6	5,861.3	.1
Interior Deep Zone Monitor (TABLE 5)	10.1	0.7	13.8	638	17.2	723	109.4	6.8	143.3	N/A

SHALLOW ZONE WELLS ARE AS FOLLOWS: GROUP 1 – MW100S; GROUP 2 – MW98S AND MW112S

* D.L. – Detection Limit of On–Site Lab

TABLE 7

TABLE OF OUTLIERS DISCARDED BY TOLERANCE TESTING
FOR RESTORATION AND UPPER CONTROL LIMIT PARAMETERS
CHRISTENSEN UNIT 2 NORTH

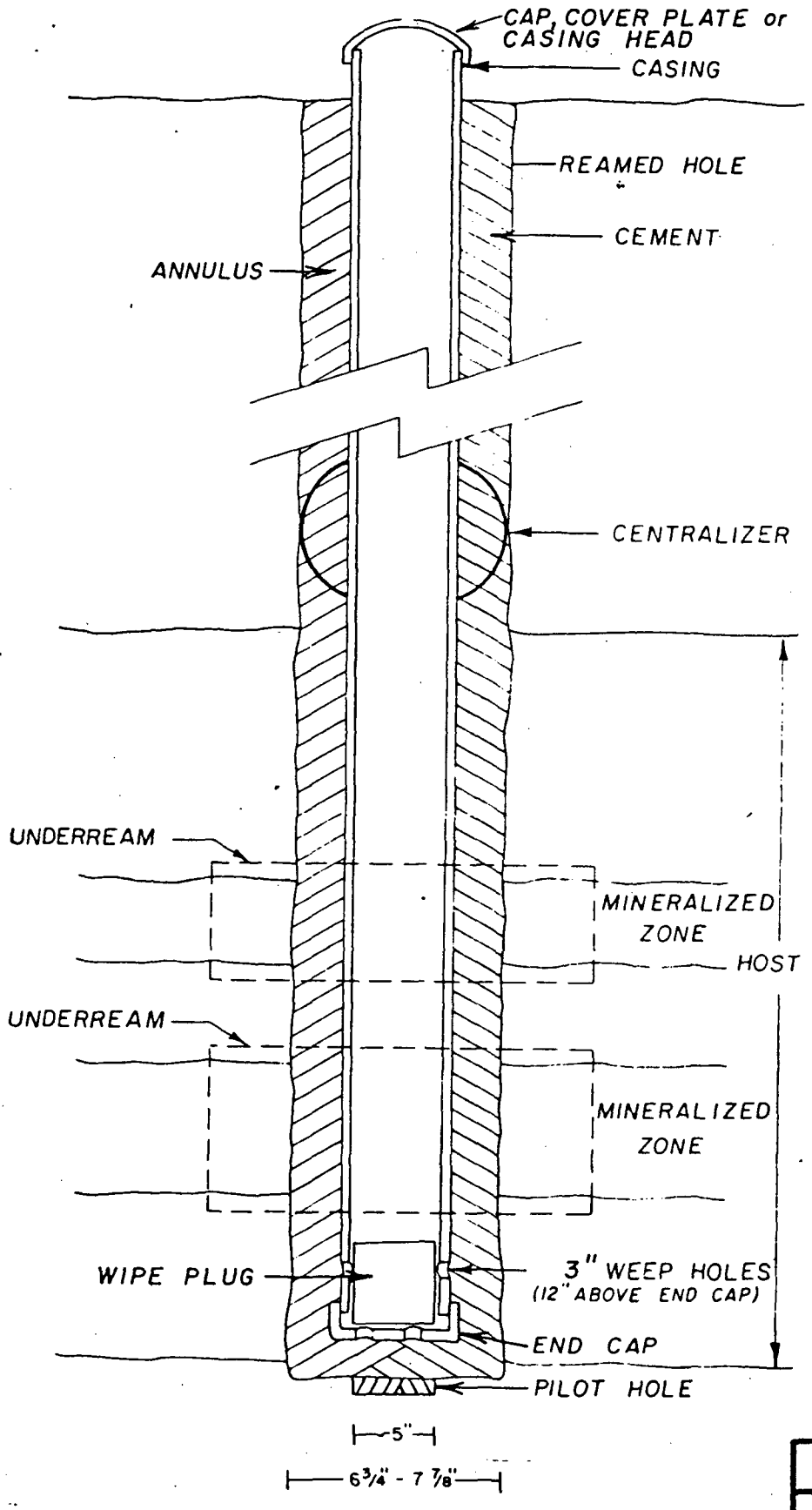
INTERIOR ORE ZONE BASELINE DATA				
	SOURCE ----->	E.L.I.	E.L.I.	E.L.I.
RESTORATION	WELL # ----->	2S88-1	2S100-2	2S104-1
PARAMETER	DATE ----->	12/10/92	12/10/92	1/18/93
Cl		0.43		
Al			.011	
Se				0.19
V				21.9
Zn				1.7

PERIMETER ORE ZONE BASELINE DATA					
	SOURCE ----->	E.L.I.	TOMIN	E.L.I.	E.L.I.
U.C.L.	WELL # ----->	MW-102	MW-103	MW-104	MW-111
PARAMETER	DATE ----->	12/04/92	12/04/92	12/11/92	12/03/92
Cl		7.0	5.9	7.3	7.4

INTERIOR SHALLOW ZONE BASELINE DATA		
	SOURCE ----->	
U.C.L.	WELL # ----->	
PARAMETER	DATE ----->	

INTERIOR DEEP ZONE BASELINE DATA		
	SOURCE ----->	
U.C.L.	WELL # ----->	
PARAMETER	DATE ----->	

NOTE- THIS TABLE LISTS OUTLIERS FOR RESTORATION TARGET PARAMETERS AND UPPER CONTROL LIMIT PARAMETERS ONLY



1. Drill 5" diameter pilot hole through the mineralized zone.

2. Run geophysical log.

3. Calculate depth, thickness and grade of mineralized intercepts.

4. Determine zones to be completed.

5. Ream the hole to 6-3/4" to 7-7/8" diameter to approximately 15' past the bottom of the mineralized zone.

6. Install 4" to 5" casing approximately 10' past the bottom of the lowest completion interval.

7. Cement the annulus. Then use a 5" wipe plug behind the cement but ahead of the chase water to wipe casing to bottom. Shut well in.

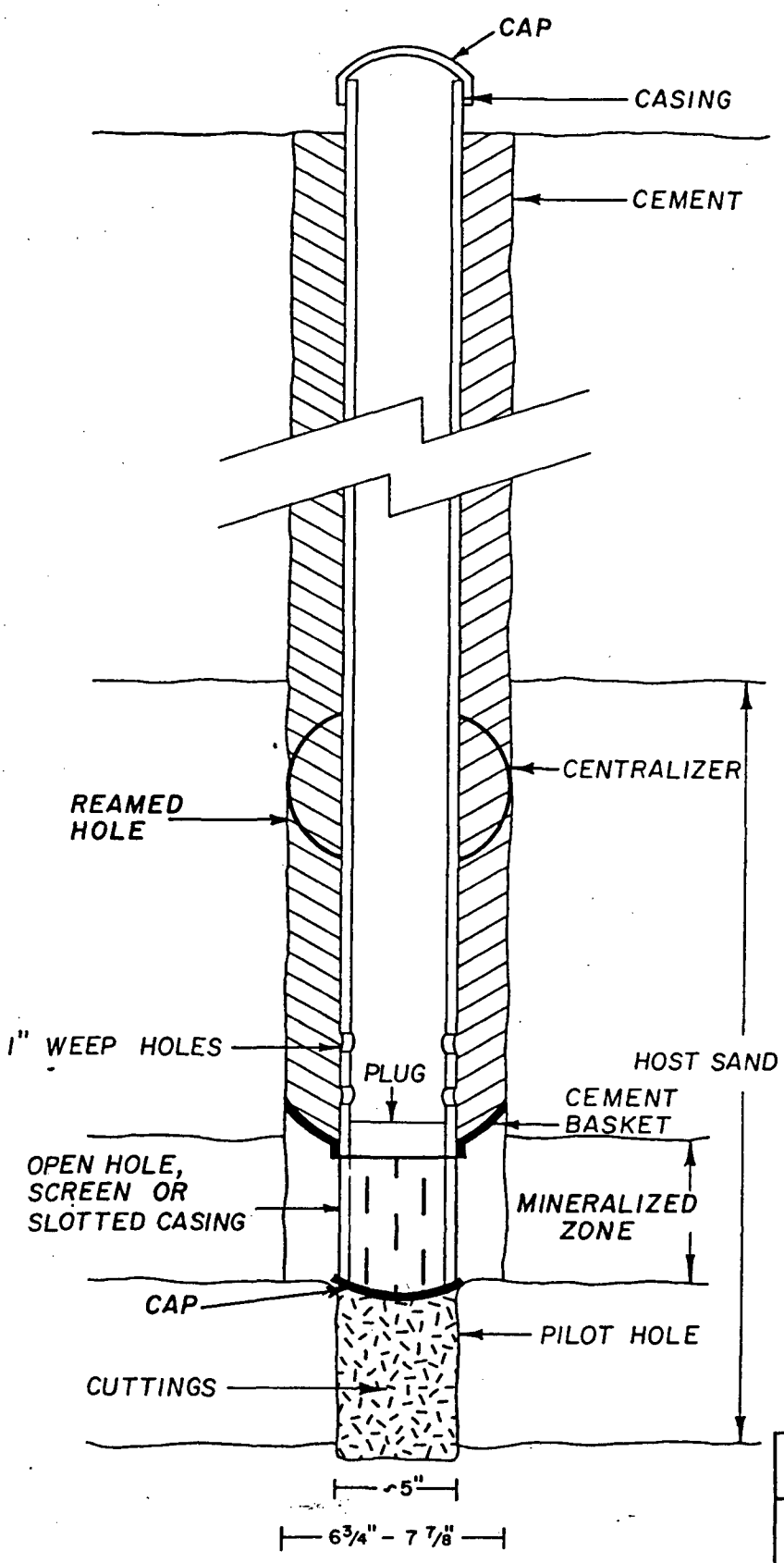
8. Top off the annulus with cement after settling has occurred.

9. Drill out the residual cement to approximately 5' past the bottom of the lowest completion.

10. Underream all mineralized intervals through casing and cement. The mineralized intervals will average a total of 10' in one to three zones.

11. Airlift and swab casing until required turbidity level is achieved.

TOTAL MINERALS CORP.		
WELL CONSTRUCTION METHOD 1 UNDERREAMED INTERVALS		
	SCALE: NONE	FIGURE:
DRAWN BY: P.H.	DATE: 3/10/92	



1. Drill 5" diameter pilot hole through the mineralized zone.
2. Run geophysical log.
3. Calculate depth, thickness and grade of mineralized intercepts.
4. Determine zone to be completed.
5. Ream the hole to 6-3/4" to 7-7/8" diameter through the mineralized zone.
6. Install 4" to 5" casing to the top of designated mineralized zone with a cement basket.
7. Cement the annulus. Shut well in.
8. Top off the annulus with cement after settling has occurred.
9. Drill out the residual cement inside the casing, plug and airflush.
10. Completion interval will be approximately 20'-200' per hole and will be left open hole or screen or slotted casing will be installed.
11. Airlift and swab casing until required turbidity level is achieved.

TOTAL MINERALS CORP.

WELL CONSTRUCTION
METHOD 2
SCREENED or SLOTTED INTERVAL

	SCALE: NONE	FIGURE:
DRAWN BY: P.H.	DATE: 3/10/92	

APPENDIX I

INDIVIDUAL WELL SAMPLE VALUES
WITH WATER LEVELS

INTERIOR ORE ZONE BASELINE DATA

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 U84-1

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4678.6 ft. Above M.S.L.

------> W. L. AVERAGE= 4553.6 ft. Above M.S.L.

Sample Date:	12-09-92	12-22-92	01-06-93	01-18-93	No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
WATER LEVEL Depth	129.60	125.30	123.00	122.20							
Elevation	4549.0	4553.3	4555.6	4556.4							
MAJOR IONS mg/l:											
Ca	9.8	8	7.2	7.6	4	8.15	1.147	1.317	9.80	7.200	0.05
Mg	0.26	0.27	0.35	0.4	4	0.32	0.067	0.004	0.40	0.260	0.1
Na	140	135	140	140	4	138.75	2.500	6.250	140.00	135.000	0.05
K	8.3	3.5	5.3	4.9	4	5.5	2.020	4.080	8.30	3.500	0.10
CO3	19.3	16.6			2	17.95	1.909	3.645	19.30	16.600	0.1
HCO3	82.1	100			2	91.05	12.657	160.205	100.00	82.100	0.1
SO4	221	211	212	208	4	213	5.598	31.333	221.00	208.000	0.5
Cl	8.9	7.08	9.7	9.8	4	8.87	1.259	1.586	9.80	7.080	0.10
NH4 (N)	< 0.05	0.12			2	0.085	0.049	0.002	0.12	0.050	0.05
NO2 (N)	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
NO3 (N)	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
F	0.32	0.26			2	0.29	0.042	0.002	0.32	0.260	0.10
SIO2	8.4	8.7			2	8.55	0.212	0.045	8.70	8.400	1.00
TDS @ 180 C	456	435	431	418	4	435	15.769	248.667	456.00	418.000	1
Cond (umho/cm)	747	730	707	710	4	723.5	18.699	349.667	747.00	707.000	1
Alk-CaCO3	95.8	106	104	108	4	103.45	5.355	28.677	108.00	95.800	0.1
pH (units)	9.62	9.47	9.36	9.30	4	9.4375	0.141	0.020	9.62	9.300	1-14
TRACE METALS mg/l:											
Al	< 0.1	< 0.1			4	0.05	0.058	0.003	0.10		0.10
As	0.003	0.002	< 0.001	0.002	4	0.002	0.001	0.000	0.00	0.001	0.001
Ba	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.01			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.01			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.01			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
Ni	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Se	0.006	0.005	0.004	< 0.001	4	0.004	0.002	0.000	0.01	0.001	0.001
V	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.01			0.01	0.010	0.01
RADIOMETRIC pCi/l:											
U (mg/l)	0.054	0.03	0.055	0.032	4	0.04275	0.014	0.000	0.06	0.030	0.0003
Ra226	5.2	6.9	5.9	8.6	4	6.65	1.475	2.177	8.60	5.200	0.2
Q.A. DATA:											
Anion meq:	6.8752337	6.8159175	6.7699061	6.7693897	4	6.8076117	0.050	0.003	6.88	6.769	
Cation meq:	6.8296667	6.4050318	6.6120206	6.6259309	4	6.6181625	0.173	0.030	6.83	6.405	
WYDEQ A/C Bal.%	-0.332487	-3.107838	-1.179841	-1.070962	4	-1.422782	1.185	1.404	-0.33	-3.108	
Calc TDS mg/l:	458.2355	441.4058	437.99	436.58	4	443.55283	9.996	99.919	458.24	436.580	
TDS A/C Bal:	0.9951215	0.9854877	0.9840407	0.9574419	4	0.980523	0.016	0.000	1.00	0.957	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 S88–1

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4671.2 ft. Above M.S.L.

------> W. L. AVERAGE= 4552.1 ft. Above M.S.L.

Sample Date:	12–10–92	12–21–92	01–06–93	01–18–93
WATER LEVEL Depth	120.40	118.50	118.90	118.70
Elevation	4550.8	4552.7	4552.3	4552.5

MAJOR IONS mg/l:					No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Ca	10.1	7.4	7.9	8.4	4	8.45	1.173	1.377	10.10	7.400	0.05
Mg	0.55	0.49	0.5	0.6	4	0.535	0.051	0.003	0.60	0.490	0.1
Na	139	133	138	138	4	137	2.708	7.333	139.00	133.000	0.05
K	6.4	2.7	3.3	4.4	4	4.2	1.627	2.647	6.40	2.700	0.10
CO3	14.6	10.7			2	12.65	2.758	7.605	14.60	10.700	0.1
HCO3	96.1	107			2	101.55	7.707	59.405	107.00	96.100	0.1
SO4	221	216	213	207	4	214.25	5.852	34.250	221.00	207.000	0.5
Cl	9	7.61	9.23	7.8	4	8.41	0.823	0.678	9.23	7.610	0.10
NH4 (N)	0.43	0.07			1	0.07			0.07	0.070	0.05
NO2 (N)	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
NO3 (N)	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
F	0.23	0.45			2	0.34	0.156	0.024	0.45	0.230	0.10
SIO2	8.2	7.6			2	7.9	0.424	0.180	8.20	7.600	1.00
TDS @ 180 C	454	401	421	423	4	424.75	21.884	478.917	454.00	401.000	1
Cond (umho/cm)	721	713	703	712	4	712.25	7.365	54.250	721.00	703.000	1
Alk–CaCO3	100	103	110	102	4	103.75	4.349	18.917	110.00	100.000	0.1
pH (units)	9.43	9.25	9.31	9.18	4	9.2925	0.106	0.011	9.43	9.180	1–14

TRACE METALS mg/l:											
Al	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
As	0.004	0.003	0.003	0.002	4	0.003	0.001	0.000	0.00	0.002	0.001
Ba	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.01			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.01			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.01			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
Ni	< 0.05	< 0.05			2	0.05			0.05	0.050	0.05
Se	0.006	< 0.005	0.005	< 0.001	4	0.00425	0.002	0.000	0.01	0.001	0.001
V	< 0.1	< 0.1			2	0.1			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.01			0.01	0.010	0.01

RADIOMETRIC pCi/l:											
U (mg/l)	0.01	0.065	0.090	0.060	4	0.05625	0.034	0.001	0.09	0.010	0.0003
Ra226	45.8	14.1	54.5	40.8	4	38.8	17.412	303.193	54.50	14.100	0.2

Q.A. DATA:											
Anion meq:	6.9461553	6.8631011	6.8975	6.5722183	4	6.8197437	0.168	0.028	6.95	6.572	
Cation meq:	6.80378	6.2823243	6.5212821	6.5828205	4	6.5398732	0.202	0.041	6.77	6.282	
WYDEQ A/C Bal.%	–1.035462	–4.418091	–2.803667	0.0805942	4	–2.100705	1.943	3.775	0.08	–4.418	
Calc TDS mg/l:	458.5257	440.3813	439.03	428.42	4	441.45058	12.244	149.908	457.97	428.420	
TDS A/C Bal:	0.9901299	0.9105745	0.9589322	0.9873489	4	0.9620462	0.037	0.001	0.99	0.911	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 T92–2

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4672.2 ft. Above M.S.L.

------> W. L. AVERAGE= 4549.6 ft. Above M.S.L.

Sample Date:	12–10–92	12–21–92	01–06–93	01–18–93
WATER LEVEL Depth	120.90	120.70	129.20	119.50
Elevation	4551.3	4551.5	4543.0	4552.7

MAJOR IONS mg/l:					No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Ca	8	6.9	7	7.4	4	7.33	0.499	0.249	8.00	6.900	0.05
Mg	0.4	0.48	0.48	0.4	4	0.44	0.046	0.002	0.48	0.400	0.1
Na	133	132	138	134	4	134.25	2.630	6.917	138.00	132.000	0.05
K	3.8	1.2	0.9	3.0	4	2.23	1.401	1.963	3.80	0.900	0.10
CO3	11	7.2			2	9.10	2.687	7.220	11.00	7.200	0.1
HCO3	102	112			2	107.00	7.071	50.000	112.00	102.000	0.1
SO4	216	205	205	204	4	207.50	5.686	32.333	216.00	204.000	0.5
Cl	9.4	7.75	9.02	9.6	4	8.94	0.831	0.690	9.60	7.750	0.10
NH4 (N)	< 0.05	0.07			2	0.06	0.014	0.000	0.07	0.050	0.05
NO2 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
NO3 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
F	0.23	0.29			2	0.26	0.042	0.002	0.29	0.230	0.10
SIO2	9.2	7.7			2	8.45	1.061	1.125	9.20	7.700	1.00
TDS @ 180 C	450	426	427	387	4	422.50	26.134	683.000	450.00	387.000	1
Cond (umho/cm)	713	686	686	700	4	696.25	12.971	168.250	713.00	686.000	1
Alk–CaCO3	99.8	102	100	98.2	4	100.00	1.558	2.427	102.00	98.200	0.1
pH (units)	9.28	9.06	8.05	9.00	4	8.85	0.545	0.297	9.28	8.050	1–14

TRACE METALS mg/l:											
Al	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
As	0.002	< 0.001	< 0.001	0.001	4	0.001	0.001	0.000	0.00	0.001	0.001
Ba	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Ni	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Se	0.001	0.007	0.003	< 0.001	4	0.003	0.003	0.000	0.01	0.001	0.001
V	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.010			0.01	0.010	0.01

RADIOMETRIC pCi/l:											
U (mg/l)	0.022	0.025	0.047	0.028	4	0.031	0.011	0.000	0.05	0.022	0.0003
Ra226	12.7	16.9	8.7	16.9	4	13.800	3.934	15.480	16.90	8.700	0.2

Q.A. DATA:											
Anion meq:	6.8299775	6.5947576	6.5249178	6.4844225	4	6.609	0.155	0.024	6.83	6.484	
Cation meq:	6.3316009	6.1745512	6.4130769	6.3063434	4	6.306	0.099	0.010	6.41	6.175	
WYDEQ A/C Bal.%	–3.786602	–3.290753	–0.864438	–1.392248	4	–2.334	1.423	2.024	–0.86	–3.787	
Calc TDS mg/l:	442.9355	425.4513	421.4	418.302	4	427.022	11.005	121.117	442.94	418.302	
TDS A/C Bal:	1.0159493	1.0012897	1.013289	0.9251689	4	0.989	0.043	0.002	1.02	0.925	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 T95–1

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4671.2 ft. Above M.S.L.

------> W. L. AVERAGE= 4551.0 ft. Above M.S.L.

Sample Date:	12–10–92	12–21–92	01–06–93	01–18–93
WATER LEVEL Depth	122.70	118.70	119.90	119.50
Elevation	4548.5	4552.5	4551.3	4551.7

MAJOR IONS mg/l:					No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Ca	8.5	7.5	7.6	8.2	4	7.95	0.480	0.230	8.50	7.500	0.05
Mg	0.52	0.63	0.65	0.8	4	0.65	0.115	0.013	0.80	0.520	0.1
Na	133	136	135	138	4	135.50	2.082	4.333	138.00	133.000	0.05
K	3.3	3.4	2.9	3.5	4	3.28	0.263	0.069	3.50	2.900	0.10
CO3	8.6	6.3			2	7.45	1.626	2.645	8.60	6.300	0.1
HCO3	108	111			2	109.50	2.121	4.500	111.00	108.000	0.1
SO4	223	213	212	206	4	213.50	7.047	49.667	223.00	206.000	0.5
Cl	9.6	7.48	9.23	10.2	4	9.13	1.169	1.366	10.20	7.480	0.10
NH4 (N)	< 0.05	0.12			2	0.09	0.049	0.002	0.12	0.050	0.05
NO2 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
NO3 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
F	0.21	0.28			2	0.25	0.049	0.002	0.28	0.210	0.10
SIO2	9.1	7.6			2	8.35	1.061	1.125	9.10	7.600	1.00
TDS @ 180 C	452	441	419	419	4	432.75	16.500	272.250	452.00	419.000	1
Cond (umho/cm)	716	708	692	709	4	706.25	10.145	102.917	716.00	692.000	1
Alk–CaCO3	101	100	102	98.9	4	100.48	1.330	1.769	102.00	98.900	0.1
pH (units)	9.15	9.00	9.06	9.10	4	9.08	0.063	0.004	9.15	9.000	1–14

TRACE METALS mg/l:											
Al	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
As	0.002	0.002	< 0.001	< 0.001	4	0.002	0.001	0.000	0.00	0.001	0.001
Ba	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Ni	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Se	< 0.001	0.006	0.004	< 0.001	4	0.003	0.002	0.000	0.01	0.001	0.001
V	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.010			0.01	0.010	0.01

RADIOMETRIC pCi/l:											
U (mg/l)	0.016	0.015	0.031	0.018	4	0.020	0.007	0.000	0.03	0.015	0.0003
Ra226	15.8	19	19.5	14.8	4	17.275	2.326	5.409	19.50	14.800	0.2

Q.A. DATA:											
Anion meq:	6.9987527	6.7068989	6.7166667	6.5569906	4	6.745	0.184	0.034	7.00	6.557	
Cation meq:	6.3537804	6.4509459	6.3780909	6.5664103	4	6.437	0.095	0.009	6.57	6.354	
WYDEQ A/C Bal.%	–4.830337	–1.94525	–2.585583	0.0717775	4	–2.322	2.019	4.078	0.07	–4.830	
Calc TDS mg/l:	450.7355	438.6858	429.6	427.029	4	436.513	10.720	114.912	450.74	427.029	
TDS A/C Bal:	1.0028054	1.0052753	0.9753259	0.981198	4	0.991	0.015	0.000	1.01	0.975	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 S100–2

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4660.8 ft. Above M.S.L.

------> W. L. AVERAGE= 4549.3 ft. Above M.S.L.

Sample Date:	12–10–92	12–22–92	01–06–93	01–18–93
WATER LEVEL Depth	110.50	110.80	113.00	111.60
Elevation	4550.3	4550.0	4547.8	4549.2

MAJOR IONS mg/l:					No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Ca	9.6	9.1	8.2	7.9	4	8.70	0.787	0.620	9.60	7.900	0.05
Mg	0.15	0.19	0.25	0.4	4	0.25	0.110	0.012	0.40	0.150	0.1
Na	131	126	129	137	4	130.75	4.646	21.583	137.00	126.000	0.05
K	3.6	2.6	3.4	3.9	4	3.38	0.556	0.309	3.90	2.600	0.10
CO3	13.9	10			2	11.95	2.758	7.605	13.90	10.000	0.1
HCO3	78.1	89.2			2	83.65	7.849	61.605	89.20	78.100	0.1
SO4	227	219	216	206	4	217.00	8.679	75.333	227.00	206.000	0.5
Cl	9	8.02	10.1	9.8	4	9.23	0.931	0.866	10.10	8.020	0.10
NH4 (N)	0.06	0.12			2	0.09	0.042	0.002	0.12	0.060	0.05
NO2 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
NO3 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
F	0.25	0.27			2	0.26	0.014	0.000	0.27	0.250	0.10
SiO2	9.6	8.0			2	8.80	1.131	1.280	9.60	8.000	1.00
TDS @ 180 C	436	428	406	402	4	418.00	16.573	274.667	436.00	402.000	1
Cond (umho/cm)	723	684	693	722	4	705.50	19.975	399.000	723.00	684.000	1
Alk–CaCO3	84.6	87.8	98.6	99.8	4	92.70	7.634	58.280	99.80	84.600	0.1
pH (units)	9.50	9.30	9.27	9.17	4	9.31	0.138	0.019	9.50	9.170	1–14

TRACE METALS mg/l:											
Al	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
As	0.011	0.008	0.005	0.006	3	0.006	0.002	0.000	0.01	0.005	0.001
Ba	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Ni	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Se	0.01	0.008	0.005	< 0.001	4	0.006	0.004	0.000	0.01	0.001	0.001
V	0.1	< 0.1			2	0.100			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.010			0.01	0.010	0.01

RADIOMETRIC pCi/l:											
U (mg/l)	0.001	0.087	0.113	0.073	4	0.069	0.048	0.002	0.11	0.001	0.0003
Ra226	1.4	28.4	29	13.2	4	18.000	13.263	175.920	29.00	1.400	0.2

Q.A. DATA:											
Anion meq:	6.7537926	6.6125401	6.756507	6.563723	4	6.672	0.098	0.010	6.76	6.564	
Cation meq:	6.2993971	6.0389838	6.1267085	6.4848551	4	6.237	0.197	0.039	6.48	6.039	
WYDEQ A/C Bal.%	–3.481107	–4.533496	–4.88852	–0.604418	4	–3.377	1.943	3.773	–0.60	–4.889	
Calc TDS mg/l:	444.0684	428.7758	427.096	425.878	4	431.455	8.493	72.127	444.07	425.878	
TDS A/C Bal:	0.9818307	0.9981907	0.950606	0.9439323	4	0.969	0.026	0.001	1.00	0.944	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 S104-1

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4664.8 ft. Above M.S.L.

------> W. L. AVERAGE= 4549.6 ft. Above M.S.L.

Sample Date:	12-10-92	12-22-92	01-06-93	01-18-93
WATER LEVEL Depth	114.20	115.00	115.90	115.80
Elevation	4550.6	4549.8	4548.9	4549.0

MAJOR IONS mg/l:						No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Ca		5.7		10.1	8.3	8.7	4	8.20	1.837	3.373	10.10	5.700	0.05
Mg		0.59		0.74	0.71	0.8	4	0.71	0.088	0.008	0.80	0.590	0.1
Na		147		142	138	135	4	140.50	5.196	27.000	147.00	135.000	0.05
K		4.3		3.9	3.4	2.7	4	3.58	0.690	0.476	4.30	2.700	0.10
CO3		18.5		14			2	16.25	3.182	10.125	18.50	14.000	0.1
HCO3		78.8		92			2	85.40	9.334	87.120	92.00	78.800	0.1
SO4		227		216	217	213	4	218.25	6.076	36.917	227.00	213.000	0.5
Cl		8.6		7.15	9.02	9	4	8.44	0.883	0.780	9.02	7.150	0.10
NH4 (N)	<	0.05		0.07			2	0.06	0.014	0.000	0.07	0.050	0.05
NO2 (N)	<	0.1	<	0.1			2	0.10			0.10	0.100	0.10
NO3 (N)	<	0.1	<	0.1			2	0.10			0.10	0.100	0.10
F		0.24		0.27			2	0.26	0.021	0.000	0.27	0.240	0.10
SiO2		9.3		8.5			2	8.90	0.566	0.320	9.30	8.500	1.00
TDS @ 180 C		464		425	426	416	4	432.75	21.313	454.250	464.00	416.000	1
Cond (umho/cm)		733		702	708	770	4	728.25	30.902	954.917	770.00	702.000	1
Alk-CaCO3		92		95.8	94.5	107	4	97.33	6.640	44.089	107.00	92.000	0.1
pH (units)		9.62		9.43	9.15	9.24	4	9.36	0.209	0.044	9.62	9.150	1-14

TRACE METALS mg/l:													
Al	<	0.1	<	0.1			2	0.100			0.10	0.100	0.10
As		0.002		0.002	0.001	0.001	4	0.002	0.001	0.000	0.00	0.001	0.001
Ba	<	0.1	<	0.1			2	0.100			0.10	0.100	0.10
B	<	0.1	<	0.1			2	0.100			0.10	0.100	0.10
Cd	<	0.01	<	0.01			2	0.010			0.01	0.010	0.01
Cr	<	0.05	<	0.05			2	0.050			0.05	0.050	0.05
Cu	<	0.01	<	0.01			2	0.010			0.01	0.010	0.01
Fe	<	0.05	<	0.05			2	0.050			0.05	0.050	0.05
Pb	<	0.05	<	0.05			2	0.050			0.05	0.050	0.05
Mn	<	0.01	<	0.01			2	0.010			0.01	0.010	0.01
Hg	<	0.001	<	0.001			2	0.001			0.00	0.001	0.001
Mo	<	0.1	<	0.1			2	0.100			0.10	0.100	0.10
Ni	<	0.05	<	0.05			2	0.050			0.05	0.050	0.05
Se		0.006		0.005	0.003	0.119	3	0.005	0.002	0.000	0.01	0.003	0.001
V	<	0.1	<	0.1		21.9	2	0.100			0.10	0.100	0.10
Zn	<	0.01		0.01		1.7	2	0.010			0.01	0.010	0.01

RADIOMETRIC pCi/l:												
U (mg/l)	0.05	0.011	0.164	<	0.0003	4	0.056	0.075	0.006	0.16	0.000	0.0003
Ra226	21.7	37.9	31.1		15.4	4	26.525	9.956	99.123	37.90	15.400	0.2

Q.A. DATA:											
Anion meq:	6.9068074	6.7047681	6.6649178	6.8310211	4	6.777	0.112	0.013	6.91	6.665	
Cation meq:	6.8539504	6.8602313	6.5613462	6.4924504	4	6.679	0.211	0.045	6.86	6.440	
WYDEQ A/C Bal.%	-0.384114	1.146061	-0.783076	-2.54116	4	-0.741	1.687	2.846	1.15	-2.943	
Calc TDS mg/l:	461.5355	449.5913	434.075	436.17	4	444.918	13.225	174.904	461.54	434.075	
TDS A/C Bal:	1.0053398	0.945303	0.9813972	0.9537566	4	0.972	0.027	0.001	1.01	0.945	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 R108–1

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4649.2 ft. Above M.S.L.

------> W. L. AVERAGE= 4550.7 ft. Above M.S.L.

Sample Date:	12–09–92	12–21–92	01–06–93	01–18–93	No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
WATER LEVEL Depth	98.3	98.6	98.6	98.6							
Elevation	4550.9	4550.6	4550.6	4550.6							
MAJOR IONS mg/l:											
Ca	7.9	7.4	8.1	8.7	4	8.03	0.538	0.289	8.70	7.400	0.05
Mg	0.47	0.6	0.73	0.8	4	0.65	0.146	0.021	0.80	0.470	0.1
Na	136	133	125	135	4	132.25	4.992	24.917	136.00	125.000	0.05
K	4.8	1.5	3.1	2.6	4	3.00	1.374	1.887	4.80	1.500	0.10
CO3	5.1	3.8			2	4.45	0.919	0.845	5.10	3.800	0.1
HCO3	113	113			2	113.00			113.00	113.000	0.1
SO4	219	214	207	208	4	212.00	5.598	31.333	219.00	207.000	0.5
Cl	8.8	7.88	8.41	9.5	4	8.65	0.682	0.465	9.50	7.880	0.10
NH4 (N)	< 0.05	0.12			2	0.09	0.049	0.002	0.12	0.050	0.05
NO2 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
NO3 (N)	< 0.10	< 0.10			2	0.10			0.10	0.100	0.10
F	0.28	0.27			2	0.28	0.007	0.000	0.28	0.270	0.10
SIO2	8.5	8.1			2	8.30	0.283	0.080	8.50	8.100	1.00
TDS @ 180 C	442	435	401	400	4	419.50	22.128	489.667	442.00	400.000	1
Cond (umho/cm)	716	680	685	703	4	696.00	16.593	275.333	716.00	680.000	1
Alk–CaCO3	100	98.4	101	97	4	99.10	1.763	3.107	101.00	97.000	0.1
pH (units)	8.9	8.77	8.76	8.76	4	8.80	0.068	0.005	8.90	8.760	1–14
TRACE METALS mg/l:											
Al	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
As	0.003	< 0.001	< 0.001	0.001	4	0.002	0.001	0.000	0.00	0.001	0.001
Ba	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
NI	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Se	0.008	0.006	0.004	< 0.001	4	0.005	0.003	0.000	0.01	0.001	0.001
V	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.010			0.01	0.010	0.01
RADIOMETRIC pCi/l:											
U (mg/l)	0.04	0.016	0.029	0.019	4	0.026	0.011	0.000	0.04	0.016	0.0003
Ra226	44.5	27.1	9.5	28.0	4	27.275	14.297	204.403	44.50	9.500	0.2
Q.A. DATA:											
Anion meq:	6.8618689	6.6879271	6.5694014	6.540939	4	6.665	0.146	0.021	6.86	6.541	
Cation meq:	6.48851	6.2642932	5.9801031	6.4378986	4	6.293	0.229	0.053	6.49	5.980	
WYDEQ A/C Bal.%	–2.796616	–3.270743	–4.695789	–0.793911	4	–2.889	1.613	2.603	–0.79	–4.696	
Calc TDS mg/l:	448.2555	434.0458	413.95	423.77	4	430.005	14.675	215.349	448.26	413.950	
TDS A/C Bal:	0.9860448	1.0021984	0.968716	0.9439083	4	0.975	0.025	0.001	1.00	0.944	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX1.WK3

APPENDIX 1

WELL #: 2 R114-1

INTERIOR ORE ZONE BASELINE DATA

MEASURING POINT ELEVATION: 4650.1 ft. Above M.S.L.

------> W. L. AVERAGE= 4551.5 ft. Above M.S.L.

Sample Date:	12-09-92	12-21-92	01-06-93	01-18-93	No. of Samples*	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
WATER LEVEL Depth	98.30	98.40	98.90	99.00							
Elevation	4551.8	4551.7	4551.2	4551.1							
MAJOR IONS mg/l:											
Ca	9.4	8	8	8.2	4	8.40	0.673	0.453	9.40	8.000	0.05
Mg	0.6	0.7	0.72	0.7	4	0.68	0.054	0.003	0.72	0.600	0.1
Na	142	134	136	137	4	137.25	3.403	11.583	142.00	134.000	0.05
K	5.6	1.4	2	3	4	3.00	1.855	3.440	5.60	1.400	0.10
CO3	9.6	5.3			2	7.45	3.041	9.245	9.60	5.300	0.1
HCO3	110	118			2	114.00	5.657	32.000	118.00	110.000	0.1
SO4	223	213	213	210	4	214.75	5.679	32.250	223.00	210.000	0.5
Cl	9.7	7.61	9.42	10.3	4	9.26	1.158	1.341	10.30	7.610	0.10
NH4 (N)	0.06	0.12			2	0.09	0.042	0.002	0.12	0.060	0.05
NO2 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
NO3 (N)	< 0.1	< 0.1			2	0.10			0.10	0.100	0.10
F	0.25	0.28			2	0.27	0.021	0.000	0.28	0.250	0.10
SIO2	8.6	7.9			2	8.25	0.495	0.245	8.60	7.900	1.00
TDS @ 180 C	463	442	414	412	4	432.75	24.377	594.250	463.00	412.000	1
Cond (umho/cm)	744	701	694	708	4	711.75	22.247	494.917	744.00	694.000	1
Alk-CaCO3	104	104	105	99.8	4	103.20	2.315	5.360	105.00	99.800	0.1
pH (units)	9.19	8.90	8.95	8.78	4	8.96	0.172	0.030	9.19	8.780	1-14
TRACE METALS mg/l:											
Al	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
As	0.003	0.001	0.001	0.003	4	0.002	0.001	0.000	0.00	0.001	0.001
Ba	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
B	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Cd	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Cr	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Cu	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Fe	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Pb	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Mn	< 0.01	< 0.01			2	0.010			0.01	0.010	0.01
Hg	< 0.001	< 0.001			2	0.001			0.00	0.001	0.001
Mo	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
NI	< 0.05	< 0.05			2	0.050			0.05	0.050	0.05
Se	0.008	0.006	0.004	< 0.001	4	0.005	0.003	0.000	0.01	0.001	0.001
V	< 0.1	< 0.1			2	0.100			0.10	0.100	0.10
Zn	< 0.01	0.01			2	0.010			0.01	0.010	0.01
RADIOMETRIC pCi/l:											
U (mg/l)	0.047	0.021	0.027	0.019	4	0.029	0.013	0.000	0.05	0.019	0.0003
Ra226	50.8	26.8	35.5	21.3	4	33.600	12.871	165.660	50.80	21.300	0.2
Q.A. DATA:											
Anion meq:	7.0697951	6.7919816	6.8028521	6.6611408	4	6.831	0.171	0.029	7.07	6.661	
Cation meq:	6.85644	6.3435407	6.4243255	6.5017781	4	6.532	0.226	0.051	6.86	6.344	
WYDEQ A/C Bal.%	-1.532037	-3.413956	-2.861734	-1.210694	4	-2.255	1.053	1.108	-1.21	-3.414	
Calc TDS mg/l:	464.6684	438.1858	433.19	430.078	4	441.531	15.783	249.091	464.67	430.078	
TDS A/C Bal:	0.9964095	1.0087045	0.9557007	0.9579658	4	0.980	0.027	0.001	1.01	0.956	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE:---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX II

INDIVIDUAL WELL SAMPLE VALUES WITH WATER LEVELS

PERIMETER MONITOR WELL BASELINE DATA

Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

WELL #: MW–101

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING PONT ELEVATION: 4703.5 Ft. Above M.S.L.

------> W. L. AVERAGE= 4561.8 Ft. Above M.S.L.

Sample Date:	12–04–92	12–22–92	12–28–92	01–12–93	TOMIN 12–04–92	TOMIN 12–22–92	TOMIN 12–28–92	TOMIN 01–12–93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	141.70	141.50	141.70	141.90											
Elevation	4561.8	4562	4561.8	4561.8											
MAJOR IONS mg/l:															
Ca	6.30	6.60	6.10	6.90					4	6.48	0.350	0.123	6.90	6.10	0.05
Mg	0.58	0.73	0.70	0.64					4	0.66	0.067	0.004	0.73	0.58	0.1
Na	130.00	138.00	128.00	138.00					4	133.50	5.260	27.667	138.00	128.00	0.05
K	2.50	3.40	2.00	4.30					4	3.05	1.015	1.030	4.30	2.00	0.10
CO3	13.8								1	13.80			13.80	13.80	0.1
HCO3	83.0								1	83.00			83.00	83.00	0.1
SO4	201.0	202.0	202.0	206.0					4	202.75	2.217	4.917	206.00	201.00	0.5
Cl	7.90	9.40	9.60	9.20	9	9.3	9.1	9.6	8	9.14	0.545	0.297	9.60	7.90	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.86								1	0.86			0.86	0.86	0.10
SIO2	8.30								1	8.30			8.30	8.30	1.00
TDS @ 180 C	400	412	399	396					4	401.75	7.042	49.583	412.00	396.00	1
Cond (umho/cm)	692	652	684	668	671	666	653	653	8	667.38	14.870	221.125	692.00	652.00	1
Alk–CaCO3	88.4	89.4	85.8	86.0	86.9	84	82.2	84.7	8	87.18	5.261	27.894	89.40	82.20	0.1
pH (units)	9.5	9.1	9.2	8.9	9.5	9.4	9.3	9.2	8	9.28	0.197	0.039	9.50	8.93	1–14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	< 0.001	0.002	< 0.001	0.002					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.007	0.022	0.009	0.011					3	0.01	0.002	0.000	0.01	0.01	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.009	0.009	0.005	< 0.000					4	0.01	0.004	0.000	0.01	0.00	0.0003
Ra226	1.0	2.8	1.4	2.2					4	1.85	0.806	0.650	2.80	1.00	0.2
Q.A. DATA:															
Anion meq:	6.290	6.461	6.195	6.271					4	6.30	0.112	0.013	6.46	6.19	
Cation meq:	6.098	6.478	5.980	6.509					4	6.27	0.267	0.071	6.51	5.98	
WYDEQ A/C Bal.%	(1.553)	0.131	(1.765)	1.861					4	–0.33	1.690	2.856	1.86	–1.77	
Calc TDS mg/l:	414	421	401	418					4	413.16	8.779	77.066	420.76	400.74	
TDS A/C Bal:	0.97	0.98	1.00	0.95					4	0.97	0.020	0.000	1.00	0.95	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE ------> [box]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3
WELL #: MW-102

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4696.2 Ft. Above M.S.L.

------> W. L. AVERAGE= 4558.4 Ft. Above M.S.L.

Sample Date:	12-04-92	12-15-92	12-28-92	01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	138.20	137.30	137.70	138.00											
Elevation	4558	4558.9	4558.5	4558.2											
MAJOR IONS mg/l:															
Ca	6.90	6.90	7.30	7.70					4	7.20	0.383	0.147	7.70	6.90	0.05
Mg	0.71	0.77	0.77	0.84					4	0.77	0.053	0.003	0.84	0.71	0.1
Na	130.00	133.00	129.00	134.00					4	131.50	2.380	5.667	134.00	129.00	0.05
K	3.80	2.60	2.70	4.80					4	3.48	1.037	1.076	4.80	2.60	0.10
CO3	9.3								1	9.30			9.30	9.30	0.1
HCO3	90.5								1	90.50			90.50	90.50	0.1
SO4	200.0	200.0	208.0	205.0					4	202.75	3.202	10.250	208.00	200.00	0.5
Cl	7.00	9.40	9.60	9.20	9.00	9.1	9.4	9.6	7	9.33	0.236	0.056	9.60	9.00	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.74								1	0.74			0.74	0.74	0.10
SIO2	9.30								1	9.30			9.30	9.30	1.00
TDS @ 180 C	400	386	422	401					4	402.25	14.841	220.250	422.00	386.00	1
Cond (umho/cm)	685	663	676	676	672	672	653	664	8	670.13	9.848	96.982	685.00	653.00	1
Alk-CaCO3	87.8	89.6	86.0	87.0	85.3	86.7	85.5	89.3	8	87.15	1.636	2.677	89.60	85.30	0.1
pH (units)	9.3	8.9	8.8	8.9	9.3	9.2	9.1	9	8	9.05	0.193	0.037	9.30	8.77	1-14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	0.001	< 0.001	< 0.001	< 0.001					4	0.00			0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.007	0.010	0.009	0.010					4	0.01	0.001	0.000	0.01	0.01	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.003	0.004	0.004	0.002					4	0.00	0.001	0.000	0.00	0.00	0.0003
Ra226	0.9	4.3	1.2	< 0.2					4	1.65	1.816	3.297	4.30	0.20	0.2
Q.A. DATA:															
Anion meq:	6.211	6.223	6.282	6.270					4	6.20	0.125	0.016	6.28	6.01	
Cation meq:	6.172	6.258	6.107	6.404					4	6.24	0.128	0.016	6.40	6.11	
WYDEQ A/C Bal.%	(0.312)	0.280	(1.412)	1.059					4	0.31	1.226	1.503	1.30	-1.41	
Calc TDS mg/l:	414	407	408	415					4	409.17	3.848	13.306	414.61	406.91	
TDS A/C Bal:	0.97	0.95	1.03	0.97					4	0.98	0.037	0.001	1.03	0.95	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

APPENDIX 2

WELL #: MW-103

MEASURING POINT ELEVATION: 4701.1 Ft. Above M.S.L.

------> W. L. AVERAGE= 4559.1 Ft. Above M.S.L.

		PERIMETER MONITOR WELL BASELINE DATA				TOMIN	TOMIN	TOMIN	TOMIN							
Sample Date:		12-04-92	12-15-92	12-28-92	01-12-93	12-04-92	12-15-92	12-28-92	01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level	Depth	141.60	141.80	142.20	142.40											
	Elevation	4559.5	4559.3	4558.9	4558.7											
MAJOR IONS mg/l:																
Ca		6.50	8.20	8.30	8.40					4	7.85	0.904	0.817	8.40	6.50	0.05
Mg		0.63	0.47	0.56	0.57					4	0.56	0.066	0.004	0.63	0.47	0.1
Na		132.00	138.00	133.00	139.00					4	135.50	3.512	12.333	139.00	132.00	0.05
K		3.90	3.50	2.00	3.20					4	3.15	0.818	0.670	3.90	2.00	0.10
CO3		19.5								1	19.50			19.50	19.50	0.1
HCO3		70.5								1	70.50			70.50	70.50	0.1
SO4		208.0	200.0	208.0	206.0					4	205.50	3.786	14.333	208.00	200.00	0.5
Cl		7.80	8.70	9.40	8.10	5.9	9.8	9.6	10.3	7	9.07	0.901	0.812	10.30	7.80	0.10
NH4 (N)		< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)		< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)		< 0.10								1	0.10			0.10	0.10	0.10
F		0.83								1	0.83			0.83	0.83	0.10
SIO2		8.30								1	8.30			8.30	8.30	1.00
TDS @ 180 C		416	409	413	410					4	412.00	3.162	10.000	416.00	409.00	1
Cond (umho/cm)		686	652	670	667	688	692	656	686	8	672.13	14.990	224.696	692.00	652.00	1
Alk-CaCO3		86.8	83.8	87.4	86.5	85.3	90.6	84.5	87.7	8	86.58	2.133	4.548	90.60	83.80	0.1
pH (units)		9.7	9.5	9.4	9.3	9.7	9.6	9.5	9.5	8	9.52	0.139	0.019	9.70	9.31	1-14
TRACE METALS mg/l:																
Al		< 0.10								1	0.10			0.10	0.10	0.10
As		0.014	0.017	0.009	0.010											0.001
Ba		< 0.10								1	0.10			0.10	0.10	0.10
B		< 0.10								1	0.10			0.10	0.10	0.10
Cd		< 0.01								1	0.01			0.01	0.01	0.01
Cr		< 0.05								1	0.05			0.05	0.05	0.05
Cu		< 0.01								1	0.01			0.01	0.01	0.01
Fe		< 0.05								1	0.05			0.05	0.05	0.05
Pb		< 0.05								1	0.05			0.05	0.05	0.05
Mn		< 0.01								1	0.01			0.01	0.01	0.01
Hg		< 0.001								1	0.00			0.00	0.00	0.001
Mo		< 0.10								1	0.10			0.10	0.10	0.10
Ni		< 0.05								1	0.05			0.05	0.05	0.05
Se		0.007	0.007	0.009	0.011					4	0.01	0.002	0.000	0.01	0.01	0.001
V		< 0.10								1	0.10			0.10	0.10	0.10
Zn		< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:																
U (mg/l)		0.003	0.028	0.001	< 0.000					4	0.01	0.013	0.000	0.03	0.00	0.0003
Ra226		1.2	1.9	0.2	0.2					4	0.88	0.830	0.689	1.90	0.20	0.2
Q.A. DATA:																
Anion meq:		6.417	6.088	6.346	6.250					4	6.28	0.142	0.020	6.42	6.09	
Cation meq:		6.235	6.539	6.298	6.593					4	6.42	0.177	0.031	6.59	6.23	
WYDEQ A/C Bal.%		(1.438)	3.573	(0.400)	2.672					4	1.10	2.400	5.760	3.57	-1.44	
Calc TDS mg/l:		424	410	415	418					4	416.55	5.747	33.030	423.62	409.99	
TDS A/C Bal:		0.98	1.00	1.00	0.98					4	0.99	0.009	0.000	1.00	0.98	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

WELL #: MW–104

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4630.6 Ft. Above M.S.L.

------> W. L. AVERAGE= 4554.7 Ft. Above M.S.L.

Sample Date:	12–11–92	12–15–92	12–28–92	01–12–93	TOMIN 12–11–92	TOMIN 12–15–92	TOMIN 12–28–92	TOMIN 01–12–93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	75.40	75.50	75.90	76.70											
Elevation	4555.2	4555.1	4554.7	4553.9											
MAJOR IONS mg/l:															
Ca	12.00	9.80	9.40	8.20					4	9.85	1.586	2.517	12.00	8.20	0.05
Mg	0.25	0.23	0.32	0.28					4	0.27	0.039	0.002	0.32	0.23	0.1
Na	135.00	145.00	144.00	139.00					4	140.75	4.646	21.583	145.00	135.00	0.05
K	4.30	3.50	3.40	5.00					4	4.05	0.751	0.563	5.00	3.40	0.10
CO3	31.2								1	31.20			31.20	31.20	0.1
HCO3	49.3								1	49.30			49.30	49.30	0.1
SO4	205.0	210.0	210.0	214.0					4	209.75	3.686	13.583	214.00	205.00	0.5
Cl	7.30	8.70	9.50	9.00	8.9	9	9.2	8.2	7	8.93	0.407	0.166	9.50	8.20	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.77								1	0.77			0.77	0.77	0.10
SiO2	8.80								1	8.80			8.80	8.80	1.00
TDS @ 180 C	426	403	422	432					4	420.75	12.527	156.917	432.00	403.00	1
Cond (umho/cm)	703	672	712	712	715	728	710	704	8	707.00	16.098	259.143	728.00	672.00	1
Alk–CaCO3	88.6	88.2	85.8	97.8	90.2	102.4	95.6	96.7	8	93.16	5.778	33.388	102.40	85.80	0.1
pH (units)	10.1	9.9	9.7	9.6	10	10	9.9	9.7	8	9.86	0.161	0.026	10.05	9.61	1–14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	< 0.001	< 0.001	< 0.001	0.002					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.008	0.008	0.010	0.010					4	0.01	0.002	0.000	0.01	0.01	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	< 0.000	< 0.000	0.002	0.003					4	0.00	0.001	0.000	0.00	0.00	0.0003
Ra226	< 0.2	4.3	0.8	0.6					4	1.48	1.900	3.609	4.30	0.20	0.2
Q.A. DATA:															
Anion meq:	6.379	6.384	6.359	6.668					4	6.40	0.204	0.042	6.67	6.17	
Cation meq:	6.619	6.903	6.845	6.605					4	6.74	0.153	0.023	6.90	6.61	
WYDEQ A/C Bal.%	1.842	3.907	3.682	(0.473)					4	2.65	2.089	4.363	3.91	–0.47	
Calc TDS mg/l:	430	431	429	435					4	429.50	5.109	26.104	435.14	422.88	
TDS A/C Bal:	0.99	0.93	0.98	0.99					4	0.98	0.031	0.001	1.01	0.93	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE ------>
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Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

WELL #: MW-105

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4624.4 Ft. Above M.S.L.

------> W. L. AVERAGE= 4551.6 Ft. Above M.S.L.

Sample Date:	12-04-92	12-15-92	12-28-92	01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	72.70	72.40	72.70	73.30											
Water Level Elevation	4551.7	4552	4551.7	4551.1											
MAJOR IONS mg/l:															
Ca	6.60	7.00	7.60	7.70					4	7.23	0.519	0.269	7.70	6.60	0.05
Mg	0.56	0.69	0.77	0.78					4	0.70	0.102	0.010	0.78	0.56	0.1
Na	129.00	138.00	132.00	136.00					4	133.75	4.031	16.250	138.00	129.00	0.05
K	1.50	2.00	2.60	4.30					4	2.60	1.219	1.487	4.30	1.50	0.10
CO3	4.3								1	4.30			4.30	4.30	0.1
HCO3	102.0								1	102.00			102.00	102.00	0.1
SO4	199.0	204.0	205.0	208.0					4	203.50	3.109	9.667	208.00	199.00	0.5
Cl	8.70	9.10	9.60	8.60	9.2	9.5	9.5	9.5	8	9.21	0.387	0.150	9.60	8.60	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.80								1	0.80			0.80	0.80	0.10
SiO2	8.30								1	8.30			8.30	8.30	1.00
TDS @ 180 C	388	392	411	398					4	397.25	10.046	100.917	411.00	388.00	1
Cond (umho/cm)	707	686	702	698	686	686	678	675	8	687.25	14.210	201.929	707.00	666.00	1
Alk-CaCO3	90.0	93.8	95.8	95.8	91.1	94.3	95	85.1	8	92.61	3.700	13.690	95.80	85.10	0.1
pH (units)	8.9	9.9	8.7	8.7	8.8	8.9	8.8	8.8	8	8.93	0.386	0.149	9.87	8.67	1-14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	< 0.001	< 0.001	0.001	0.002					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.007	0.004	0.009	0.009					4	0.01	0.002	0.000	0.01	0.00	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.018	0.033	0.026	0.047					4	0.03	0.012	0.000	0.05	0.02	0.0003
Ra226	0.2	1.6	0.3	< 0.2					4	0.58	0.685	0.469	1.60	0.20	0.2
Q.A. DATA:															
Anion meq:	6.263	6.382	6.457	6.450					4	6.39	0.090	0.008	6.46	6.26	
Cation meq:	6.042	6.459	6.250	6.473					4	6.31	0.203	0.041	6.47	6.04	
WYDEQ A/C Bal.%	(1.794)	0.595	(1.631)	0.181					4	-0.66	1.226	1.504	0.60	-1.79	
Calc TDS mg/l:	411	418	416	422					4	416.62	4.647	21.592	421.62	410.67	
TDS A/C Bal:	0.94	0.94	0.99	0.94					4	0.95	0.023	0.001	0.99	0.94	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE ------> [ ]
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Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

WELL #: MW-106

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4598.7 Ft. Above M.S.L.

------> W. L. AVERAGE= 4550.2 Ft. Above M.S.L.

Sample Date:	12-04-92	12-15-92	12-28-92	01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	46.30	46.30	46.60	46.90											
Elevation	4550.4	4550.4	4550.1	4549.8											
MAJOR IONS mg/l:															
Ca	8.70	6.90	6.40	6.40					4	7.10	1.092	1.193	8.70	6.40	0.05
Mg	0.40	0.51	0.56	0.51					4	0.50	0.068	0.005	0.56	0.40	0.1
Na	132.00	145.00	133.00	134.00					4	136.00	6.055	36.667	145.00	132.00	0.05
K	2.50	2.60	1.40	3.70					4	2.55	0.940	0.883	3.70	1.40	0.10
CO3	16.5								1	16.50			16.50	16.50	0.1
HCO3	86.1								1	86.10			86.10	86.10	0.1
SO4	212.0	210.0	213.0	213.0					4	212.00	1.414	2.000	213.00	210.00	0.5
Cl	8.40	8.80	9.30	8.60	9.4	9.4	9.3	9	8	9.03	0.388	0.151	9.40	8.40	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.80								1	0.80			0.80	0.80	0.10
SIO2	9.00								1	9.00			9.00	9.00	1.00
TDS @ 180 C	431	393	419	409					4	413.00	16.083	258.667	431.00	393.00	1
Cond (umho/cm)	706	652	701	688	704	693	676	674	8	686.75	18.507	342.500	706.00	652.00	1
Alk-CaCO3	94.8	88.2	84.4	86.0	91.3	88.2	82.2	84.3	8	87.43	4.121	16.979	94.80	82.20	0.1
pH (units)	9.5	9.4	9.2	9.0	9.6	9.4	9.3	9.1	8	9.31	0.201	0.040	9.60	9.03	1-14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	< 0.001	< 0.001	0.001	0.002					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.007	0.004	0.008	0.011					4	0.01	0.003	0.000	0.01	0.00	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.029	0.015	0.100	0.029					3	0.02	0.008	0.000	0.03	0.02	0.0003
Ra226	< 0.2	1.4	0.2	< 0.2					4	0.50	0.600	0.360	1.40	0.20	0.2
Q.A. DATA:															
Anion meq:	6.671	6.387	6.387	6.400					4	6.46	0.140	0.020	6.67	6.39	
Cation meq:	6.290	6.759	6.185	6.283					4	6.38	0.257	0.066	6.76	6.19	
WYDEQ A/C Bal.%	(2.942)	2.827	(1.609)	(0.917)					4	-0.66	2.472	6.112	2.83	-2.94	
Calc TDS mg/l:	434	428	415	419					4	423.92	8.661	75.011	434.26	415.14	
TDS A/C Bal:	0.99	0.92	1.01	0.98					4	0.97	0.039	0.002	1.01	0.92	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [box]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

WELL #: MW-107

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4592.9 Ft. Above M.S.L.

------> W. L. AVERAGE= 4550.0 Ft. Above M.S.L.

Sample Date:	12-04-92	12-15-92	12-28-92	01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	43.10	43.20	42.90	42.30											
Elevation	4549.8	4549.7	4550	4550.6											
MAJOR IONS mg/l:															
Ca	6.60	6.40	6.80	6.70					4	6.63	0.171	0.029	6.80	6.40	0.05
Mg	0.53	0.65	0.67	0.61					4	0.62	0.062	0.004	0.67	0.53	0.1
Na	128.00	142.00	133.00	136.00					4	135.00	5.477	30.000	142.00	128.00	0.05
K	3.00	3.00	1.80	5.10					4	3.23	1.372	1.883	5.10	1.80	0.10
CO3	6.7								1	6.70			6.70	6.70	0.1
HCO3	95.9								1	95.90			95.90	95.90	0.1
SO4	209.0	209.0	214.0	214.0					4	211.50	2.887	8.333	214.00	209.00	0.5
Cl	8.30	8.60	9.20	8.50	9.2	9	9	8.9	8	8.84	0.334	0.111	9.20	8.30	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.78								1	0.78			0.78	0.78	0.10
SIO2	8.40								1	8.40			8.40	8.40	1.00
TDS @ 180 C	399	392	399	415					4	401.25	9.743	94.917	415.00	392.00	1
Cond (umho/cm)	704	653	705	671	689	685	677	674	8	682.25	17.409	303.071	705.00	653.00	1
Alk-CaCO3	88.3	88.4	89.0	91.8	85.3	86.9	86.7	89.5	8	88.24	1.988	3.954	91.80	85.30	0.1
pH (units)	9.1	9.0	8.9	8.9	9.2	9.1	9	9	8	9.02	0.112	0.013	9.20	8.85	1-14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	0.001	< 0.001	< 0.001	0.002					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.006	0.004	0.008	0.010					4	0.01	0.003	0.000	0.01	0.00	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.026	0.033	0.030	0.053					4	0.04	0.012	0.000	0.05	0.03	0.0003
Ra226	< 0.2	0.7	0.2	0.2					4	0.33	0.250	0.063	0.70	0.20	0.2
Q.A. DATA:															
Anion meq:	6.439	6.364	6.497	6.534					4	6.46	0.074	0.005	6.53	6.36	
Cation meq:	6.078	6.625	6.225	6.430					4	6.34	0.239	0.057	6.63	6.08	
WYDEQ A/C Bal.%	(2.882)	2.006	(2.145)	(0.803)					4	-0.96	2.154	4.641	2.01	-2.88	
Calc TDS mg/l:	421	424	420	427					4	422.85	3.129	9.792	426.91	419.76	
TDS A/C Bal:	0.95	0.93	0.95	0.97					4	0.95	0.019	0.000	0.97	0.93	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3
WELL #: MW-108

APPENDIX 2

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4838.5 Ft. Above M.S.L.

------> W. L. AVERAGE= 4550.8 Ft. Above M.S.L.

Sample Date:	12-04-92	12-15-92	12-28-92	01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	87.60	87.60	87.80	87.80											
Elevation	4550.9	4550.9	4550.7	4550.7											
MAJOR IONS mg/l:															
Ca	11.40	9.90	10.80	8.00					4	9.53	2.430	5.903	11.40	8.00	0.05
Mg	0.63	0.61	0.67	0.35					4	0.57	0.145	0.021	0.67	0.35	0.1
Na	131.00	144.00	138.00	135.00					4	137.00	5.477	30.000	144.00	131.00	0.05
K	3.00	2.50	2.40	5.10					4	3.25	1.261	1.590	5.10	2.40	0.10
CO3	20.7								1	20.70			20.70	20.70	0.1
HCO3	86.1								1	86.10			86.10	86.10	0.1
SO4	202.0	206.0	204.0	205.0					4	204.25	1.708	2.917	206.00	202.00	0.5
Cl	8.20	8.60	9.60	8.80	9	9	9	9.6	8	8.98	0.471	0.222	9.60	8.20	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.83								1	0.83			0.83	0.83	0.10
SIO2	9.00								1	9.00			9.00	9.00	1.00
TDS @ 180 C	418	412	425	426					4	420.25	6.551	42.917	426.00	412.00	1
Cond (umho/cm)	718	673	715	704	717	712	704	693	8	704.50	15.260	232.857	718.00	673.00	1
Alk-CaCO3	101.0	103.0	105.0	95.8	103.4	103.4	103.2	96.5	8	101.41	3.429	11.756	105.00	95.80	0.1
pH (units)	9.6	9.4	9.6	9.8	9.7	9.8	9.6	9.9	8	9.65	0.138	0.019	9.90	9.44	1-14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	0.001	< 0.001	0.001	< 0.001					4	0.00			0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.006	0.004	0.008	0.008					4	0.01	0.002	0.000	0.01	0.00	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.024	0.013	0.010	0.032					4	0.02	0.010	0.000	0.03	0.01	0.0003
Ra226	< 0.2	0.6	0.3	< 0.2					4	0.33	0.189	0.036	0.60	0.20	0.2
Q.A. DATA:															
Anion meq:	6.599	6.594	6.620	6.435					4	6.56	0.086	0.007	6.62	6.43	
Cation meq:	6.413	6.871	6.657	6.330					4	6.57	0.245	0.060	6.87	6.33	
WYDEQ A/C Bal.%	(1.425)	2.056	0.278	(0.824)					4	0.02	1.529	2.338	2.06	-1.43	
Calc TDS mg/l:	431	434	430	419					4	428.34	6.768	45.802	434.44	418.69	
TDS A/C Bal:	0.97	0.95	0.99	1.02					4	0.98	0.029	0.001	1.02	0.95	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [box]
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Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

APPENDIX 2

WELL #: MW–109

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4629.8 Ft. Above M.S.L.

------> W. L. AVERAGE= 4550.1 Ft. Above M.S.L.

Sample Date:	12–03–92	12–15–92	12–28–92	01–12–93	TOMIN 12–03–92	TOMIN 12–15–92	TOMIN 12–28–92	TOMIN 01–12–93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	80.90	79.20	79.40	79.30											
Elevation	4548.9	4550.6	4550.4	4550.5											
MAJOR IONS mg/l:															
Ca	6.70	6.10	6.70	4.70					4	6.05	0.943	0.890	6.70	4.70	0.05
Mg	0.58	0.62	0.66	0.53					4	0.60	0.058	0.003	0.66	0.53	0.1
Na	136.00	137.00	140.00	132.00					4	136.25	3.304	10.917	140.00	132.00	0.05
K	2.30	1.60	2.20	7.50					4	3.40	2.751	7.567	7.50	1.60	0.10
CO3	12.2								1	12.20			12.20	12.20	0.1
HCO3	96.2								1	96.20			96.20	96.20	0.1
SO4	197.0	204.0	208.0	203.0					4	202.50	3.873	15.000	208.00	197.00	0.5
Cl	9.00	9.40	9.70	9.00	9.5	9.4	9.4	9.6	8	9.38	0.255	0.065	9.70	9.00	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.77								1	0.77			0.77	0.77	0.10
SiO2	7.90								1	7.90			7.90	7.90	1.00
TDS @ 180 C	417	404	423	414					4	414.50	7.937	63.000	423.00	404.00	1
Cond (umho/cm)	712	650	681	700	683	682	672	668	8	681.00	19.041	362.571	712.00	650.00	1
Alk–CaCO3	96.6	92.2	90.6	91.0	93.1	90.6	90.2	88.5	8	91.60	2.436	5.934	96.60	88.50	0.1
pH (units)	9.4	9.2	9.0	9.2	9.3	9.3	9.2	9.6	8	9.27	0.163	0.026	9.60	9.04	1–14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	< 0.001	< 0.001	< 0.001	0.002					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.008	0.003	0.008	0.013					4	0.01	0.004	0.000	0.01	0.00	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.009	0.023	0.022	0.029					4	0.02	0.008	0.000	0.03	0.01	0.0003
Ra226	0.3	0.3	< 0.2	0.6					4	0.35	0.173	0.030	0.60	0.20	0.2
Q.A. DATA:															
Anion meq:	6.396	6.359	6.377	6.303					4	6.36	0.040	0.002	6.40	6.30	
Cation meq:	6.374	6.354	6.533	6.211					4	6.37	0.132	0.017	6.53	6.21	
WYDEQ A/C Bal.%	(0.177)	(0.036)	1.212	(0.736)					4	0.07	0.822	0.675	1.21	–0.74	
Calc TDS mg/l:	421	415	421	412					4	417.30	4.425	19.582	421.46	412.24	
TDS A/C Bal:	0.99	0.97	1.01	1.00					4	0.99	0.015	0.000	1.01	0.97	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE ------>
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Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3

APPENDIX 2

WELL #: MW-110

PERIMETER MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4641.6 Ft. Above M.S.L.

------> W. L. AVERAGE= 4552.2 Ft. Above M.S.L.

Sample Date:		12-03-92	12-15-92	12-28-92	01-14-93	TOMIN 12-03-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-14-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level	Depth	89.10	89.30	89.30	90.00											
	Elevation	4552.5	4552.3	4552.3	4551.6											
MAJOR IONS mg/l:																
Ca		8.40	7.80	7.20	6.50					4	7.48	0.814	0.662	8.40	6.50	0.05
Mg		0.43	0.40	0.35	0.37					4	0.39	0.035	0.001	0.43	0.35	0.1
Na		140.00	141.00	137.00	134.00					4	138.00	3.162	10.000	141.00	134.00	0.05
K		3.40	3.00	2.70	5.20					4	3.58	1.121	1.256	5.20	2.70	0.10
CO3		14.1								1	14.10			14.10	14.10	0.1
HCO3		93.1								1	93.10			93.10	93.10	0.1
SO4		199.0	200.0	200.0	201.0					4	200.00	0.816	0.667	201.00	199.00	0.5
Cl		8.20	9.40	10.00	9.70	9.6	9.8	9.3	9.1	8	9.39	0.559	0.313	10.00	8.20	0.10
NH4 (N)		< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)		< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)		< 0.10								1	0.10			0.10	0.10	0.10
F		0.74								1	0.74			0.74	0.74	0.10
SIO2		8.20								1	8.20			8.20	8.20	1.00
TDS @ 180 C		428	414	422	443					4	426.75	12.258	150.250	443.00	414.00	1
Cond (umho/cm)		683	682	685	685	700	695	681	678	8	686.13	7.492	56.125	700.00	678.00	1
Alk-CaCO3		97.0	97.8	98.2	101.0	105.1	102.8	99.1	100.2	8	100.15	2.741	7.514	105.10	97.00	0.1
pH (units)		9.4	9.3	9.4	8.9	9.8	9.5	9.4	9.3	8	9.38	0.241	0.058	9.80	8.93	1-14
TRACE METALS mg/l:																
Al		< 0.10								1	0.10			0.10	0.10	0.10
As		< 0.001	< 0.001	0.001	0.003					3	0.00			0.00	0.00	0.001
Ba		< 0.10								1	0.10			0.10	0.10	0.10
B		< 0.10								1	0.10			0.10	0.10	0.10
Cd		< 0.01								1	0.01			0.01	0.01	0.01
Cr		< 0.05								1	0.05			0.05	0.05	0.05
Cu		< 0.01								1	0.01			0.01	0.01	0.01
Fe		< 0.05								1	0.05			0.05	0.05	0.05
Pb		< 0.05								1	0.05			0.05	0.05	0.05
Mn		< 0.01								1	0.01			0.01	0.01	0.01
Hg		< 0.001								1	0.00			0.00	0.00	0.001
Mo		< 0.10								1	0.10			0.10	0.10	0.10
Ni		< 0.05								1	0.05			0.05	0.05	0.05
Se		0.007	0.003	0.007	0.047					3	0.01	0.002	0.000	0.01	0.00	0.001
V		< 0.10								1	0.10			0.10	0.10	0.10
Zn		< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:																
U (mg/l)		0.003	0.023	0.005	0.040					4	0.02	0.017	0.000	0.04	0.00	0.0003
Ra226		< 0.2	< 0.2	< 0.2	1.4					4	0.50	0.600	0.360	1.40	0.20	0.2
Q.A. DATA:																
Anion meq:		6.426	6.387	6.412	6.481					4	6.43	0.039	0.002	6.48	6.39	
Cation meq:		6.648	6.631	6.415	6.315					4	6.50	0.164	0.027	6.65	6.32	
WYDEQ A/C Bal.%		1.697	1.668	0.020	(1.293)					4	0.57	1.498	2.244	1.87	-1.29	
Calc TDS mg/l:		430	421	417	418					4	421.68	5.761	33.186	429.93	417.15	
TDS A/C Bal:		1.00	0.98	1.01	1.06					4	1.01	0.033	0.001	1.06	0.98	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [box]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch – Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX2.WK3
WELL #: MW-111

APPENDIX 2

MEASURING POINT ELEVATION: 4649.6 Ft. Above M.S.L.

------> W. L. AVERAGE= 4553.6 Ft. Above M.S.L.

	PERIMETER MONITOR WELL BASELINE DATA				TOMIN	TOMIN	TOMIN	TOMIN						
Sample Date:	12-03-92	12-15-92	12-28-92	01-12-93	12-03-92	12-15-92	12-28-92	01-12-93	No. of Samples*	Mean	Std. Dev	Variance	Maximum	Minimum	D.L.
Water Level Depth	96.10	98.00	98.00	95.80											
Elevation	4553.5	4553.6	4553.6	4553.8											
MAJOR IONS mg/l:															
Ca	8.00	6.70	6.80	5.60					4	6.78	0.981	0.963	8.00	5.60	0.05
Mg	0.14	0.19	0.20	0.28					4	0.20	0.058	0.003	0.28	0.14	0.1
Na	126.00	149.00	136.00	134.00					4	136.25	9.535	90.917	149.00	126.00	0.05
K	3.20	2.80	2.60	6.80					4	3.85	1.982	3.930	6.80	2.60	0.10
CO3	22.1								1	22.10			22.10	22.10	0.1
HCO3	80.0								1	80.00			80.00	80.00	0.1
SO4	195.0	198.0	201.0	195.0					4	197.25	2.872	8.250	201.00	195.00	0.5
Cl	7.40	8.00	9.60	9.40	9.3	9.5	9.5	9.2	7	9.21	0.552	0.305	9.60	8.00	0.10
NH4 (N)	< 0.05								1	0.05			0.05	0.05	0.05
NO2 (N)	< 0.10								1	0.10			0.10	0.10	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.10	0.10
F	0.93								1	0.93			0.93	0.93	0.10
SiO2	8.30								1	8.30			8.30	8.30	1.00
TDS @ 180 C	400	419	417	415					4	412.75	8.655	74.917	419.00	400.00	1
Cond (umho/cm)	698	679	678	717	699	695	683	680	8	691.13	13.643	186.125	717.00	678.00	1
Alk-CaCO3	98.2	100.0	102.0	99.0	105.1	100.7	98.9	100.2	8	100.51	2.200	4.841	105.10	98.20	0.1
pH (units)	9.7	9.6	9.5	9.9	9.6	9.7	9.6	10.1	8	9.71	0.184	0.034	10.10	9.53	1-14
TRACE METALS mg/l:															
Al	< 0.10								1	0.10			0.10	0.10	0.10
As	< 0.001	< 0.001	0.002	< 0.001					4	0.00	0.001	0.000	0.00	0.00	0.001
Ba	< 0.10								1	0.10			0.10	0.10	0.10
B	< 0.10								1	0.10			0.10	0.10	0.10
Cd	< 0.01								1	0.01			0.01	0.01	0.01
Cr	< 0.05								1	0.05			0.05	0.05	0.05
Cu	< 0.01								1	0.01			0.01	0.01	0.01
Fe	< 0.05								1	0.05			0.05	0.05	0.05
Pb	< 0.05								1	0.05			0.05	0.05	0.05
Mn	< 0.01								1	0.01			0.01	0.01	0.01
Hg	< 0.001								1	0.00			0.00	0.00	0.001
Mo	< 0.10								1	0.10			0.10	0.10	0.10
Ni	< 0.05								1	0.05			0.05	0.05	0.05
Se	0.008	0.003	0.007	0.011					4	0.01	0.003	0.00001	0.01	0.00	0.001
V	< 0.10								1	0.10			0.10	0.10	0.10
Zn	< 0.01								1	0.01			0.01	0.01	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.002	0.007	0.008	0.029					4	0.01	0.012	0.0001	0.03	0.00	0.0003
Ra226	0.5	< 0.2	0.4	3.1					4	1.05	1.372	1.883	3.10	0.20	0.2
Q.A. DATA:															
Anion meq:	6.382	6.350	6.498	6.307					4	6.33	0.134	0.018	6.50	6.17	
Cation meq:	5.990	6.901	6.336	6.304					4	6.38	0.379	0.144	6.90	5.99	
WYDEQ A/C Bal.%	(3.169)	4.155	(1.259)	(0.028)					4	0.34	2.625	6.888	4.15	-1.51	
Calc TDS mg/l:	412	426	418	411					4	415.04	9.076	82.366	425.69	404.58	
TDS A/C Bal:	0.97	0.88	1.00	1.01					4	0.99	0.011	0.000	1.01	0.98	

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE ------>
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX III

INDIVIDUAL WELL SAMPLE VALUES
WITH WATER LEVELS

INTERIOR SHALLOW ZONE MONITOR BASELINE DATA

Project: Christensen Ranch Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX3.WK3

WELL #: MW-98 S

APPENDIX 3

MEASURING POINT ELEVATION: 4679.4 ft. Above M.S.L.

------> W. L. AVERAGE= 4560.0 ft. Above M.S.L.

		INTERIOR SHALLOW ZONE MONITOR BASELINE DATA				TOMIN	TOMIN	TOMIN	TOMIN							
Sample Date:		12-11-92	12-22-92	01-06-93	01-18-93	12-11-92	12-22-92	01-06-93	01-18-93	No. of Samples	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Water Level	Depth	119.30	119.30	119.50	119.80											
	Elevation	4560.1	4560.1	4559.9	4559.8											
MAJOR IONS mg/l:																
Ca		496	452	527	532					4	501.75	38.791	1353.583	532.00	452.000	0.05
Mg		< 0.1	< 0.1	< 0.10	< 0.1					4	0.10			0.10	0.100	0.1
Na		241	269	293	271					4	268.50	21.315	454.333	293.00	241.000	0.05
K		71.3	50	33.9	38.7					4	48.48	16.646	277.096	71.30	33.900	0.10
CO3		768								1	768.00			768.00	768.000	0.1
HCO3		9.4								1	9.40			9.40	9.400	0.1
SO4		178	423	985	982					4	642.00	406.819	165502.000	985.00	178.000	0.5
Cl		9.2	9.75	11.8	13.2					4	10.99	1.851	3.427	13.20	9.200	0.10
NH4 (N)		0.75								1	0.75			0.75	0.750	0.05
NO2 (N)		< 0.1								1	0.10			0.10	0.100	0.10
NO3 (N)		< 0.1								1	0.10			0.10	0.100	0.10
F		0.31								1	0.31			0.31	0.310	0.10
SIO2		1.3								1	1.30			1.30	1.300	1.00
TDS @ 180 C		1935	1877	2348	2395					4	2138.75	270.479	73158.917	2395.00	1877.000	1
Cond (umho/cm)		7691	6784	5352	5251	7700	6729	5887	5378	8	6348.50	1022.297	1045091.143	7700.00	5251.000	1
Alk-CaCO3		1780	1334	926	841	1753	1436	1066	919	8	1256.88	376.216	141538.174	1780.00	841.000	0.1
pH (units)		12.18	12.14	12.16	11.96	12.8	12.5	12.4	12.2	8	12.27	0.214	0.046	12.80	11.960	1-14
TRACE METALS mg/l:																
Al		< 0.1								1	0.100			0.10	0.100	0.10
As		0.001	< 0.001	< 0.001	< 0.001					4	0.001			0.00	0.001	0.001
Ba		0.9								1	0.900			0.90	0.900	0.10
B		< 0.1								1	0.100			0.10	0.100	0.10
Cd		< 0.01								1	0.010			0.01	0.010	0.01
Cr		< 0.05								1	0.050			0.05	0.050	0.05
Cu		< 0.01								1	0.010			0.01	0.010	0.01
Fe		< 0.05								1	0.050			0.05	0.050	0.05
Pb		< 0.05								1	0.050			0.05	0.050	0.05
Mn		< 0.01								1	0.010			0.01	0.010	0.01
Hg		< 0.001								1	0.001			0.00	0.001	0.001
Mo		0.2								1	0.200			0.20	0.200	0.10
Ni		< 0.05								1	0.050			0.05	0.050	0.05
Se		0.013	0.006	0.006	< 0.001					4	0.007	0.005	0.000	0.01	0.001	0.001
V		< 0.1								1	0.100			0.10	0.100	0.10
Zn		< 0.01								1	0.010			0.01	0.010	0.01
RADIOMETRIC pCi/l:																
U (mg/l)		0.014	0.001	< 0.0003	< 0.0003					4	0.00	0.007	0.000	0.01	0.000	0.0003
Ra226		19.7	9.4	6.3	10.2					4	11.40	5.783	33.447	19.70	6.300	0.2
Q.A. DATA:																
Anion meq:		39.59809	35.767148	39.373228	37.650164					4	38.10	1.780	3.170	39.60	35.767	
Cation meq:		37.183022	35.586037	39.966695	39.38325					4	38.03	2.023	4.091	39.97	35.586	
WYDEQ A/C Bal.%		-3.145393	-0.253823	0.7480053	2.249784					4	-0.10	2.276	5.180	2.25	-3.145	
Calc TDS mg/l:		1771.7185	2017.59	2415.66	2350.01					4	2138.74	300.390	90233.934	2415.66	1771.719	
TDS A/C Bal:		1.09216	0.9303179	0.9719911	1.0191446					4	1.00	0.069	0.005	1.09	0.930	

NOTE - OUTLIERS ARE BOUNDED BY BOLD OUTLINE: ----> [ ]
THESE OUTLIERS ARE NOT USED IN THESE INDIVIDUAL CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX3.WK3

WELL #: MW-100 S

APPENDIX 3

INTERIOR SHALLOW ZONE MONITOR BASELINE DATA

MEASURING POINT ELEVATION: 4660.5 ft. Above M.S.L.

------> W. L. AVERAGE= 4556.0 ft. Above M.S.L.

Sample Date:		12-11-92	12-22-92	01-06-93	01-18-93	TOMIN 12-11-92	TOMIN 12-22-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Water Level	Depth	104.50	104.20	104.70	104.80											
	Elevation	4556	4556.3	4555.8	4555.7											
MAJOR IONS mg/l:																
Ca		272	271	275	303					4	280.25	15.262	232.917	303.00	271.000	0.05
Mg		51.2	51	51.6	49.2					4	50.75	1.063	1.130	51.60	49.200	0.1
Na		298	283	268	264					4	278.25	15.500	240.250	298.00	264.000	0.05
K		5.5	8.9	7.3	9					4	7.68	1.648	2.709	9.00	5.500	0.10
CO3										1						0.1
HCO3		210								1	210.00			210.00	210.000	0.1
SO4		1370	1319	1357	1379					4	1356.25	26.424	698.250	1379.00	1319.000	0.5
Cl		12.8	11	12.6	13	12.5	12.5	12	12.1	8	12.31	0.624	0.390	13.00	11.000	0.10
NH4 (N)		0.22								1	0.22			0.22	0.220	0.05
NO2 (N)	<	0.10								1	0.10			0.10	0.100	0.10
NO3 (N)	<	0.10								1	0.10			0.10	0.100	0.10
F		0.14								1	0.14			0.14	0.140	0.10
SiO2		12.7								1	12.70			12.70	12.700	1.00
TDS @ 180 C		2102	2109	2119	2139					4	2117.25	16.091	258.917	2139.00	2102.000	1
Cond (umho/cm)		2667	2573	2456	2620	2560	2584	2592	2614	8	2583.25	61.209	3746.500	2667.00	2456.000	1
Alk-CaCO3		173	178	181	173	175	174	175	176	8	175.53	2.766	7.651	181.00	173.000	0.1
pH (units)		7.51	7.85	8.07	7.62	7.9	7.6	7.6	7.5	8	7.71	0.208	0.043	8.07	7.500	1-14
TRACE METALS mg/l:																
Al	<	0.10								1	0.100			0.10	0.100	0.10
As		0.002	< 0.001	< 0.001	< 0.001					4	0.001	0.001	0.000	0.00	0.001	0.001
Ba	<	0.10								1	0.100			0.10	0.100	0.10
B	<	0.10								1	0.100			0.10	0.100	0.10
Cd	<	0.01								1	0.010			0.01	0.010	0.01
Cr	<	0.05								1	0.050			0.05	0.050	0.05
Cu	<	0.01								1	0.010			0.01	0.010	0.01
Fe		0.08								1	0.080			0.08	0.080	0.05
Pb	<	0.05								1	0.050			0.05	0.050	0.05
Mn		0.31								1	0.310			0.31	0.310	0.01
Hg	<	0.001								1	0.001			0.00	0.001	0.001
Mo	<	0.10								1	0.100			0.10	0.100	0.10
Ni	<	0.05								1	0.050			0.05	0.050	0.05
Se		0.005	0.005	0.006	< 0.001					4	0.004	0.002	0.000	0.01	0.001	0.001
V	<	0.10								1	0.100			0.10	0.100	0.10
Zn	<	0.01								1	0.010			0.01	0.010	0.01
RADIOMETRIC pCi/l:																
U (mg/l)		0.14	0.01	0.008	0.014					4	0.04	0.065	0.004	0.14	0.008	0.0003
Ra226		7.9	3	1.3	3.8					4	4.00	2.801	7.847	7.90	1.300	0.2
Q.A. DATA:																
Anion meq:		32.37	31.348026	32.245763	32.555364					4	32.13	0.535	0.287	32.56	31.349	
Cation meq:		31.01	30.332553	29.889353	30.95903					4	30.55	0.537	0.288	31.01	29.889	
WYDEQ A/C Bal.%		(2.14)	-1.647936	-3.792398	-2.513342					4	-2.52	0.918	0.842	-1.65	-3.792	
Calc TDS mg/l:		2128.7948	2052.48	2081.91	2122.73					4	2096.48	35.970	1293.865	2128.79	2052.480	
TDS A/C Bal:		0.9874132	1.0275374	1.0178154	1.0076847					4	1.01	0.017	0.000	1.03	0.987	

NOTE - OUTLIERS ARE BOUNDED BY BOLD OUTLINE: ----> [ ]
THESE OUTLIERS ARE NOT USED IN THESE INDIVIDUAL CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX3.WK3

WELL #: MW-112 S

APPENDIX 3

INTERIOR SHALLOW ZONE MONITOR BASELINE DATA

MEASURING POINT ELEVATION: 4652.6 ft. Above M.S.L.

------> W. L. AVERAGE= 4553.8 ft. Above M.S.L.

Sample Date:	12-11-92	12-21-92	01-06-93	01-18-93	TOMIN 12-11-92	TOMIN 12-21-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
Water Level Depth	98.00	99.00	99.00	99.10											
Water Level Elevation	4554.6	4553.6	4553.6	4553.5											
MAJOR IONS mg/l:															
Ca	276	403	461	532					4	418.00	108.373	11744.667	532.00	276.000	0.05
Mg	< 0.1	< 0.1	< 0.1	< 0.1					4	0.10			0.10	0.100	0.1
Na	154	189	232	214					4	197.25	33.797	1142.250	232.00	154.000	0.05
K	20.8	52	72	97.2					4	60.50	32.288	1042.493	97.20	20.800	0.10
CO3	361								1	361.00			361.00	361.000	0.1
HCO3	6								1	6.00			6.00	6.000	0.1
SO4	107	88.2	137	118					4	112.55	20.422	417.077	137.00	88.200	0.5
Cl	11.6	9.62	5.16	8.1					4	8.62	2.716	7.374	11.60	5.160	0.10
NH4 (N)	0.11								1	0.11			0.11	0.110	0.05
NO2 (N)	< 0.1								1	0.10			0.10	0.100	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.100	0.10
F	0.22								1	0.22			0.22	0.220	0.10
SIO2	2.2								1	2.20			2.20	2.200	1.00
TDS @ 180 C	1444	1561	1741	2063					4	1702.25	269.745	72762.250	2063.00	1444.000	1
Cond (umho/cm)	4784	6015	6870	8358	4670	6171	7518	8368	8	6594.00	1447.840	2096239.714	8368.00	4670.000	1
Alk-CaCO3	1010	1374	1680	1832	1026	1372	1723	1919	8	1491.93	351.377	123465.876	1918.90	1010.000	0.1
pH (units)	12.01	12.49	12.44	12.27	12.4	12.5	12.5	12.5	8	12.39	0.172	0.030	12.50	12.010	1-14
TRACE METALS mg/l:															
Al	0.13								1	0.130			0.13	0.130	0.10
As	< 0.001	< 0.001	< 0.001	0.005					4	0.002	0.002	0.000	0.01	0.001	0.001
Ba	0.3								1	0.300			0.30	0.300	0.10
B	< 0.1								1	0.100			0.10	0.100	0.10
Cd	< 0.01								1	0.010			0.01	0.010	0.01
Cr	< 0.05								1	0.050			0.05	0.050	0.05
Cu	< 0.01								1	0.010			0.01	0.010	0.01
Fe	< 0.05								1	0.050			0.05	0.050	0.05
Pb	< 0.05								1	0.050			0.05	0.050	0.05
Mn	< 0.01								1	0.010			0.01	0.010	0.01
Hg	< 0.001								1	0.001			0.00	0.001	0.001
Mo	< 0.1								1	0.100			0.10	0.100	0.10
Ni	< 0.05								1	0.050			0.05	0.050	0.05
Se	0.021	0.048	0.025	0.026					4	0.030	0.012	0.000	0.05	0.021	0.001
V	< 0.1								1	0.100			0.10	0.100	0.10
Zn	< 0.01								1	0.010			0.01	0.010	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.002	0.001	0.012	< 0.0003					4	0.00	0.005	0.000	0.01	0.000	0.0003
Ra226	46.9	201	202	522					3	149.97	89.260	7967.303	202.00	46.900	0.2
Q.A. DATA:															
Anion meq:	22.781792	29.588486	36.599519	39.326502					4	32.07	7.430	55.201	39.33	22.782	
Cation meq:	21.063181	29.709058	34.991444	38.404989					4	31.04	7.553	57.055	38.40	21.063	
WYDEQ A/C Bal.%	-3.919792	0.203334	-2.246198	-1.185509					4	-1.79	1.740	3.028	0.20	-3.920	
Calc TDS mg/l:	1553.0029	1580.06	1932.06	2086.92					4	1788.01	263.672	69523.043	2086.92	1553.003	
TDS A/C Bal:	0.9298115	0.9879372	0.9011107	0.9885381					4	0.95	0.044	0.002	0.99	0.901	

NOTE - OUTLIERS ARE BOUNDED BY BOLD OUTLINE: ----->
THESE OUTLIERS ARE NOT USED IN THESE INDIVIDUAL CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX IV

INDIVIDUAL WELL SAMPLE VALUES
WITH WATER LEVELS

INTERIOR DEEP ZONE MONITOR BASELINE DATA

Project: Christensen Ranch Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX4.WK3

WELL #: MW-97 D

APPENDIX 4

INTERIOR DEEP ZONE MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4680.0 ft. Above M.S.L.

------> W. L. AVERAGE= 4552.2 ft. Above M.S.L.

Sample Date:	12-09-92	12-22-92	01-06-93	01-18-93	TOMIN 12-09-92	TOMIN 12-22-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
WATER LEVEL Depth	127.60	127.90	127.80	128.00											
Elevation	4552.4	4552.1	4552.2	4552.0											
MAJOR IONS mg/l:															
Ca	7.2	8.5	6.7	7.1					4	7.38	0.780	0.609	8.50	6.700	0.05
Mg	0.48	0.5	0.41	0.4					4	0.45	0.050	0.002	0.50	0.400	0.1
Na	127	125	121	132					4	126.25	4.573	20.917	132.00	121.000	0.05
K	7.2	3.2	2.1	2.3					4	3.70	2.382	5.673	7.20	2.100	0.10
CO3	2.2								1	2.20			2.20	2.200	0.1
HCO3	130								1	130.00			130.00	130.000	0.1
SO4	188	171	168	169					4	174.00	9.416	88.667	188.00	168.000	0.5
Cl	10.2	8.4	9.77	11.0	10.9	10.3	9.8	10.1	8	10.06	0.803	0.644	11.00	8.420	0.10
NH4 (N)	0.11								1	0.11			0.11	0.110	0.05
NO2 (N)	< 0.1								1	0.10			0.10	0.100	0.10
NO3 (N)	< 0.1								1	0.10			0.10	0.100	0.10
F	0.53								1	0.53			0.53	0.530	0.10
SiO2	8.5								1	8.50			8.50	8.500	1.00
TDS @ 180 C	390	382	340	359					4	367.75	22.692	514.917	390.00	340.000	1
Cond (umho/cm)	668	648	620	633	649	632	630	633	8	639.13	15.047	226.411	668.00	620.000	1
Alk-CaCO3	110	110	91.0	108	109.2	109	110	108.2	8	106.93	6.483	42.034	110.00	91.000	0.1
pH (units)	8.47	8.69	8.62	8.75	9.2	9	9	8.9	8	8.83	0.239	0.057	9.20	8.470	1-14
TRACE METALS mg/l:															
Al	< 0.1								1	0.10			0.10	0.100	0.10
As	0.001	< 0.001	< 0.001	< 0.001					4	0.00			0.00	0.001	0.001
Ba	< 0.1								1	0.10			0.10	0.100	0.10
B	< 0.1								1	0.10			0.10	0.100	0.10
Cd	< 0.01								1	0.01			0.01	0.010	0.01
Cr	< 0.05								1	0.05			0.05	0.050	0.05
Cu	< 0.01								1	0.01			0.01	0.010	0.01
Fe	< 0.05								1	0.05			0.05	0.050	0.05
Pb	< 0.05								1	0.05			0.05	0.050	0.05
Mn	< 0.01								1	0.01			0.01	0.010	0.01
Hg	< 0.001								1	0.00			0.00	0.001	0.001
Mo	< 0.1								1	0.10			0.10	0.100	0.10
Ni	< 0.05								1	0.05			0.05	0.050	0.05
Se	0.007	0.004	0.006	< 0.001					4	0.00	0.003	0.000	0.01	0.001	0.001
V	< 0.1								1	0.10			0.10	0.100	0.10
Zn	< 0.01								1	0.01			0.01	0.010	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.002	0.02	< 0.0003	< 0.0003					4	0.01	0.010	0.000	0.02	0.000	0.0003
Ra226	2.6	3.8	1.4	2.9					4	2.68	0.991	0.983	3.80	1.400	0.2
Q.A. DATA:															
Anion meq:	6.4506519	5.9996831	5.5952113	5.9906925					4	6.01	0.350	0.122	6.45	5.595	
Cation meq:	6.1288632	5.9835006	5.6838824	6.1864381					4	6.00	0.225	0.050	6.19	5.684	
WYDEQ A/C Bal.%	-2.558038	-0.135044	0.7861546	1.6074857					4	-0.07	1.802	3.247	1.61	-2.558	
Calc TDS mg/l:	417.2929	383.72	363.49	387.68					4	388.05	22.190	492.409	417.29	363.490	
TDS A/C Bal:	0.9345953	0.9955176	0.9353765	0.9260215					4	0.95	0.032	0.001	1.00	0.928	

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE: ---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch Mine Unit #2 NORTH

FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX4.WK3

WELL #: MW-99 D

APPENDIX 4

INTERIOR DEEP ZONE MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4662.9 ft. Above M.S.L.

------> W. L. AVERAGE= 4547.7 ft. Above M.S.L.

Sample Date:	12-10-92	12-22-92	01-06-93	01-18-93	TOMIN 12-10-92	TOMIN 12-22-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
WATER LEVEL Depth	115.80	115.80	114.40	114.70											
Elevation	4547.1	4547.1	4548.5	4548.2											
MAJOR IONS mg/l:															
Ca	5.5	6.8	6.8	5.2					4	6.08	0.846	0.716	6.80	5.200	0.05
Mg	0.44	2.6	2.4	0.7					4	1.54	1.122	1.260	2.60	0.440	0.1
Na	125	123	121	120					4	122.25	2.217	4.917	125.00	120.000	0.05
K	1.3	1.6	2.8	2.3					4	2.00	0.678	0.460	2.80	1.300	0.10
CO3	4.9								1	4.90			4.90	4.900	0.1
HCO3	127								1	127.00			127.00	127.000	0.1
SO4	169	160	163	158					4	162.50	4.796	23.000	169.00	158.000	0.5
Cl	9.4	7.68	9.84	10.2	10.2	10.9	10.5	10	8	9.84	0.979	0.958	10.90	7.680	0.10
NH4 (N)	0.48								1	0.48			0.48	0.480	0.05
NO2 (N)	< 0.1								1	0.10			0.10	0.100	0.10
NO3 (N)	< 0.1								1	0.10			0.10	0.100	0.10
F	0.38								1	0.38			0.38	0.380	0.10
SIO2	10.1								1	10.10			10.10	10.100	1.00
TDS @ 180 C	387	355	375	354					4	367.75	16.070	258.250	387.00	354.000	1
Cond (umho/cm)	640	635	611	653	632	616	614	616	8	627.13	15.123	228.696	653.00	611.000	1
Alk-CaCO3	111	130	116	115	112.7	112.3	112.2	112.4	8	115.20	6.197	38.409	130.00	111.000	0.1
pH (units)	8.84	9.37	8.84	8.81	8.9	8.9	8.9	8.8	8	8.92	0.186	0.035	9.37	8.800	1-14
TRACE METALS mg/l:															
Al	< 0.1								1	0.10			0.10	0.100	0.10
As	0.001	< 0.001	< 0.001	< 0.001					4	0.00			0.00	0.001	0.001
Ba	< 0.1								1	0.10			0.10	0.100	0.10
B	< 0.1								1	0.10			0.10	0.100	0.10
Cd	< 0.01								1	0.01			0.01	0.010	0.01
Cr	< 0.05								1	0.05			0.05	0.050	0.05
Cu	< 0.01								1	0.01			0.01	0.010	0.01
Fe	< 0.05								1	0.05			0.05	0.050	0.05
Pb	< 0.05								1	0.05			0.05	0.050	0.05
Mn	< 0.01								1	0.01			0.01	0.010	0.01
Hg	< 0.001								1	0.00			0.00	0.001	0.001
Mo	< 0.1								1	0.10			0.10	0.100	0.10
Ni	< 0.05								1	0.05			0.05	0.050	0.05
Se	0.005	0.005	0.005	< 0.001					4	0.00	0.002	0.000	0.01	0.001	0.001
V	< 0.1								1	0.10			0.10	0.100	0.10
Zn	< 0.01								1	0.01			0.01	0.010	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.001	0.002	0.007	< 0.0003					4	0.00	0.003	0.000	0.01	0.000	0.0003
Ra226	2.1	0.6	0.2	8.6					4	2.88	3.903	15.236	8.60	0.200	0.2
Q.A. DATA:															
Anion meq:	6.0652083	6.1496714	5.9930164	5.8789906					4	6.02	0.115	0.013	6.15	5.879	
Cation meq:	5.8287199	5.9455184	5.8726644	5.594699					4	5.81	0.152	0.023	5.95	5.595	
WYDEQ A/C Bal.%	-1.988313	-1.687866	-1.014286	-2.47777					4	-1.79	0.612	0.375	-1.01	-2.478	
Calc TDS mg/l:	390.9802	380.98	376.6	366.55					4	378.78	10.133	102.670	390.98	366.550	
TDS A/C Bal:	0.9898199	0.9318074	0.9957515	0.9857618					4	0.97	0.029	0.001	1.00	0.932	

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE: ---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

Project: Christensen Ranch Mine Unit #2 NORTH
FILE NAME: C:\MU2NORTH\NBSLINE\APPENDX4.WK3

APPENDIX 4

WELL #: MW-113 D

INTERIOR DEEP ZONE MONITOR WELL BASELINE DATA

MEASURING POINT ELEVATION: 4652.3 ft. Above M.S.L.

------> W. L. AVERAGE= 4548.8 ft. Above M.S.L.

Sample Date:	12-10-92	12-22-92	01-06-93	01-18-93	TOMIN 12-10-92	TOMIN 12-22-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std. Dev.	Variance	Maximum	Minimum	D.L.
WATER LEVEL Depth	103.00	103.50	103.60	103.80											
Elevation	4549.3	4548.8	4548.7	4548.5											
MAJOR IONS mg/l:															
Ca	4.4	5.6	7.9	7.8					4	6.43	1.726	2.979	7.93	4.400	0.05
Mg	0.03	0.1	0.49	0.1					4	0.18	0.209	0.044	0.49	0.030	0.1
Na	122	119	123	124					4	122.00	2.160	4.667	124.00	119.000	0.05
K	1.8	4	1.7	2.8					4	2.58	1.072	1.149	4.00	1.700	0.10
CO3	11								1	11.00			11.00	11.000	0.1
HCO3	102								1	102.00			102.00	102.000	0.1
SO4	168	173	174	170					4	171.25	2.754	7.583	174.00	168.000	0.5
Cl	10.1	9.62	10.2	10.5	10.2	10.8	10.7	10.5	8	10.33	0.379	0.144	10.80	9.620	0.10
NH4 (N)	0.43								1	0.43			0.43	0.430	0.05
NO2 (N)	< 0.1								1	0.10			0.10	0.100	0.10
NO3 (N)	< 0.10								1	0.10			0.10	0.100	0.10
F	0.29								1	0.29			0.29	0.290	0.10
SiO2	9.5								1	9.50			9.50	9.500	1.00
TDS @ 180 C	426	370	366	379					4	385.25	27.705	767.583	426.00	366.000	1
Cond (umho/cm)	671	647	610	635	664	647	647	650	8	646.38	18.454	340.554	671.00	610.000	1
Alk-CaCO3	99.8	102	105	106	103.8	107.9	110.4	113	8	105.99	4.347	18.893	113.00	99.800	0.1
pH (units)	9.28	9.43	9.87	9.5	9.9	9.8	9.8	9.6	8	9.65	0.229	0.052	9.90	9.280	1-14
TRACE METALS mg/l:															
Al	< 0.1								1	0.10			0.10	0.100	0.10
As	0.003	< 0.001	< 0.001	< 0.001					4	0.00	0.001	0.000	0.00	0.001	0.001
Ba	< 0.1								1	0.10			0.10	0.100	0.10
B	< 0.1								1	0.10			0.10	0.100	0.10
Cd	< 0.01								1	0.01			0.01	0.010	0.01
Cr	< 0.05								1	0.05			0.05	0.050	0.05
Cu	< 0.01								1	0.01			0.01	0.010	0.01
Fe	< 0.05								1	0.05			0.05	0.050	0.05
Pb	< 0.05								1	0.05			0.05	0.050	0.05
Mn	< 0.01								1	0.01			0.01	0.010	0.01
Hg	< 0.001								1	0.00			0.00	0.001	0.001
Mo	< 0.1								1	0.10			0.10	0.100	0.10
Ni	< 0.05								1	0.05			0.05	0.050	0.05
Se	0.009	0.005	0.005	< 0.001					4	0.01	0.003	0.000	0.01	0.001	0.001
V	< 0.1								1	0.10			0.10	0.100	0.10
Zn	< 0.01								1	0.01			0.01	0.010	0.01
RADIOMETRIC pCi/l:															
U (mg/l)	0.001	< 0.0003	0.021	< 0.0003					4	0.01	0.010	0.000	0.02	0.000	0.0003
Ra226	3.1	3.1	6.5	8.5					4	5.30	2.668	7.120	8.50	3.100	0.2
Q.A. DATA:															
Anion meq:	5.8100559	5.9151526	6.0123239	5.9574413					4	5.92	0.086	0.007	6.01	5.810	
Cation meq:	5.6183675	5.5648105	5.8287492	5.8614326					4	5.72	0.149	0.022	5.86	5.565	
WYDEQ A/C Bal.%	-1.677285	-3.05177	-1.550322	-0.812334					4	-1.77	0.934	0.872	-0.81	-3.052	
Calc TDS mg/l:	440.3937	373.54	381.37	379.86					4	393.79	31.253	976.756	440.39	373.540	
TDS A/C Bal:	0.9673163	0.9905231	0.9596979	0.997736					4	0.98	0.018	0.000	1.00	0.960	

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE: ---> [ ]
THESE OUTLIERS ARE NOT USED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX V

EXCURSION INDICATOR DATA

PERIMETER ORE ZONE MONITOR WELLS
INTERIOR SHALLOW ZONE MONITOR WELLS
INTERIOR DEEP ZONE MONITOR WELLS

C:\MU2NORTH\NBSLINE\APPENDX5.WK3

APPENDIX 5
EXCURSION INDICATOR DATA
PERIMETER ORE ZONE MONITOR WELLS
MINE UNIT 2 NORTH

Sample I.D.: **MW101**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	7.90	9.40	9.60	9.20	9.00	9.30	9.10	9.60	8	9.14	0.54	0.30	9.60	7.90	0.10
Cond (umho/cm)	692	652	684	668	671	666	653	653	8	667	15	221	692	652	1.00
Alk-CaCO3	88.4	99.4	85.8	86.0	86.9	84.0	82.2	84.7	8	87.2	5.3	27.9	99.4	82.2	0.10
pH (units)	9.5	9.1	9.2	8.9	9.5	9.4	9.3	9.2	8	9.3	0.2	0.0	9.5	8.9	1-14

Sample I.D.: **MW102**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	**7.40**	9.40	9.60	9.20	9.00	9.10	9.40	9.60	7	9.33	0.24	0.06	9.60	9.00	0.10
Cond (umho/cm)	685	663	676	676	672	672	653	664	8	670	10	97	685	653	1.00
Alk-CaCO3	87.8	89.6	86.0	87.0	85.3	86.7	85.5	89.3	8	87.2	1.6	2.7	89.6	85.3	0.10
pH (units)	9.3	8.9	8.8	8.9	9.3	9.2	9.1	9.0	8	9.1	0.2	0.0	9.3	8.8	1-14

Sample I.D.: **MW103**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	7.80	8.70	9.40	8.10	**5.90**	9.60	9.60	10.30	7	9.07	0.90	0.81	10.30	7.80	0.10
Cond (umho/cm)	686	652	670	667	688	692	656	666	8	672	15	225	692	652	1.00
Alk-CaCO3	86.8	83.8	87.4	86.5	85.3	90.6	84.5	87.7	8	86.6	2.1	4.5	90.6	83.8	0.10
pH (units)	9.7	9.5	9.4	9.3	9.7	9.6	9.5	9.5	8	9.5	0.1	0.0	9.7	9.3	1-14

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT INCLUDED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX 5
EXCURSION INDICATOR DATA
PERIMETER ORE ZONE MONITOR WELLS
MINE UNIT 2 NORTH

Sample I.D.: **MW104**

Sample Date:	E.L.I. 12-11-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-11-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	**7.00**	8.70	9.50	9.00	8.90	9.00	9.20	8.20	7	8.93	0.41	0.17	9.50	8.20	0.10
Cond (umho/cm)	703	672	712	712	715	728	710	704	8	707	16	259	728	672	1.00
Alk-CaCO3	88.6	88.2	85.8	97.8	90.2	102.4	95.6	96.7	8	93.2	5.8	33.4	102.4	85.8	0.10
pH (units)	10.1	9.9	9.7	9.6	10.0	10.0	9.9	9.7	8	9.9	0.2	0.0	10.1	9.6	1-14

Sample I.D.: **MW105**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	8.70	9.10	9.60	8.60	9.20	9.50	9.50	9.50	8	9.21	0.39	0.15	9.60	8.60	0.10
Cond (umho/cm)	707	666	702	698	686	686	678	675	8	687	14	202	707	666	1.00
Alk-CaCO3	90.0	93.8	95.8	95.8	91.1	94.3	95.0	85.1	8	92.6	3.7	13.7	95.8	85.1	0.10
pH (units)	8.9	9.9	8.7	8.7	8.8	8.9	8.8	8.8	8	8.9	0.4	0.1	9.9	8.7	1-14

Sample I.D.: **MW106**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	8.40	8.80	9.30	8.60	9.40	9.40	9.30	9.00	8	9.03	0.39	0.15	9.40	8.40	0.10
Cond (umho/cm)	706	652	701	688	704	693	676	674	8	687	19	343	706	652	1.00
Alk-CaCO3	94.8	88.2	84.4	86.0	91.3	88.2	82.2	84.3	8	87.4	4.1	17.0	94.8	82.2	0.10
pH (units)	9.5	9.4	9.2	9.0	9.6	9.4	9.3	9.1	8	9.3	0.2	0.0	9.6	9.0	1-14

NOTE – OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> **[ ]**
THESE OUTLIERS ARE NOT INCLUDED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX 5
EXCURSION INDICATOR DATA
PERIMETER ORE ZONE MONITOR WELLS
MINE UNIT 2 NORTH

Sample I.D.: **MW107**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	8.30	8.60	9.20	8.50	9.20	9.00	9.00	8.90	8	8.84	0.33	0.11	9.20	8.30	0.10
Cond (umho/cm)	704	653	705	671	689	685	677	674	8	682	17	303	705	653	1.00
Alk-CaCO3	88.3	88.4	89.0	91.8	85.3	86.9	86.7	89.5	8	88.2	2.0	4.0	91.8	85.3	0.10
pH (units)	9.1	9.0	8.9	8.9	9.2	9.1	9.0	9.0	8	9.0	0.1	0.0	9.2	8.9	1-14

Sample I.D.: **MW108**

Sample Date:	E.L.I. 12-04-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-04-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	8.20	8.60	9.60	8.80	9.00	9.00	9.00	9.60	8	8.98	0.47	0.22	9.60	8.20	0.10
Cond (umho/cm)	718	673	715	704	717	712	704	693	8	705	15	233	718	673	1.00
Alk-CaCO3	101.0	103.0	105.0	95.8	103.4	103.4	103.2	96.5	8	101.4	3.4	11.8	105.0	95.8	0.10
pH (units)	9.6	9.4	9.6	9.8	9.7	9.6	9.6	9.9	8	9.6	0.1	0.0	9.9	9.4	1-14

Sample I.D.: **MW109**

Sample Date:	E.L.I. 12-03-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-03-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	9.00	9.40	9.70	9.00	9.50	9.40	9.40	9.60	8	9.38	0.25	0.07	9.70	9.00	0.10
Cond (umho/cm)	712	650	681	700	683	682	672	668	8	681	19	363	712	650	1.00
Alk-CaCO3	96.6	92.2	90.6	91.0	93.1	90.6	90.2	88.5	8	91.6	2.4	5.9	96.6	88.5	0.10
pH (units)	9.4	9.2	9.0	9.2	9.3	9.3	9.2	9.6	8	9.3	0.2	0.0	9.6	9.0	1-14

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> ☐
THESE OUTLIERS ARE NOT INCLUDED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX 5
EXCURSION INDICATOR DATA
PERIMETER ORE ZONE MONITOR WELLS
MINE UNIT 2 NORTH

Sample I.D.: **MW110**

Sample Date:	E.L.I. 12-03-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-14-93	TOMIN 12-03-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-14-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	8.20	9.40	10.00	9.70	9.60	9.80	9.30	9.10	8	9.39	0.56	0.31	10.00	8.20	0.10
Cond (umho/cm)	683	682	685	685	700	695	681	678	8	686	7	56	700	678	1.00
Alk-CaCO3	97.0	97.8	98.2	101.0	105.1	102.8	99.1	100.2	8	100.2	2.7	7.5	105.1	97.0	0.10
pH (units)	9.4	9.3	9.4	8.9	9.8	9.5	9.4	9.3	8	9.4	0.2	0.1	9.8	8.9	1-14

Sample I.D.: **MW111**

Sample Date:	E.L.I. 12-03-92	E.L.I. 12-15-92	E.L.I. 12-28-92	E.L.I. 01-12-93	TOMIN 12-03-92	TOMIN 12-15-92	TOMIN 12-28-92	TOMIN 01-12-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	**7.30**	8.00	9.60	9.40	9.30	9.50	9.50	9.20	7	9.21	0.55	0.30	9.60	8.00	0.10
Cond (umho/cm)	698	679	678	717	699	695	683	680	8	691	14	186	717	678	1.00
Alk-CaCO3	98.2	100.0	102.0	99.0	105.1	100.7	98.9	100.2	8	100.5	2.2	4.8	105.1	98.2	0.10
pH (units)	9.7	9.6	9.5	9.9	9.6	9.7	9.6	10.1	8	9.7	0.2	0.0	10.1	9.5	1-14

NOTE -- OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT INCLUDED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX 5
EXCURSION INDICATOR DATA
INTERIOR SHALLOW ZONE MONITOR WELLS
MINE UNIT 2 NORTH

Sample I.D.: **MW98S**

	E.L.I.	E.L.I.	E.L.I.	E.L.I.	TOMIN	TOMIN	TOMIN	TOMIN	No. of						
Sample Date:	12-11-92	12-22-92	01-06-93	01-18-93	12-11-92	12-22-92	01-06-93	01-18-93	Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	9.4	7.68	9.84	10.2					4	9.28	1.12	1.24	10.20	7.68	0.10
Cond (umho/cm)	7691	6784	5352	5251	7700	6729	5887	5378	8	6347	1022	1045091	7700	5251	1.00
Alk-CaCO3	1780	1334	926	841	1753	1436	1066	919	8	1257	376	141538	1780	841	0.10
pH (units)	12.16	12.14	12.16	11.96	12.6	12.5	12.4	12.2	8	12.3	0.2	0.0	12.6	12.0	1-14

Sample I.D.: **MW100S**

	E.L.I.	E.L.I.	E.L.I.	E.L.I.	TOMIN	TOMIN	TOMIN	TOMIN	No. of						
Sample Date:	12-11-92	12-22-92	01-06-93	01-18-93	12-11-92	12-22-92	01-06-93	01-18-93	Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	12.8	11	12.6	13	12.5	12.5	12.0	12.1	8	12.31	0.62	0.39	13.00	11.00	0.10
Cond (umho/cm)	2667	2573	2456	2620	2560	2584	2592	2614	8	2583	61	3747	2667	2456	1.00
Alk-CaCO3	173	178	181	173	175	174	175	176	8	176	3	8	181	173	0.10
pH (units)	7.51	7.85	8.07	7.62	7.9	7.6	7.6	7.5	8	7.7	0.2	0.0	8.1	7.5	1-14

Sample I.D.: **MW112S**

	E.L.I.	E.L.I.	E.L.I.	E.L.I.	TOMIN	TOMIN	TOMIN	TOMIN	No. of						
Sample Date:	12-11-92	12-21-92	01-06-93	01-18-92	12-11-92	12-21-92	01-06-93	01-18-92	Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	11.6	9.62	5.16	8.1					4	8.62	2.72	7.37	11.60	5.16	0.10
Cond (umho/cm)	4784	6015	6870	8358	4670	6171	7518	8366	8	6594	1448	2096240	8366	4670	1.00
Alk-CaCO3	1010	1374	1680	1832	1026	1372	1723	1919	8	1492	351	123466	1919	1010	0.10
pH (units)	12.01	12.49	12.44	12.27	12.40	12.50	12.50	12.50	8	12.4	0.2	0.0	12.5	12.0	1-14

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT INCLUDED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX 5
EXCURSION INDICATOR DATA
INTERIOR DEEP ZONE MONITOR WELLS
MINE UNIT 2 NORTH

Sample I.D.: **MW97D**

Sample Date:	E.L.I. 12-09-92	E.L.I. 12-22-92	E.L.I. 01-06-93	E.L.I. 01-18-93	TOMIN 12-09-92	TOMIN 12-22-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	10.2	8.4	9.77	11.0	10.9	10.3	9.8	10.1	8	10.06	0.80	0.64	11.00	8.42	0.10
Cond (umho/cm)	668	648	620	633	649	632	630	633	8	639	15	226	668	620	1.00
Alk-CaCO3	110	110	91.0	108	109	109	110	108	8	107	6	42	110	91	0.10
pH (units)	8.47	8.69	8.62	8.75	9.20	9.00	9.00	8.90	8	8.8	0.2	0.1	9.2	8.5	1-14

Sample I.D.: **MW99D**

Sample Date:	E.L.I. 12-10-92	E.L.I. 12-22-92	E.L.I. 01-06-93	E.L.I. 01-18-93	TOMIN 12-10-92	TOMIN 12-22-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	9.4	7.68	9.84	10.2	10.2	10.9	10.5	10.0	8	9.84	0.98	0.96	10.90	7.68	0.10
Cond (umho/cm)	640	635	611	653	632	616	614	616	8	627	15	229	653	611	1.00
Alk-CaCO3	111	130	116	115	113	112	112	112	8	115	6	38	130	111	0.10
pH (units)	8.84	9.37	8.84	8.81	8.90	8.90	8.90	8.80	8	8.9	0.2	0.0	9.4	8.8	1-14

Sample I.D.: **MW113D**

Sample Date:	E.L.I. 12-10-92	E.L.I. 12-21-92	E.L.I. 01-06-93	E.L.I. 01-18-93	TOMIN 12-10-92	TOMIN 12-21-92	TOMIN 01-06-93	TOMIN 01-18-93	No. of Samples	Mean	Std.Dev.	Var.	Max.	Min.	D.L.
Cl	10.1	9.62	10.2	10.5	10.2	10.8	10.7	10.5	8	10.33	0.38	0.14	10.80	9.62	0.10
Cond (umho/cm)	671	647	610	635	664	647	647	650	8	646	18	341	671	610	1.00
Alk-CaCO3	99.8	102	105	106	104	108	110	113	8	106	4	19	113	100	0.10
pH (units)	9.28	9.43	9.87	9.5	9.90	9.80	9.80	9.60	8	9.6	0.2	0.1	9.9	9.3	1-14

NOTE - OUTLIERS ARE BOUNDED BY A BOLD OUTLINE -----> [ ]
THESE OUTLIERS ARE NOT INCLUDED IN THESE CALCULATIONS AND ARE NOT USED TO CALCULATE U.C.L.'S OR RESTORATION TARGET VALUES

APPENDIX VI

CALCULATION FOR OUTLIERS AND RESTORATION TARGET VALUES

PERIMETER ORE ZONE MONITOR WELLS
INTERIOR SHALLOW ZONE MONITOR WELLS
INTERIOR DEEP ZONE MONITOR WELLS

APPENDIX 6

CALCULATIONS FOR OUTLIERS
AND RESTORATION TARGET VALUES
INTERIOR ORE ZONE BASELINE WELLS
CHRISTENSEN UNIT 2 NORTH

	No. of Sample*	Mean	Std Dev.	Var.	Max.	Min.	K Factor	K*SDEV	ACCEPTABLE HIGH	HIGH OUTLIER TEST	ACCEPTABLE LOW	LOW OUTLIER TEST	D.L.	RTV
MAJOR IONS mg/l:														
Ca	32	8.15	0.94	0.89	10.10	5.70	3.733	3.5	11.7	OK	4.63	OK	0.05	9.04
Mg	32	0.53	0.18	0.033	0.80	0.15	3.733	0.7	1.2	OK	−0.15	OK	0.1	0.56
Na	32	135.78	4.44	19.67	147.00	125.00	3.733	16.6	152.3	OK	119.22	OK	0.05	155.45
K	32	3.52	1.49	2.23	8.30	0.90	3.733	5.6	9.1	OK	−2.06	OK	0.10	5.75
CO3	16	10.91	4.69	21.95	19.30	3.80	4.492	21.0	32.0	OK	−10.14	OK	0.1	32.86
HCO3	16	100.64	12.71	161.42	118.00	78.10	4.492	57.1	157.7	OK	43.57	OK	0.1	262.06
SO4	32	213.78	6.30	39.67	227.00	204.00	3.733	23.5	237.3	OK	190.27	OK	0.5	253.45
Cl	32	8.87	0.91	0.83	10.30	7.08	3.733	3.4	12.3	OK	5.47	OK	0.10	9.69
NH4 (N)	15	0.08	0.03	0.001	0.12	0.05	4.605	0.1	0.2	OK	−0.06	OK	0.05	0.08
NO2 (N)	16	0.10	0.00	0.000	0.10	0.10	4.492	0.0	0.1	OK	0.10	OK	0.10	0.10
NO3 (N)	16	0.10	0.00	0.000	0.10	0.10	4.492	0.0	0.1	OK	0.10	OK	0.10	0.10
F	16	0.27	0.05	0.003	0.45	0.21	4.492	0.2	0.5	OK	0.04	OK	0.10	0.28
SiO2	16	8.40	0.61	0.373	9.60	7.60	4.492	2.7	11.1	OK	5.66	OK	1.00	8.77
TDS @ 180 C	32	427.25	19.19	368.38	464.00	387.00	3.733	71.6	498.9	OK	355.60	OK	1	795.63
Cond−umho/cm	32	709.97	19.50	380.28	770.00	680.00	3.733	72.8	782.8	OK	637.17	OK	1	1,090.25
Alk−CaCO3	32	100.00	5.24	27.46	110.00	84.60	3.733	19.6	119.6	OK	80.44	OK	0.1	127.46
pH units	32	9.13	0.31	0.094	9.62	8.05	3.733	1.1	10.3	OK	7.99	OK	1−14	9.23
TRACE METALS mg/l:														
Al	16	0.100	0.000	0.000	0.100	0.100	4.492	0.000	0.100	OK	0.100	OK	0.10	0.10
As	31	0.002	0.002	0.000	0.008	0.001	3.733	0.006	0.008	OK	−0.004	OK	0.001	0.00
Ba	16	0.100	0.000	0.000	0.100	0.100	4.492	0.000	0.100	OK	0.100	OK	0.10	0.10
B	16	0.100	0.000	0.000	0.100	0.100	4.492	0.000	0.100	OK	0.100	OK	0.10	0.10
Cd	16	0.010			0.010	0.010	4.492		0.010	OK	0.010	OK	0.01	0.01
Cr	16	0.050	0.000	0.000	0.050	0.050	4.492	0.000	0.050	OK	0.050	OK	0.05	0.05
Cu	16	0.010			0.010	0.010	4.492		0.010	OK	0.010	OK	0.01	0.01
Fe	16	0.050	0.000	0.000	0.050	0.050	4.492	0.000	0.050	OK	0.050	OK	0.05	0.05
Pb	16	0.050	0.000	0.000	0.050	0.050	4.492	0.000	0.050	OK	0.050	OK	0.05	0.05
Mn	16	0.010			0.010	0.010	4.492		0.010	OK	0.010	OK	0.01	0.01
Hg	16	0.001	0.000	0.000	0.001	0.001	4.492	0.000	0.001	OK	0.001	OK	0.001	0.00
Mo	16	0.100	0.000	0.000	0.100	0.100	4.492	0.000	0.100	OK	0.100	OK	0.10	0.10
Ni	16	0.050	0.000	0.000	0.050	0.050	4.492	0.000	0.050	OK	0.050	OK	0.05	0.05
Se	31	0.004	0.003	0.000	0.010	0.001	3.733	0.010	0.014	OK	−0.005	OK	0.001	0.00
V	16	0.100	0.000	0.000	0.100	0.100	4.492	0.000	0.100	OK	0.100	OK	0.10	0.10
Zn	16	0.010			0.010	0.010	4.492		0.010	OK	0.010	OK	0.01	0.01
RADIOMETRIC pCi/l:														
U mg/l	32	0.04	0.03	0.001	0.16	0.0003	3.733	0.1	0.169	OK	−0.087	OK	0.0003	0.04
Ra226	32	22.74	13.83	191.30	54.50	1.40	3.733	51.6	74.373	OK	−28.891	OK	0.2	100 **

* Samples taken from wells 2U84−1, 2S88−1, 2T95−1, 2S100−2, 2S104−1, 2R108−1, 2T92−2 and 2R114−1

** The calculated Radium 226 Restoration Target Value (214.04 pCi/L) exceeds Class of Use (5 pCi/L).
Therefore, the 100 pCi/L treatability standard is assigned as the Restoration Target Value.

APPENDIX 6

CALCULATIONS FOR OUTLIERS
UPPER CONTROL LIMITS AND RESTORATION TARGET VALUES
PERIMETER ORE ZONE MONITOR WELLS
CHRISTENSEN UNIT 2 NORTH

	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	K Factor	K*SDEV	ACCEPTABLE HIGH	HIGH OUTLIER TEST	ACCEPTABLE LOW	LOW OUTLIER TEST	D.L.	U.C.L.
MAJOR IONS mg/l:														
Ca	44	7.47	1.50	2.24	12.00	4.70	3.518	5.3	12.7	OK	2.20	OK	0.05	
Mg	44	0.53	0.18	0.03	0.84	0.14	3.518	0.6	1.2	OK	−0.11	OK	0.1	
Na	44	135.77	5.04	25.36	149.00	126.00	3.518	17.7	153.5	OK	118.06	OK	0.05	
K	44	3.29	1.30	1.69	7.50	1.40	3.518	4.6	7.9	OK	−1.28	OK	0.10	
CO3	11	15.49	7.33	53.74	31.20	4.30	5.308	38.9	54.4	OK	−23.42	OK	0.1	
HCO3	11	84.79	13.96	194.98	102.00	49.30	5.308	74.1	158.9	OK	10.67	OK	0.1	
SO4	44	204.70	5.09	25.89	214.00	195.00	3.518	17.9	222.6	OK	186.80	OK	0.5	
Cl	84	9.136	0.49	0.24	10.30	7.80	3.173	1.5	10.7	OK	7.59	OK	0.10	11.57
NH4 (N)	11	0.050	0.00	0.000	0.05	0.05	5.308	0.0	0.1	OK	0.05	OK	0.05	
NO2 (N)	11	0.100	0.00	0.000	0.10	0.10	5.308	0.0	0.1	OK	0.10	OK	0.10	
NO3 (N)	11	0.100	0.00	0.000	0.10	0.10	5.308	0.0	0.1	OK	0.10	OK	0.10	
F	11	0.805	0.05	0.003	0.93	0.74	5.308	0.3	1.1	OK	0.52	OK	0.10	
SiO2	11	8.527	0.41	0.17	9.30	7.90	5.308	2.2	10.7	OK	6.36	OK	1.00	
TDS @ 180 C	44	411.14	12.83	164.71	443.00	386.00	3.518	45.1	456.3	OK	365.99	OK	1	
Cond−umho/cm	88	685.06	18.61	346.24	728.00	650.00	3.150	58.6	743.7	OK	626.44	OK	1	778.09
Alk−CaCO3	88	92.36	6.44	41.43	105.10	82.20	3.150	20.3	112.6	OK	72.09	OK	0.1	124.55
pH units	88	9.36	0.34	0.12	10.10	8.67	3.150	1.1	10.4	OK	8.28	OK	1−14	11.08
TRACE METALS mg/l:														
Al	11	0.100	0.000	0.000	0.100	0.100	5.308	0.000	0.100	OK	0.100	OK	0.10	
As	39	0.001	0.000	0.000	0.0020	0.001	3.611	0.001	0.0027	OK	−0.000	OK	0.001	
Ba	11	0.100	0.000	0.000	0.100	0.100	5.308	0.000	0.100	OK	0.100	OK	0.10	
B	11	0.100	0.000	0.000	0.100	0.100	5.308	0.000	0.100	OK	0.100	OK	0.10	
Cd	11	0.010	0.000	0.000	0.010	0.010	5.308	0.000	0.010	OK	0.010	OK	0.01	
Cr	11	0.050	0.000	0.000	0.050	0.050	5.308	0.000	0.050	OK	0.050	OK	0.05	
Cu	11	0.010	0.000	0.000	0.010	0.010	5.308	0.000	0.010	OK	0.010	OK	0.01	
Fe	11	0.050	0.000	0.000	0.050	0.050	5.308	0.000	0.050	OK	0.050	OK	0.05	
Pb	11	0.050	0.000	0.000	0.050	0.050	5.308	0.000	0.050	OK	0.050	OK	0.05	
Mn	11	0.010	0.000	0.000	0.010	0.010	5.308	0.000	0.010	OK	0.010	OK	0.01	
Hg	11	0.001	0.000	0.000	0.001	0.001	5.308	0.000	0.001	OK	0.001	OK	0.001	
Mo	11	0.100	0.000	0.000	0.100	0.100	5.308	0.000	0.100	OK	0.100	OK	0.10	
Ni	11	0.050	0.000	0.000	0.050	0.050	5.308	0.000	0.050	OK	0.050	OK	0.05	
Se	42	0.008	0.002	0.000	0.013	0.003	3.518	0.008	0.016	OK	−0.001	OK	0.001	
V	11	0.100	0.000	0.000	0.100	0.100	5.308	0.000	0.100	OK	0.100	OK	0.10	
Zn	11	0.010	0.000	0.000	0.010	0.010	5.308	0.000	0.010	OK	0.010	OK	0.01	
RADIOMETRIC pCi/l:														
U mg/l	43	0.016	0.014	0.0002	0.053	0.0003	3.518	0.049	0.066	OK	−0.033	OK	0.0003	
Ra226	44	0.861	1.035	1.071	4.300	0.200	3.518	3.640	4.501	OK	−2.779	OK	0.2	

* Samples taken from wells MW−101, MW−102, MW−103, M1−104, MW−105, MW−106, MW−107, MW−108, MW−109, MW−110, and MW−111

APPENDIX 6

CALCULATIONS FOR OUTLIERS
AND UPPER CONTROL LIMITS
INTERIOR SHALLOW ZONE MONITOR WELLS
CHRISTENSEN UNIT 2 NORTH

	No. of Sample*	Mean	Std Dev.	Var.	Max.	Min.	K Factor	K*SDEV	ACCEPTABLE HIGH	HIGH OUTLIER TEST	ACCEPTABLE LOW	LOW OUTLIER TEST	D.L.	U.C.L.
MAJOR IONS mg/l:														
Ca	12	400.00	108.04	11,671.83	532.00	271.00	5.079	548.72	948.7	OK	-148.72	OK	0.05	
Mg	12	16.98	23.88	570.38	51.60	0.10	5.079	121.30	138.3	OK	-104.32	OK	0.1	
Na	12	248.00	41.99	1,762.83	298.00	154.00	5.079	213.25	461.2	OK	34.75	OK	0.05	
K	12	38.88	29.01	841.65	97.20	5.50	5.079	147.35	186.2	OK	-108.46	OK	0.10	
CO3	2	564.50	203.50	41,412.25	768.00	361.00	242.300	49308.05	49,872.6	OK	-48743.55	OK	0.1	
HCO3	3	75.13	95.38	9,096.44	210.00	6.00	29.055	2771.13	2,846.3	OK	-2695.99	OK	0.1	
SO4	12	703.60	548.95	301,349.89	1,379.00	88.20	5.079	2788.13	3,491.7	OK	-2084.53	OK	0.5	
Cl	16	11.06	2.11	4.47	13.20	5.16	4.492	9.50	20.56	OK	1.56	OK	0.10	SEE NOTE
NH4 (N)	3	0.36	0.28	0.08	0.75	0.11	29.055	8.12	8.48	OK	-7.76	OK	0.05	
NO2 (N)	3	0.10			0.10	0.10	29.055		0.10	OK	0.10	OK	0.10	
NO3 (N)	3	0.10			0.10	0.10	29.055		0.10	OK	0.10	OK	0.10	
F	3	0.22	0.07	0.00	0.31	0.14	29.055	2.02	2.24	OK	-1.79	OK	0.10	
SiO2	3	5.40	5.17	26.78	12.70	1.30	29.055	150.36	155.76	OK	-144.96	OK	1.00	
TDS @ 180 C	12	1,986.08	277.31	76,902.74	2,395.00	1,444.00	5.079	1408.47	3,394.6	OK	577.61	OK	1	
Cond-umho/cm	24	5,174.58	2,070.03	4,285,027.83	8,366.00	2,456.00	4.161	8613.40	13,788.0	OK	-3438.82	OK	1	SEE NOTE
Alk-CaCO3	24	974.77	637.10	405,901.09	1,918.90	173.00	4.161	2650.99	3,625.8	OK	-1676.22	OK	0.1	SEE NOTE
pH units	24	10.79	2.19	4.78	12.60	7.50	4.161	9.10	19.9	OK	1.69	OK	1-14	21.7
TRACE METALS mg/l:														
Al	3	0.110	0.014	0.000	0.130	0.100	29.055	0.411	0.521	OK	-0.301	OK	0.10	
As	12	0.001	0.001	0.000	0.005	0.001	5.079	0.006	0.007	OK	-0.004	OK	0.001	
Ba	3	0.433	0.340	0.116	0.900	0.100	29.055	9.877	10.310	OK	-9.443	OK	0.10	
B	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
Cd	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
Cr	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Cu	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
Fe	3	0.060	0.014	0.000	0.080	0.050	29.055	0.411	0.471	OK	-0.351	OK	0.05	
Pb	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Mn	3	0.110	0.141	0.020	0.310	0.010	29.055	4.109	4.219	OK	-3.999	OK	0.01	
Hg	3	0.001			0.001	0.001	29.055		0.001	OK	0.001	OK	0.001	
Mo	3	0.133	0.047	0.002	0.200	0.100	29.055	1.370	1.503	OK	-1.236	OK	0.10	
Ni	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Se	12	0.014	0.013	0.000	0.048	0.001	5.079	0.068	0.082	OK	-0.055	OK	0.001	
V	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
Zn	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
RADIOMETRIC pCi/l:														
U mg/l	12	0.017	0.038	0.001	0.140	0.000	5.079	0.190	0.207	OK	-0.174	OK	0.0003	
Ra226	11	46.500	74.056	5484.325	202.000	1.300	5.308	393.090	439.590	OK	-346.590	OK	0.2	

NOTE - THE WELLS USED IN THESE CALCULATIONS HAVE BEEN ASSIGNED U.C.L.'S ACCORDING TO THE GROUPINGS IN UNIT 2 SOUTH. REFER TO APPENDIX VI, INTERIOR SHALLOW ZONE MONITOR WELLS

* Samples taken from monitor wells MW-98S, MW-100S, MW-112S

APPENDIX 6

ASSIGNMENT OF GROUP CLASSIFICATIONS
FOR UPPER CONTROL LIMITS
SHALLOW ZONE
CHRISTENSEN UNIT 2 NORTH

ALL WELLS (3)	MW98S	MW100S	MW112S						HIGH OUTLIER		LOW OUTLIER				BELOW MINING
	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	K*SDEV	HIGH	TEST	LOW	TEST	D.L.	UCL	Mining	TEST
Chloride	16	10.6	2.2	5.0	13.0	5.2	10.0	20.7	OK	0.6	OK	0.1	21.8	210.0	OK
Conductivity	24	5,175	2,115	4,471,333	8,366	2,456	8,798.7	13,973	OK	−3624	OK	1	15,747	5,120	NOT
Alkalinity	24	974.8	650.8	423,549.0	1,918.9	173.0	2,708.0	3,682.8	OK	−1733.2	OK	0.1	4,228.8	2,600.0	NOT

TWO WELLS	MW98S	MW112S							HIGH OUTLIER		LOW OUTLIER				BELOW MINING
	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	K*SDEV	HIGH	TEST	LOW	TEST	D.L.	UCL	Mining	TEST
Chloride	8	9.0	2.0	3.8	11.6	5.2	12.6	21.6	OK	−3.7	OK	0.1	18.7	210.0	OK
Conductivity	16	6,470	1,217	1,482,289	8,366	4,670	5,469.0	11,939	OK	1,001	OK	1	12,558	5,120	NOT
Alkalinity	16	1,374.4	372.0	138,403.1	1,918.9	841.0	1,671.1	3,045.5	OK	−296.7	OK	0.1	3,234.5	2,600.0	NOT

ONE WELLS	MW100S								HIGH OUTLIER		LOW OUTLIER				BELOW MINING
	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	K*SDEV	HIGH	TEST	LOW	TEST	D.L.	UCL	Mining	TEST
Chloride	8	12.3	0.6	0.4	13.0	11.0	4.0	16.4	OK	8.3	OK	0.1	15.4	210.0	OK
Conductivity	8	2,583	61	3,747	2,667	2,456	395.9	2,979	OK	2,187	OK	1	2,889	5,120	OK
Alkalinity	8	175.5	2.8	7.7	181.0	173.0	17.9	193.4	OK	157.6	OK	0.1	189.4	2,600.0	OK

	UNIT 2 SOUTH		UNIT 2 NORTH			
					PROPOSED	
	GROUP 1	GROUP 2	A	B	GROUP 1	GROUP 2
	MW68S MW92S MW94S MW96S	MW70S MW72S	MW100S	MW98S MW112S	MW100S	MW98S MW112S
CHLORIDE	23.5	63.4	15.4	18.7	23.5	63.4
CONDUCTIVITY	3560	21365	2889	12558	3560	21365
ALKALINITY	304	5861.3	189.4	3234.5	304	5861.3

PROPOSAL IS TO ASSIGN UPPER CONTROL LIMITS TO UNIT 2 NORTH WELLS (MW100S, MW98S, MW112S) ACCORDING TO THEIR SIMILARITY TO UNIT 2 SOUTH WELLS. I.E., MW100S IS SIMILAR TO UNIT 2 SOUTH'S GROUP 1 WELLS, AND MW98S, MW112S ARE SIMILAR TO UNIT 2 SOUTH'S GROUP 2 WELLS. THEREFORE, TO AVOID CONFUSION, ASSIGN GROUP 1 AND GROUP 2 U.C.L.'S ACCORDINGLY.

APPENDIX 6

CALCULATIONS FOR OUTLIERS
AND UPPER CONTROL LIMITS
INTERIOR DEEP ZONE MONITOR WELLS
CHRISTENSEN UNIT 2 NORTH

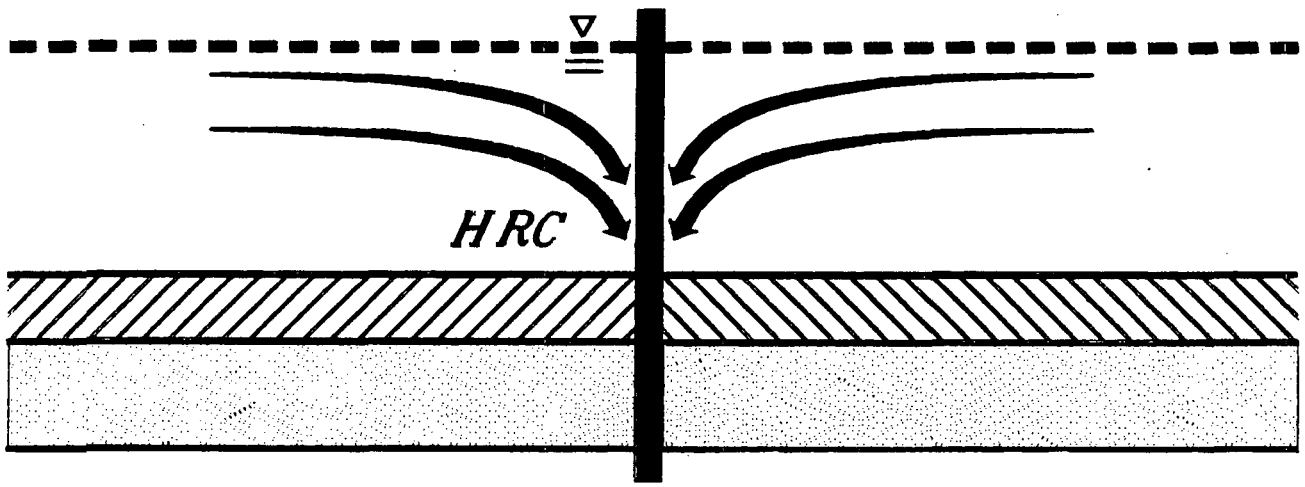
	No. of Sample*	Mean	Std.Dev.	Var.	Max.	Min.	K Factor	K*SDEV	ACCEPTABLE HIGH	HIGH OUTLIER TEST	ACCEPTABLE LOW	LOW OUTLIER TEST	D.L.	U.C.L.
MAJOR IONS mg/l:														
Ca	12	6.63	1.17	1.38	8.50	4.40	5.079	5.96	12.6	OK	0.67	OK	0.05	
Mg	12	0.72	0.82	0.67	2.60	0.03	5.079	4.16	4.9	OK	−3.44	OK	0.1	
Na	12	123.50	3.38	11.42	132.00	119.00	5.079	17.16	140.7	OK	106.34	OK	0.05	
K	12	2.76	1.52	2.32	7.20	1.30	5.079	7.73	10.5	OK	−4.98	OK	0.10	
CO3	3	6.03	3.68	13.55	11.00	2.20	29.055	106.95	113.0	OK	−100.91	OK	0.1	
HCO3	3	119.67	12.55	157.56	130.00	102.00	29.055	364.70	484.4	OK	−245.03	OK	0.1	
SO4	12	169.25	7.34	53.85	188.00	158.00	5.079	37.27	206.5	OK	131.98	OK	0.5	
Cl	24	10.08	0.74	0.55	11.00	7.68	4.161	3.08	13.2	OK	6.99	OK	0.10	13.78
NH4 (N)	3	0.34	0.16	0.03	0.48	0.11	29.055	4.76	5.1	OK	−4.42	OK	0.05	
NO2 (N)	3	0.10			0.10	0.10	29.055		0.1	OK	0.10	OK	0.10	
NO3 (N)	3	0.10			0.10	0.10	29.055		0.1	OK	0.10	OK	0.10	
F	3	0.40	0.10	0.01	0.53	0.29	29.055	2.88	3.3	OK	−2.48	OK	0.10	
SiO2	3	9.37	0.66	0.44	10.10	8.50	29.055	19.18	28.5	OK	−9.81	OK	1.00	
TDS @ 180 C	12	373.58	21.29	453.24	426.00	340.00	5.079	108.13	481.7	OK	265.45	OK	1	
Cond−umho/cm	24	637.54	17.18	295.08	671.00	610.00	4.161	71.48	709.0	OK	566.06	OK	1	723.43
Alk−CaCO3	24	109.37	6.79	46.11	130.00	91.00	4.161	28.25	137.6	OK	81.12	OK	0.1	143.32
pH units	24	9.13	0.42	0.18	9.90	8.47	4.161	1.75	10.9	OK	7.39	OK	1−14	11.23
TRACE METALS mg/l:														
Al	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
As	12	0.001	0.001	0.000	0.003	0.001	5.079	0.003	0.004	OK	−0.002	OK	0.001	
Ba	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
B	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
Cd	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
Cr	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Cu	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
Fe	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Pb	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Mn	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
Hg	3	0.001			0.001	0.001	29.055		0.001	OK	0.001	OK	0.001	
Mo	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
Ni	3	0.050			0.050	0.050	29.055		0.050	OK	0.050	OK	0.05	
Se	12	0.005	0.002	0.000	0.009	0.001	5.079	0.012	0.017	OK	−0.008	OK	0.001	
V	3	0.100			0.100	0.100	29.055		0.100	OK	0.100	OK	0.10	
Zn	3	0.010			0.010	0.010	29.055		0.010	OK	0.010	OK	0.01	
RADIOMETRIC pCi/l:														
U mg/l	12	0.005	0.007	0.0001	0.021	0.0003	5.079	0.037	0.042	OK	−0.033	OK	0.0003	
Ra226	12	3.617	2.694	7.258	8.600	0.200	5.079	13.683	17.300	OK	−10.067	OK	0.2	

* Samples taken from monitor wells MW−97D, MW−99D, MW−113D

HRC

Summary
PUMP TEST ANALYSIS
MINE UNIT 2 (NORTH)
CHRISTENSEN RANCH PROJECT
JOHNSON COUNTY, WYOMING
February, 1993

Summary of Analysis
Prepared For
TOTAL MINERALS CORPORATION
By
HYDRO RESTORATION CORPORATION
February, 1993



Summary

PUMP TEST ANALYSIS
MINE UNIT 2 (NORTH)
CHRISTENSEN RANCH PROJECT
JOHNSON COUNTY, WYOMING

(HRC, 2/23/93, C. S. Bartels)

INTRODUCTION

A hydrologic test was conducted in February, 1993 at Total Minerals Corporation's Mine Unit 2 (NORTH). This uranium *In Situ* leaching (ISL) site is located at the Christensen Ranch Project in Johnson County, Wyoming and is situated just north of Mine Unit 2 (SOUTH), which itself was tested in November, 1992. Hydro Restoration Corporation (HRC) was contracted by Total Minerals Corporation (TOMIN) to design and analyze the Pump Test for Mine Unit 2 (NORTH). This report summarizes the results to date from the analysis subsequent to that Pump Test.

PUMP TEST OPERATION

Figure 1 (not to scale) shows the relative locations of the wells involved in this Pump Test. Fourteen perimeter monitor wells, three overlying and three underlying observation wells, and two pumping wells were involved. The Primary Pumping Well, R108, was started at 10:30 A.M., February 4, 1993 at 16 gallons per minute (gpm) and produced singly for 48 hours. The forty-eight hour interval using a single pumping well (R108) was chosen to allow a standard analysis of the resulting drawdowns with the Theis and Collins / Papadopulos methods. The Secondary Pumping Well, T92, was started 48 hours after well R108 at 10:30 A.M., February 6, 1993 and also produced at 16 gpm. Wells R108 and T92 were produced together until 10:30 A.M., February 7, 1993, a total pumping time of 72 hours. Fluid level recoveries

were not monitored subsequent to production because of the multiple pumping wells.

SUMMARY of ANALYSIS

Table 1 and Figure 1 show the resulting drawdowns at the end of all pumping. The Perimeter Monitor Wells all demonstrated substantial drawdowns, showing continuity within the proposed production zone and significantly stressing the over and underlying aquitards. At the same time, the monitor wells completed in the Shallow and Deep Zones rose slightly in water level.

Barometric pressure in inches of mercury is plotted in Figure 2. During the time of pumping, a recording barometer was located in the plant building at the Christensen Ranch site, about a mile from the test location. In addition, barometric readings from the Gillette County Airport (about 45 miles distant) were obtained across both the antecedent and pumping times. The same overall look of the pressure readings from both stations during the pumping phase of the test can be noted. Generally, the barometric pressure decreased during pumping, which should result in a rising water level in observation wells not influenced by pumping. As a result, the barometric readings were converted to feet of water and inverted, as shown in Figure 3. Since the CHANGE in water level due to pumping is meaningful, the CHANGE in INVERTED barometric pressures (feet of water) from the start of pumping is shown in Figure 4. This, then, was plotted against the changes in water levels measured in the over and underlying monitor wells, as shown in Figures 5 through 10.

Figure 5 includes antecedent water levels, as well as levels during pumping, for Shallow Monitor Well MW-98S. The changes in fluid level in MW-98S corresponds very well to the INVERTED

changes in barometric pressure. Although Figures 6 through 10 show fewer antecedent readings for the other observation wells, this same correspondence is shown. There is no indication of hydraulic communication between the proposed production horizon and the observed over and underlying zones.

The Theis Curve was matched to the drawdowns observed in the production horizon associated with pumping of Well R108. The resulting transmissivities and storage coefficients are shown for the individual wells in Figures 11 through 24 and tabulated in Table 1. Generally, the matches to the Theis Curve were excellent and showed no flow boundaries within the production zone or leakage through the aquitards.

The arithmetic average of the transmissivities determined from the curve match is 583 gpd/ft and of the storage coefficients, 1.93e-4 (dimensionless). Using a production sand thickness of 148 feet (average of the open zones in the Perimeter Monitor Wells), and a viscosity of 1.24 cp at 53 deg-F, the average permeability is calculated as 238 md.

In addition, this data was tested for anisotropy using the Collins / Papadopulos Method. Fourteen wells taken in combination three at a time results in 364 SETS of simultaneous equations providing that same number of estimates of Major and Minor transmissivities. Describing a triangle by drawing lines between each of the three wells used in a particular set and imposing a maximum of 130 degrees between any two wells (effectively discounting those wells in or near a straight line), results in 190 sets of estimates. The average of these 190 sets provides an estimate of Major Transmissivity of 1330 gpd/ft, Minor Transmissivity of 342 gpd/ft, Angle of Preferred Flow of 11.1 degrees, and Storage Coefficient of 2.01e-4 (dimensionless). The corresponding Sample Standard Deviations are 1320, 126, 51.8, and 1.04e-4. Using the thickness and viscosity noted above, the

Major Permeability would be 544 md with a Minor of 140 md and results in an average permeability of 276 md.

CONCLUSIONS

1. The overlying and underlying aquitards were effectively stressed with multiple pumping wells and hydraulically isolate the proposed production zone.

2. The production zone is continuous over the area tested and the monitor wells should respond readily to changes within the mine area.

3. No faults or other flow boundaries are evident hydraulically within the area tested.

Table 1

Drawdown and
Aquifer Parameters

Total Minerals Corporation
Christensen Ranch Project
Mine Unit 2 (NORTH)
Area Pump Test — 2/93

Well Number	Well Designation	Final Drawdown (feet)	Theis Curve Match	
			Transmissivity (GPD/ft)	Storage Coefficient
2R108-1	Pumping Well #1	-147.44	—	—
2T92-2	Pumping Well #2	-8.40 [1]	—	—
MW-82	Production Monitor	-2.48	611	2.69E-04
MW-2V76-2	Production Monitor	-3.09	401	1.87E-04
MW-90	Production Monitor	-4.87	955	3.40E-04
MW-101	Production Monitor	-6.65	682	2.93E-04
MW-102	Production Monitor	-8.76	628	2.03E-04
MW-103	Production Monitor	-5.73	688	2.89E-04
MW-104	Production Monitor	-5.80	579	2.08E-04
MW-105	Production Monitor	-7.71	473	1.35E-04
MW-106	Production Monitor	-8.58	530	1.68E-04
MW-107	Production Monitor	-10.43	577	1.55E-04
MW-108	Production Monitor	-15.51	498	8.43E-05
MW-109	Production Monitor	-13.32	461	1.07E-04
MW-110	Production Monitor	-11.40	463	1.10E-04
MW-111	Production Monitor	-7.49	611	1.51E-04
MW-98S	Shallow Monitor	0.20	—	—
MW-100S	Shallow Monitor	0.30	—	—
MW-112S	Shallow Monitor	0.32	—	—
MW-97D	Deep Monitor	0.39	—	—
MW-99D	Deep Monitor	0.49	—	—
MW-113D	Deep Monitor	0.49	—	—

[1] Drawdown in Well 2T92-2 prior to starting the pump in that well at 10:30 A.M., 2-6-93.

HRC

Figure 1

Well Locations and
Drawdown at End of Pumping

Total Minerals Corp.
Christensen Ranch Project
Mine Unit 2 (NORTH)

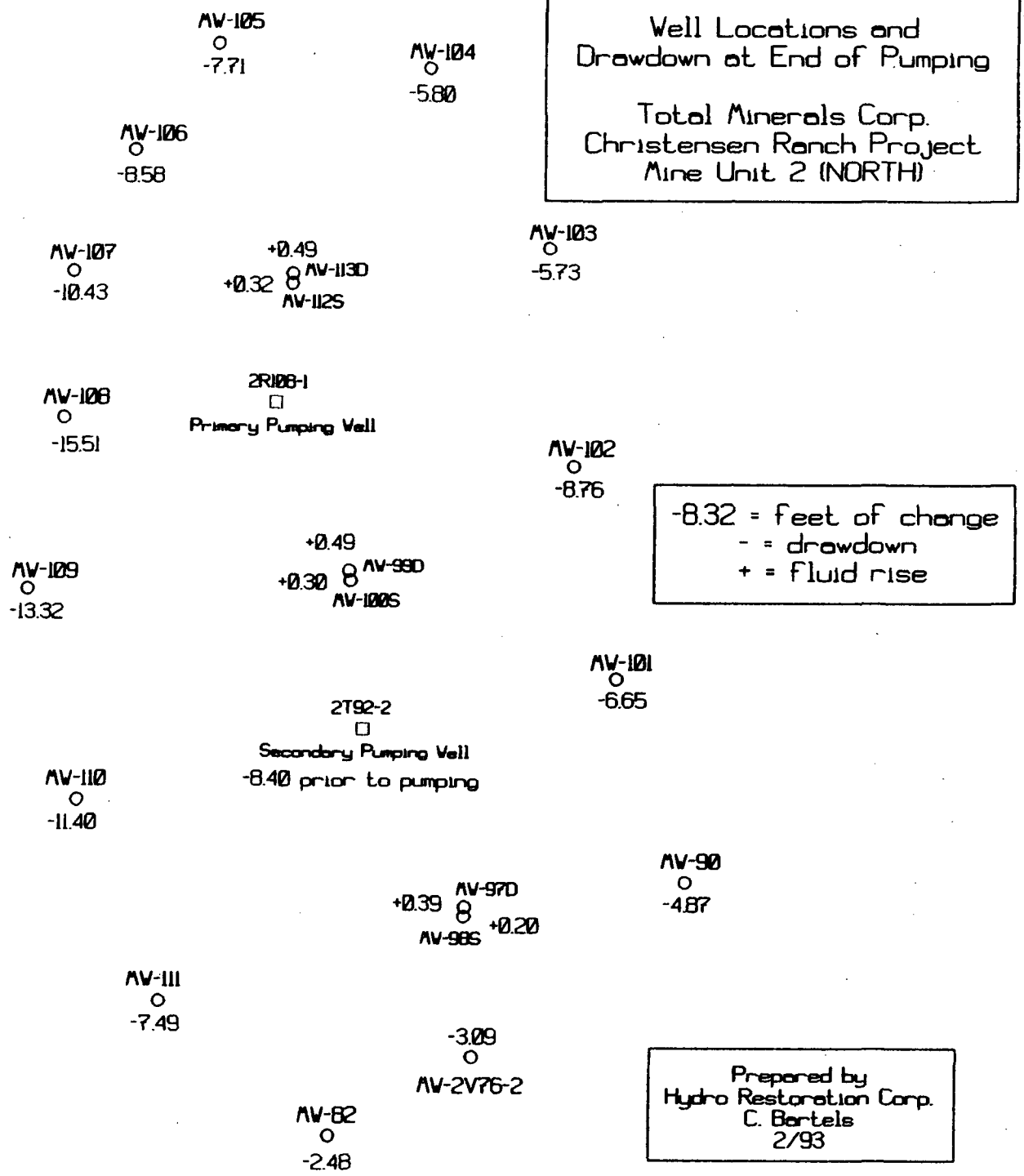


Figure 2

Total Minerals Corporation

Mine Unit 2 (NORTH): Barometer

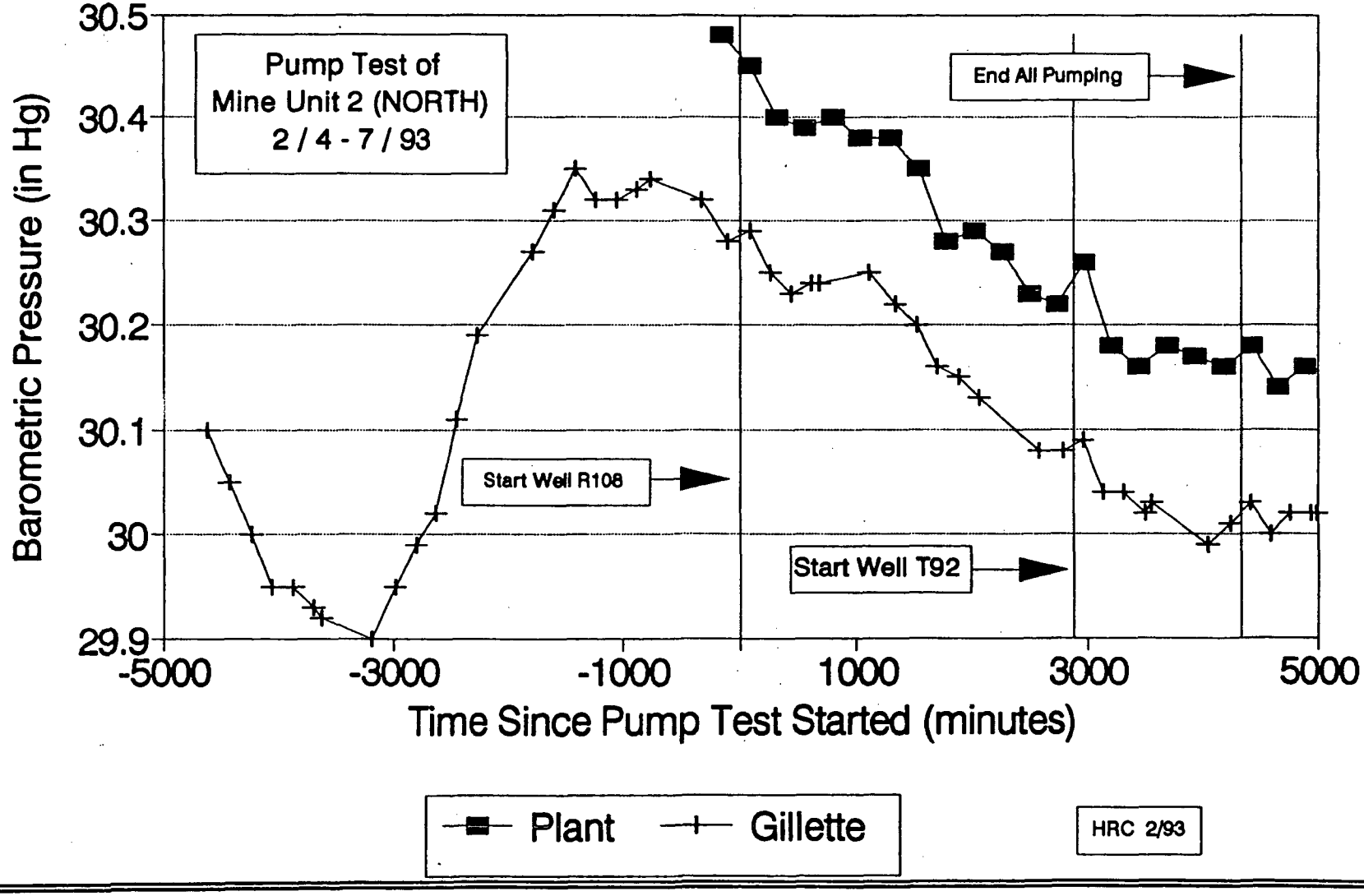


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Figure 3

Total Minerals Corporation

Barometric Pressure INVERTED

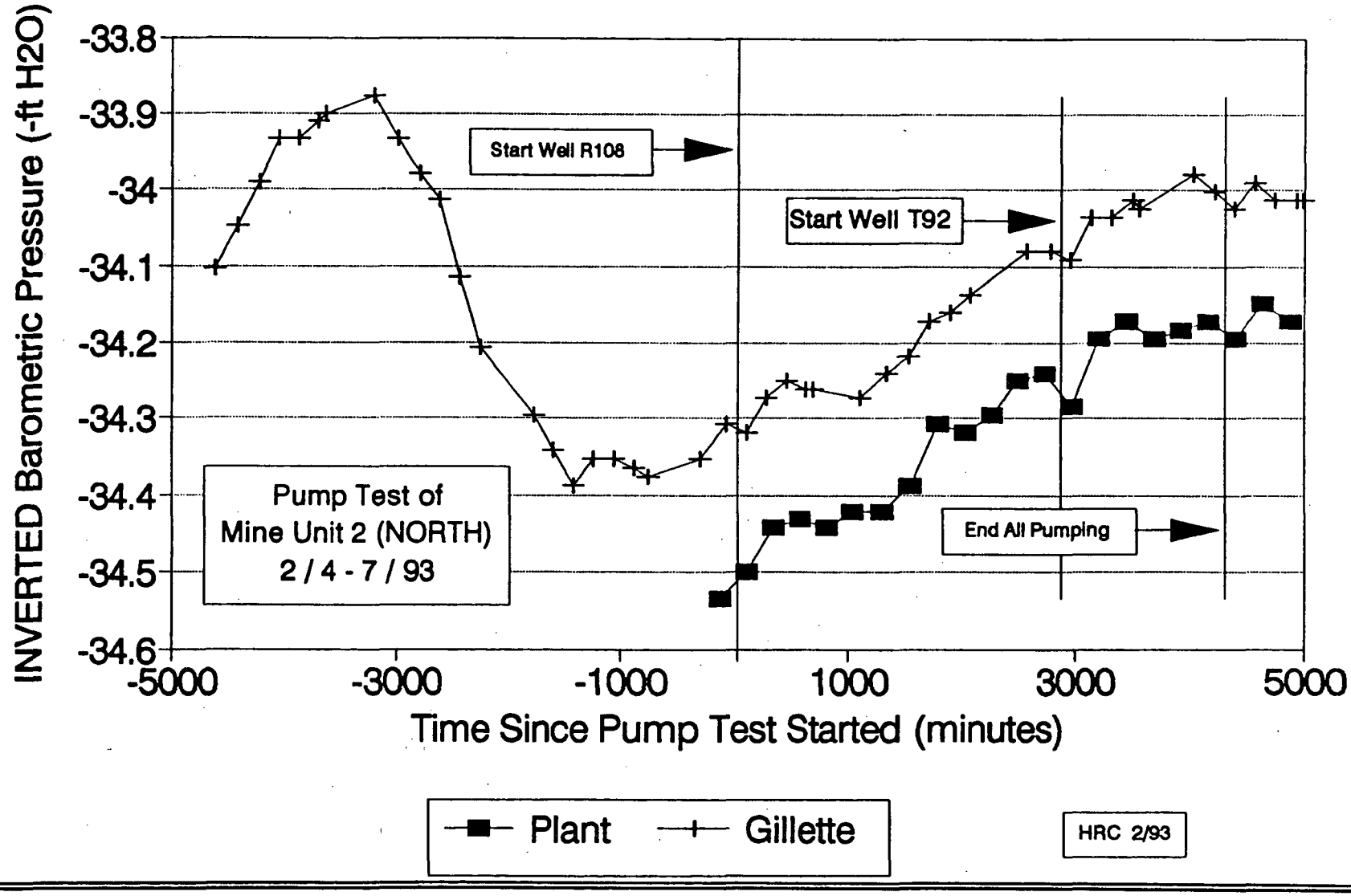

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Figure 4

Total Minerals Corporation

Barometric Pressure INVERTED

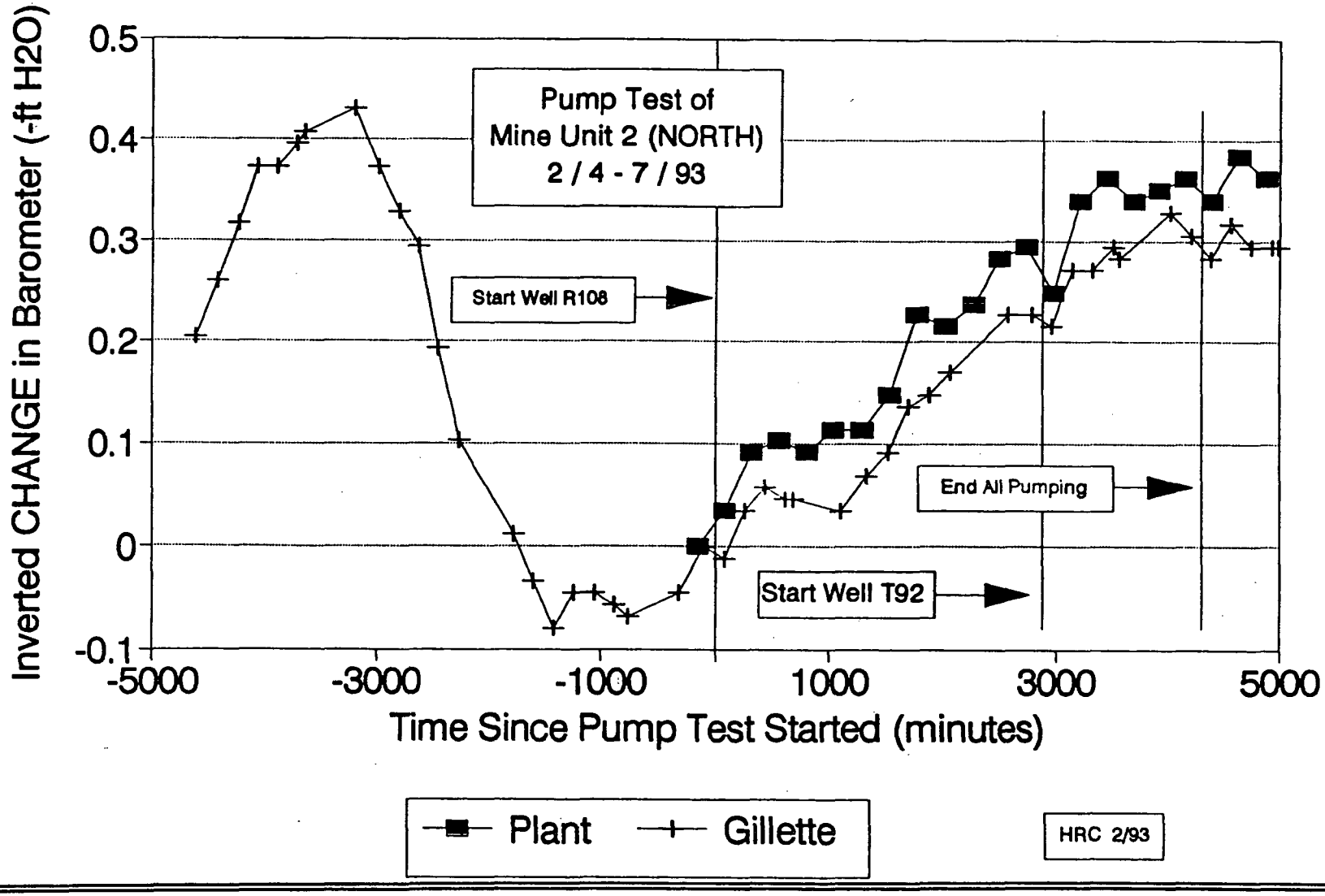

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Figure 5

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-98S (Shallow)

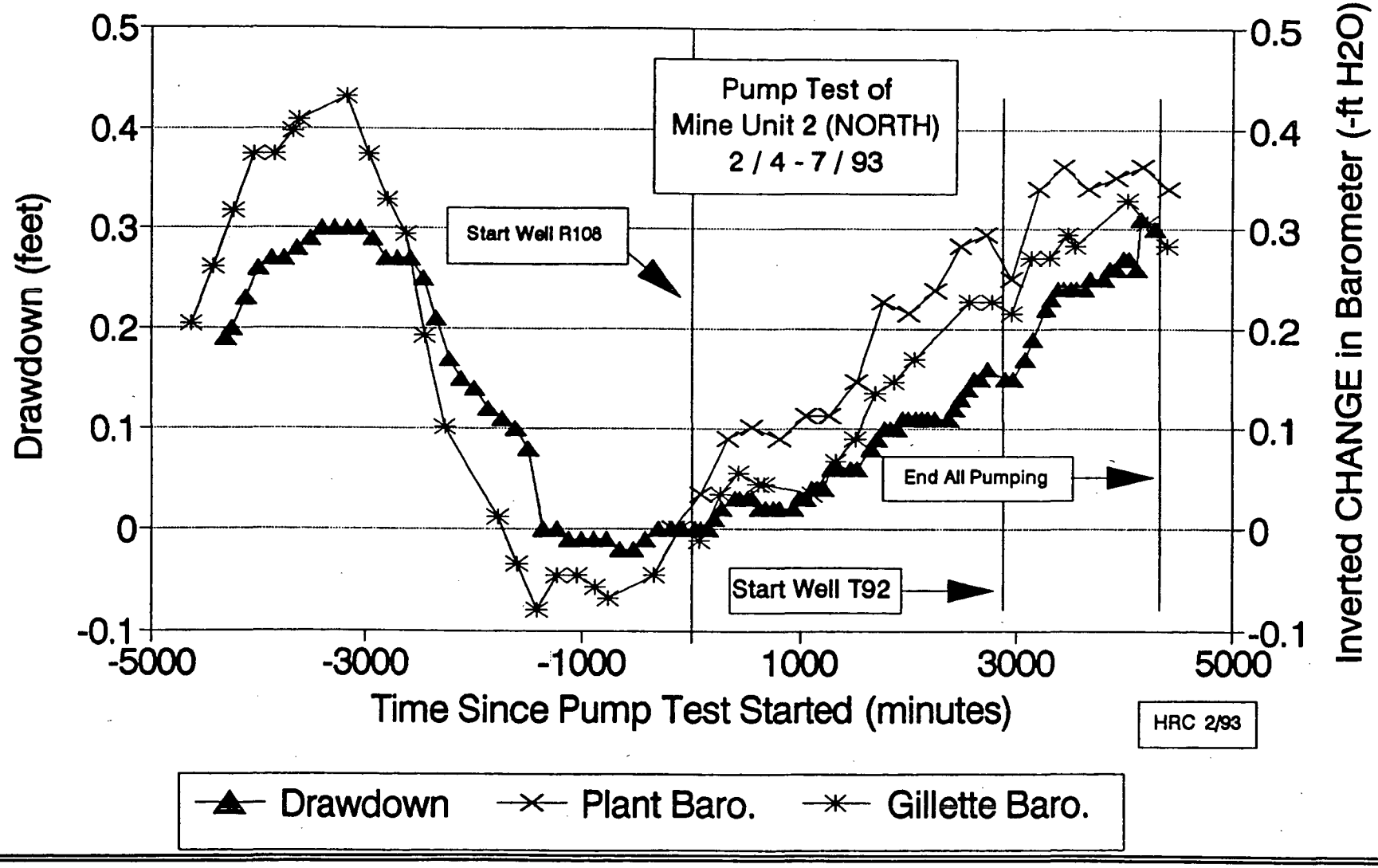

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Figure 6

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-100S (Shallow)

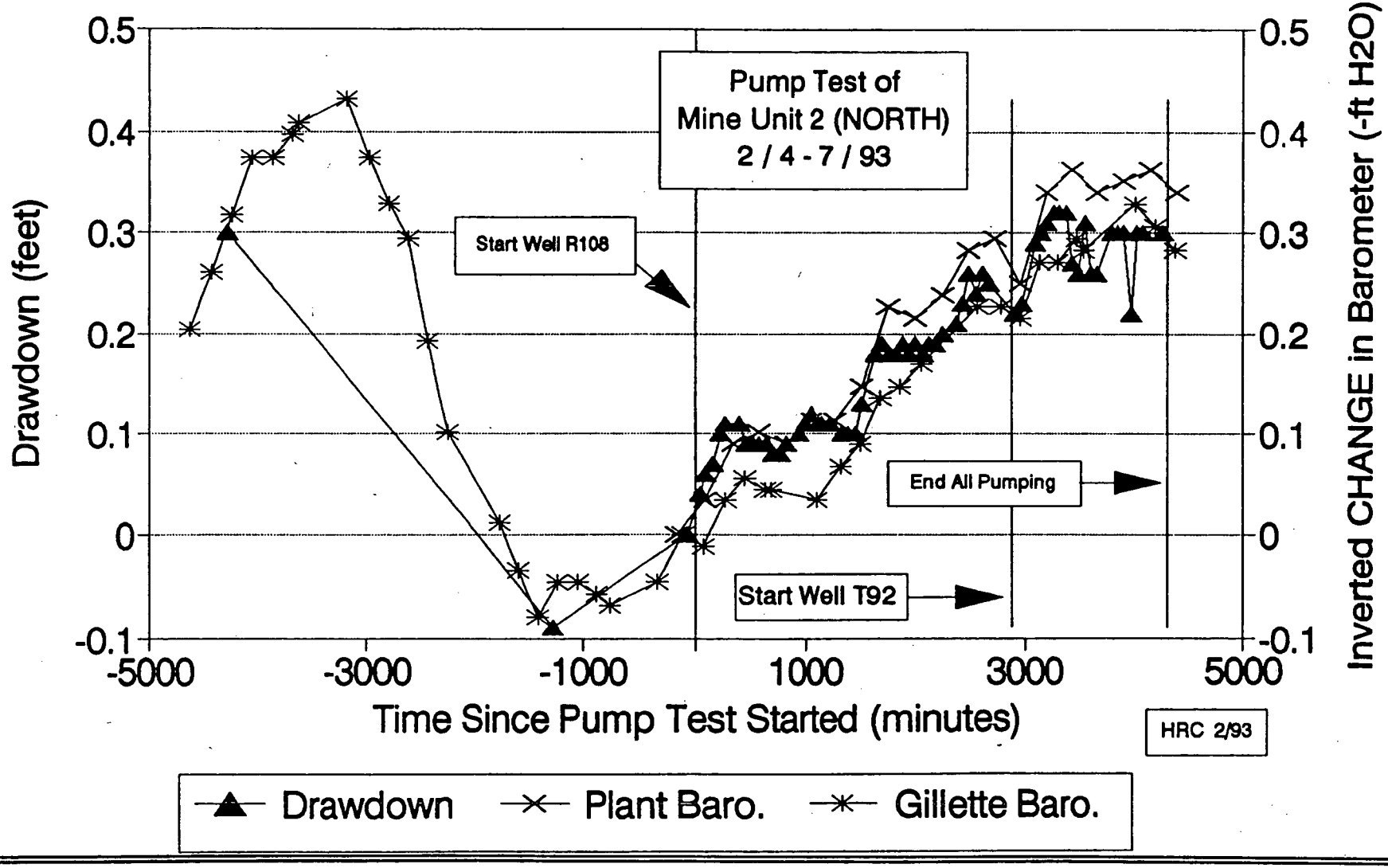

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Figure 7

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-112S (Shallow)

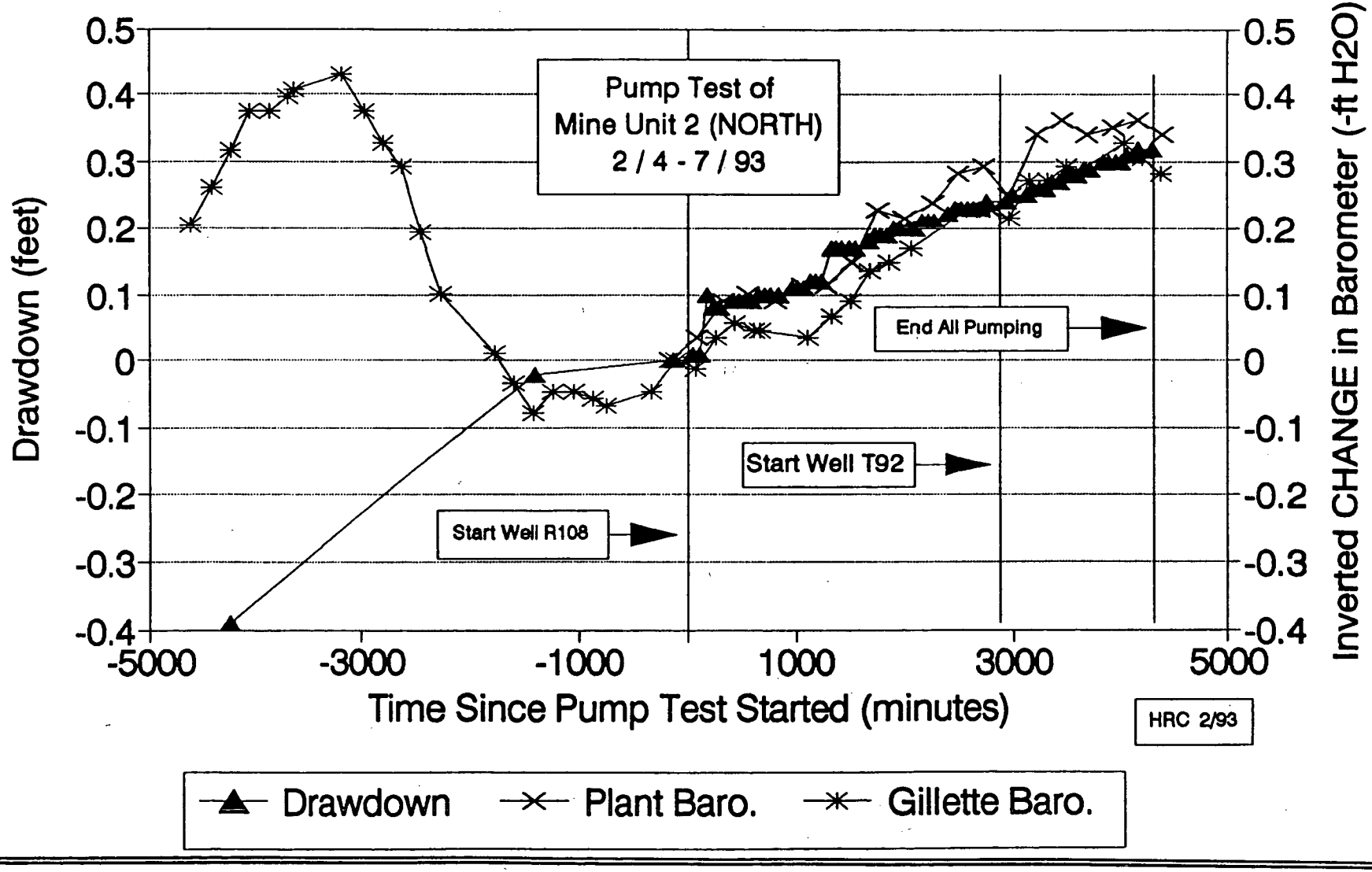

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Figure 8

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-97D (Deep)

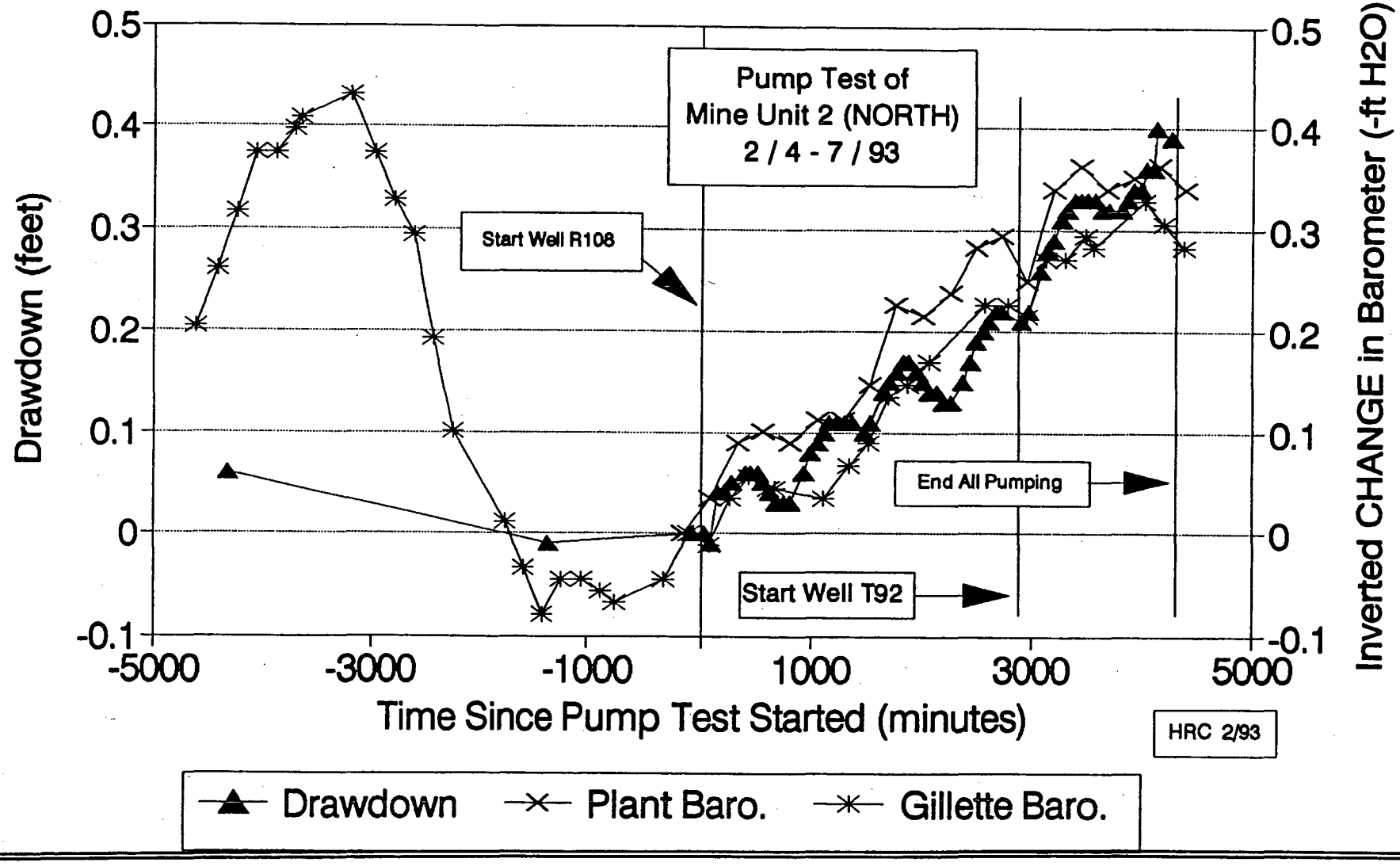

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Figure 9

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-99D (Deep)

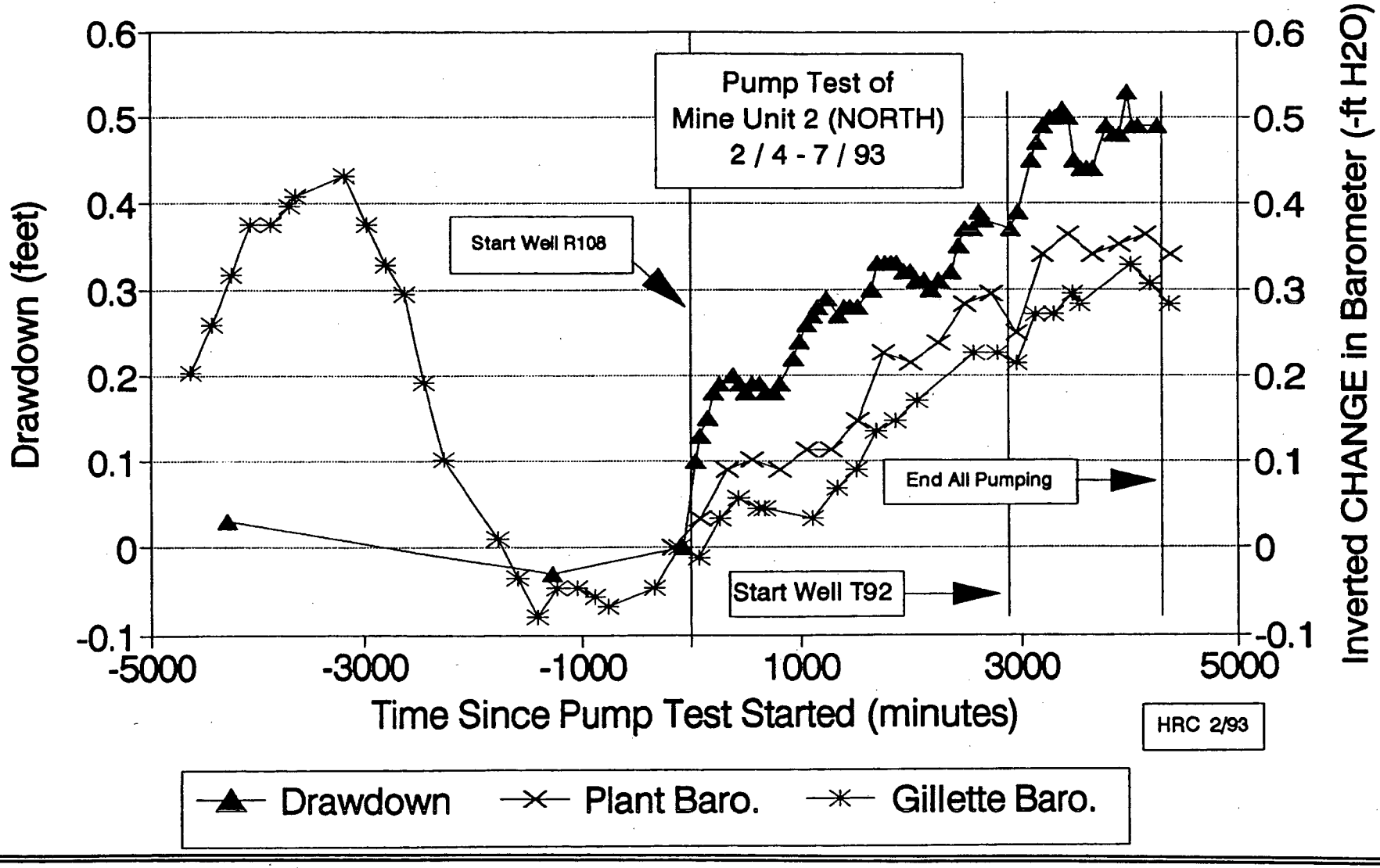

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Figure 10

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-113D (Deep)

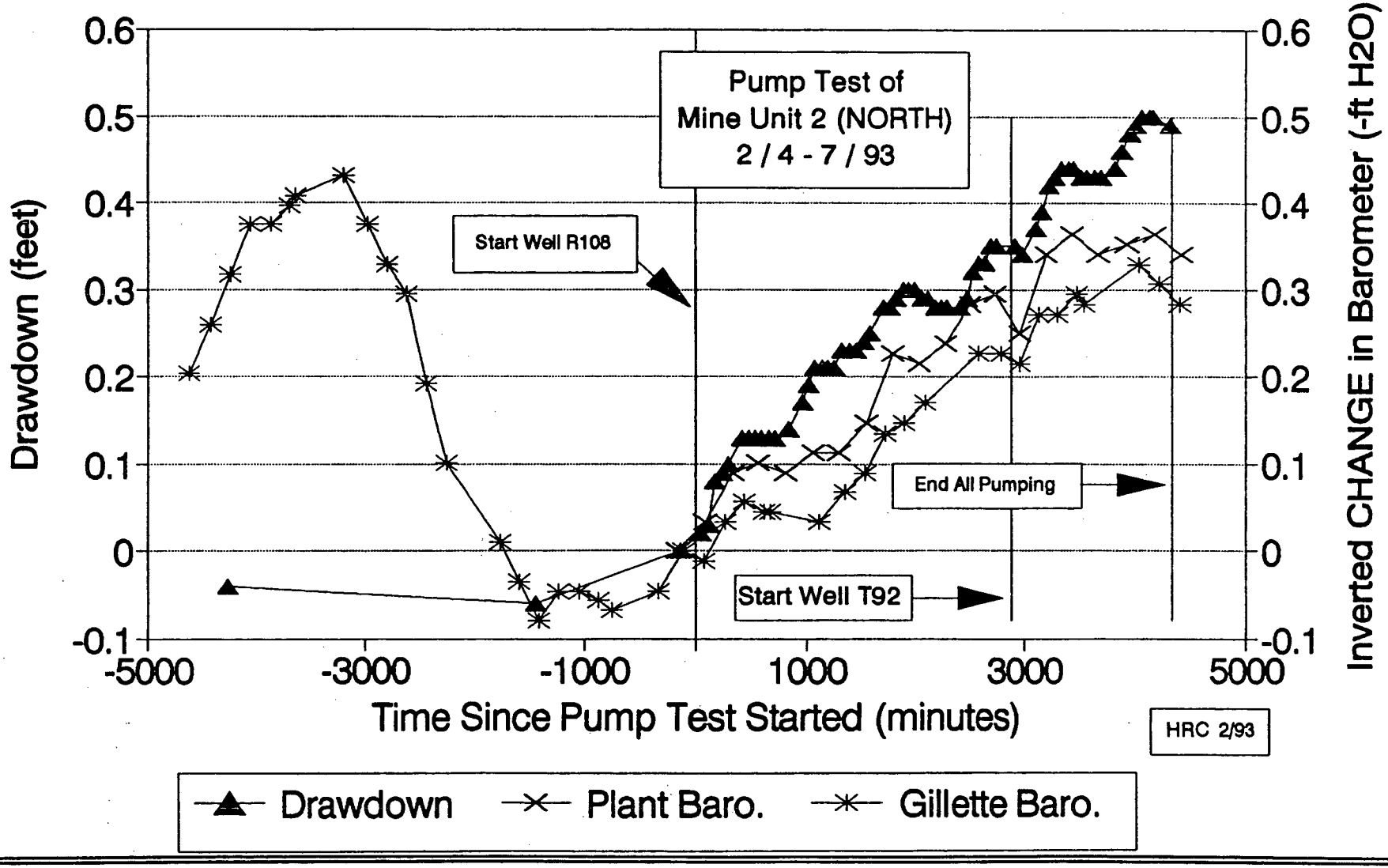

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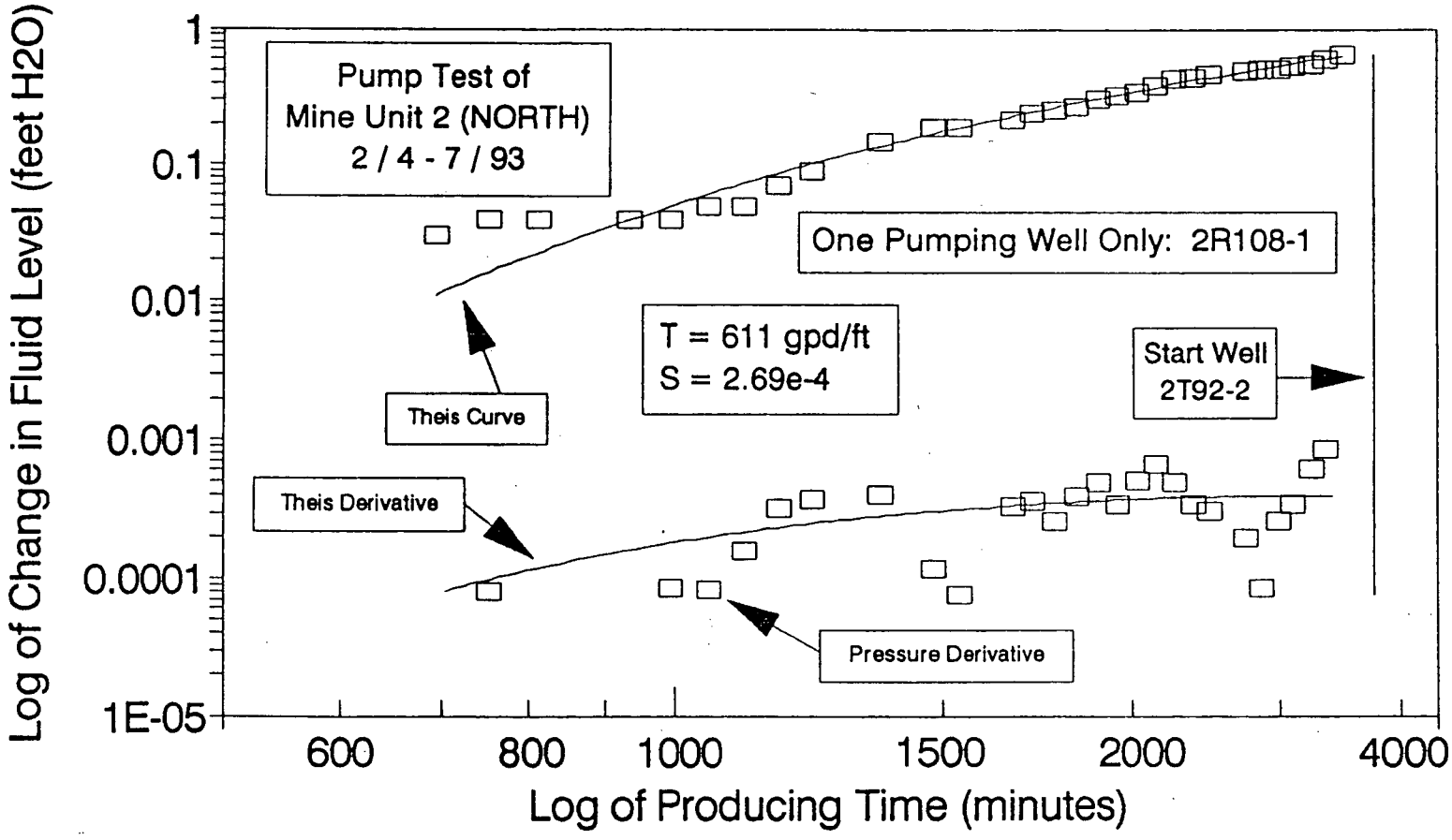
Figure 11

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-82



Drawdown —— Theis

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Figure 12

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-2V76-2

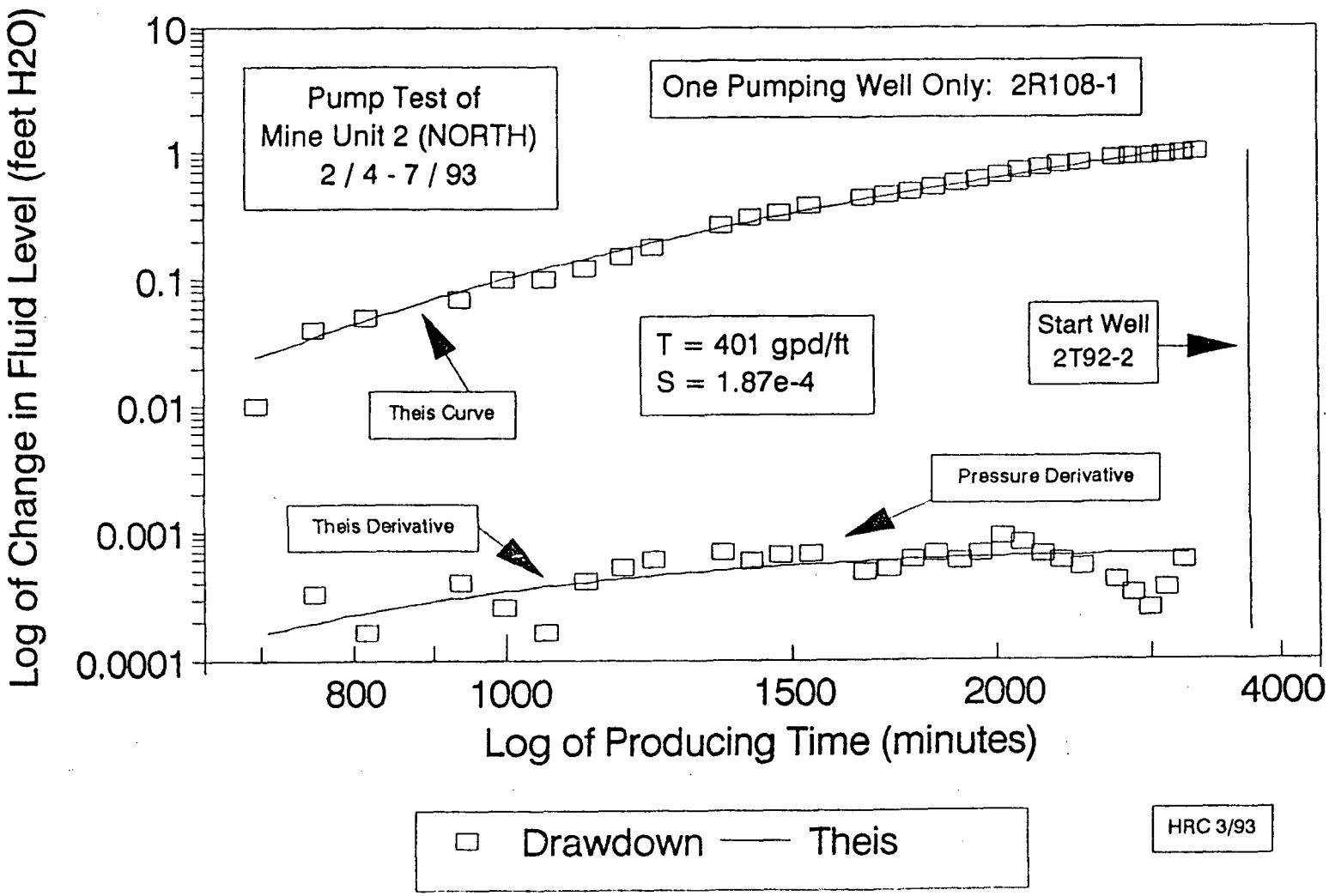

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Figure 13

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-90

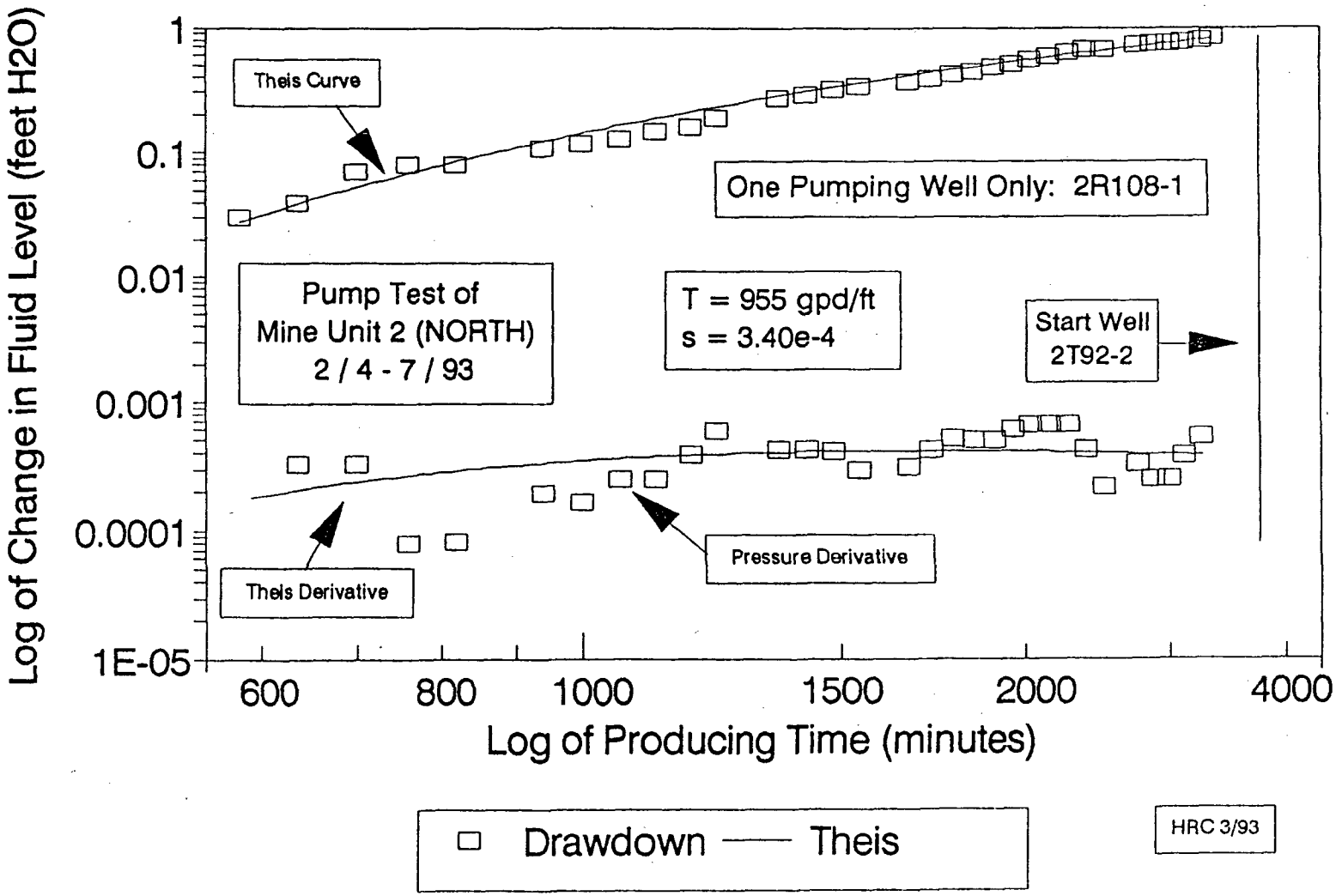

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Figure 14

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-101

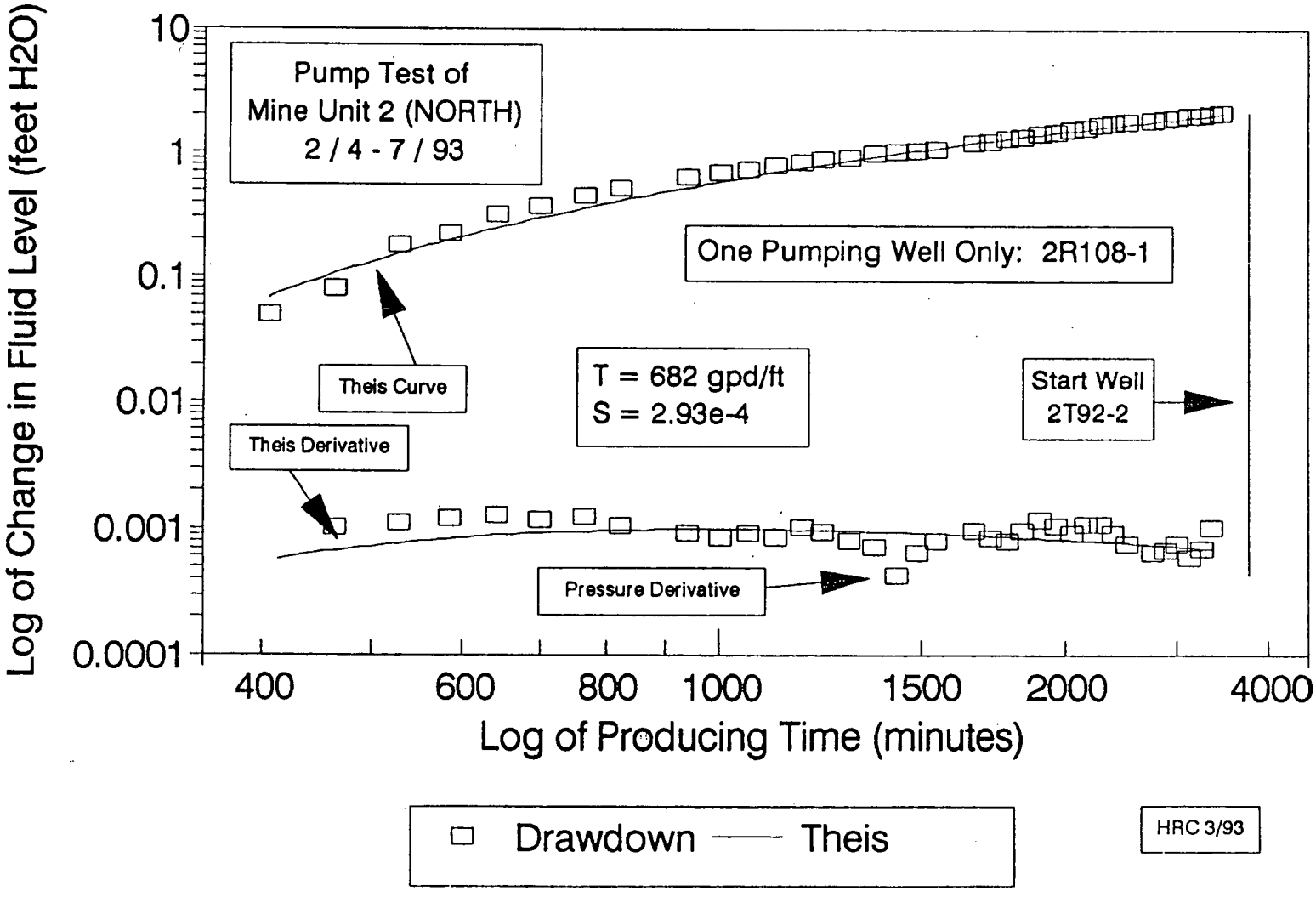

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Figure 15

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-102

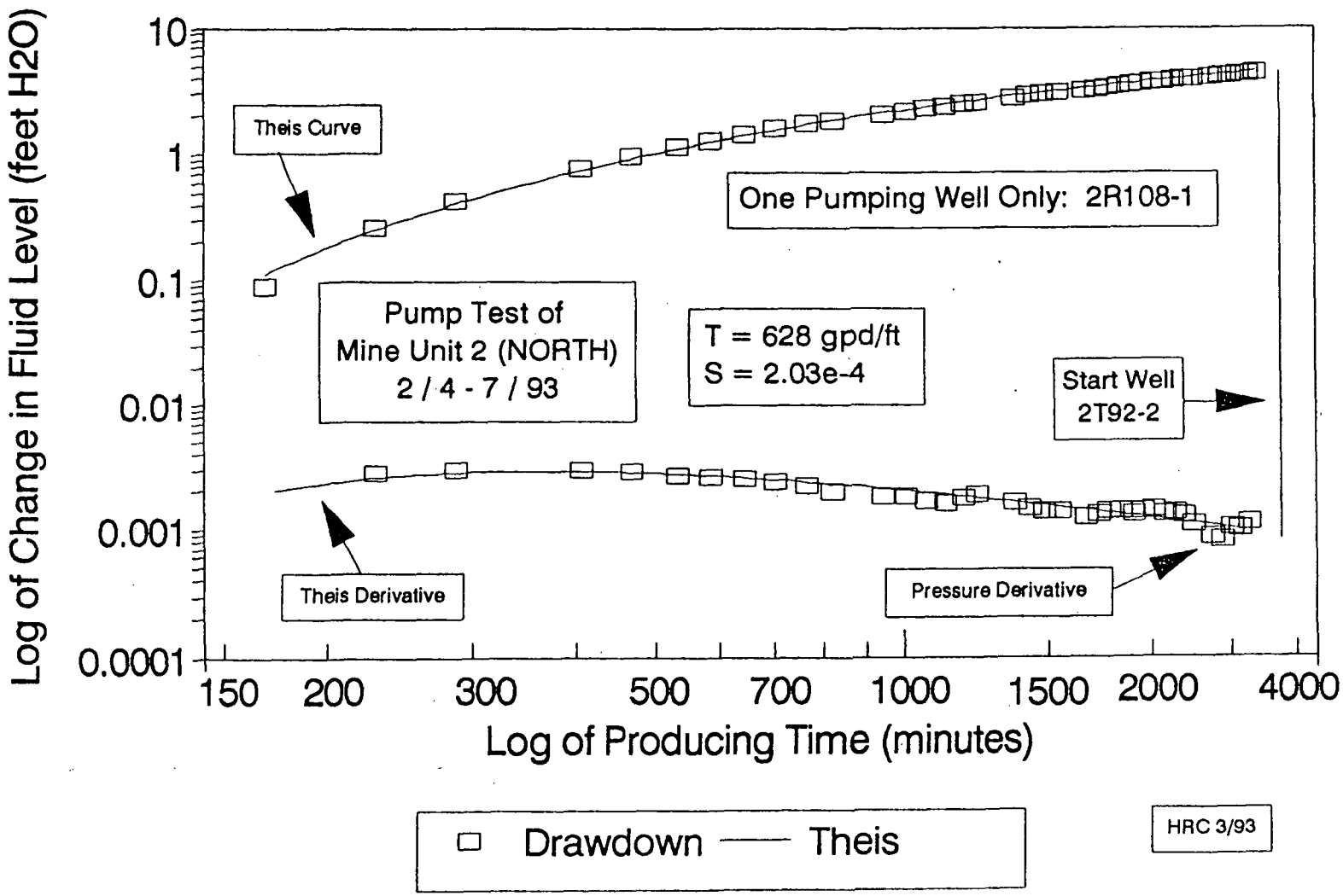

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Figure 16

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-103

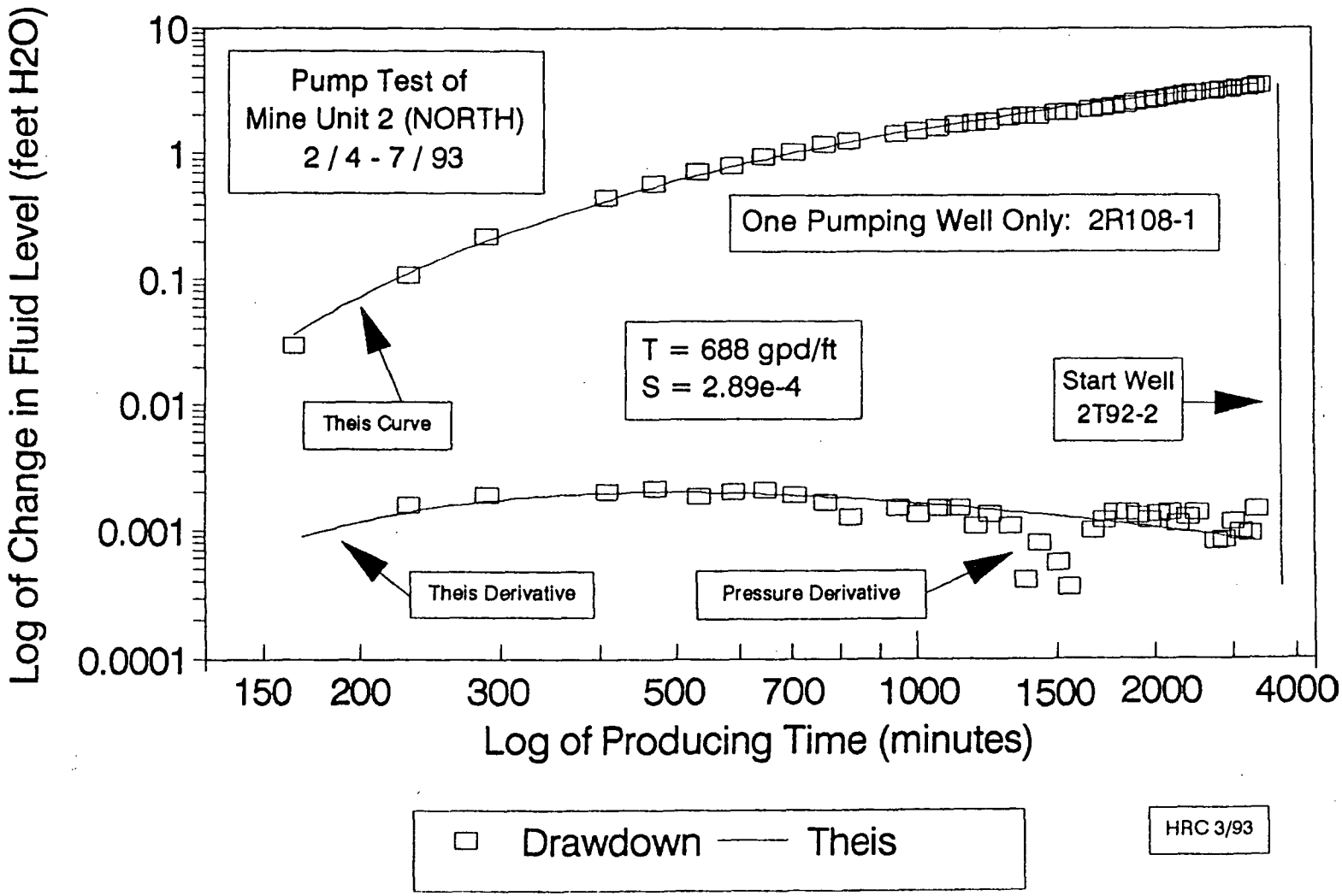

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Figure 17

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-104

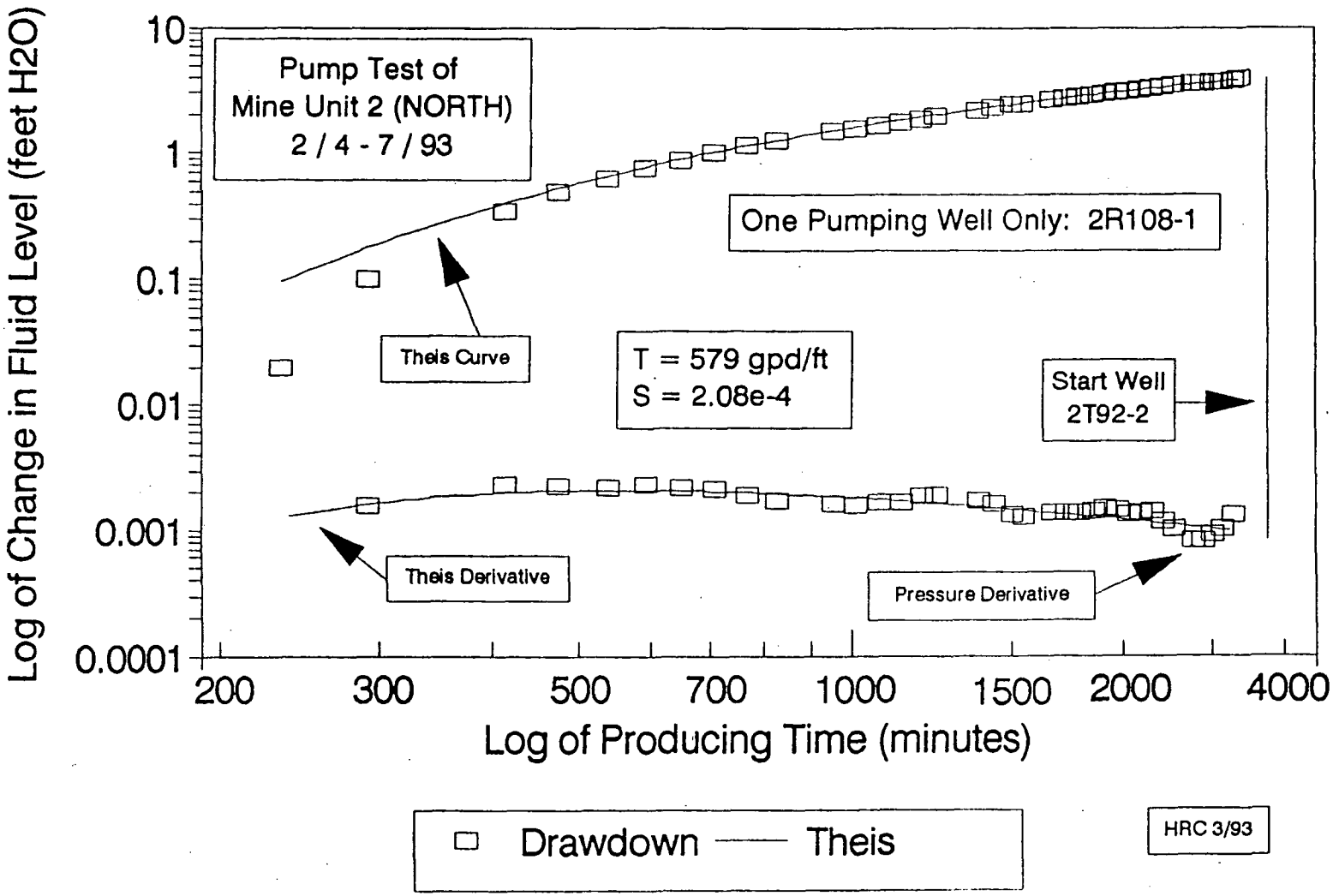

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Figure 18

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-105

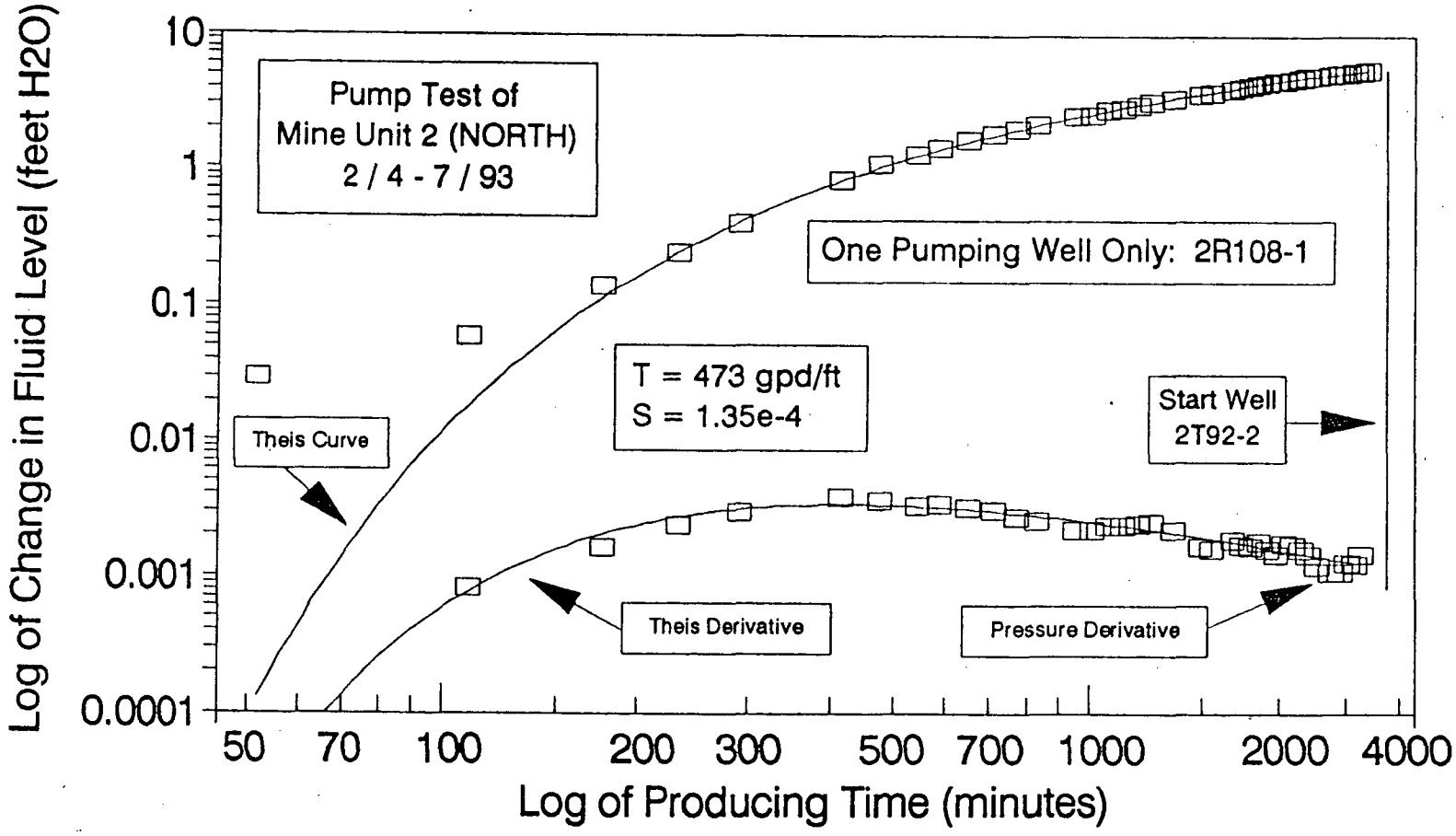

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Figure 19

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-106

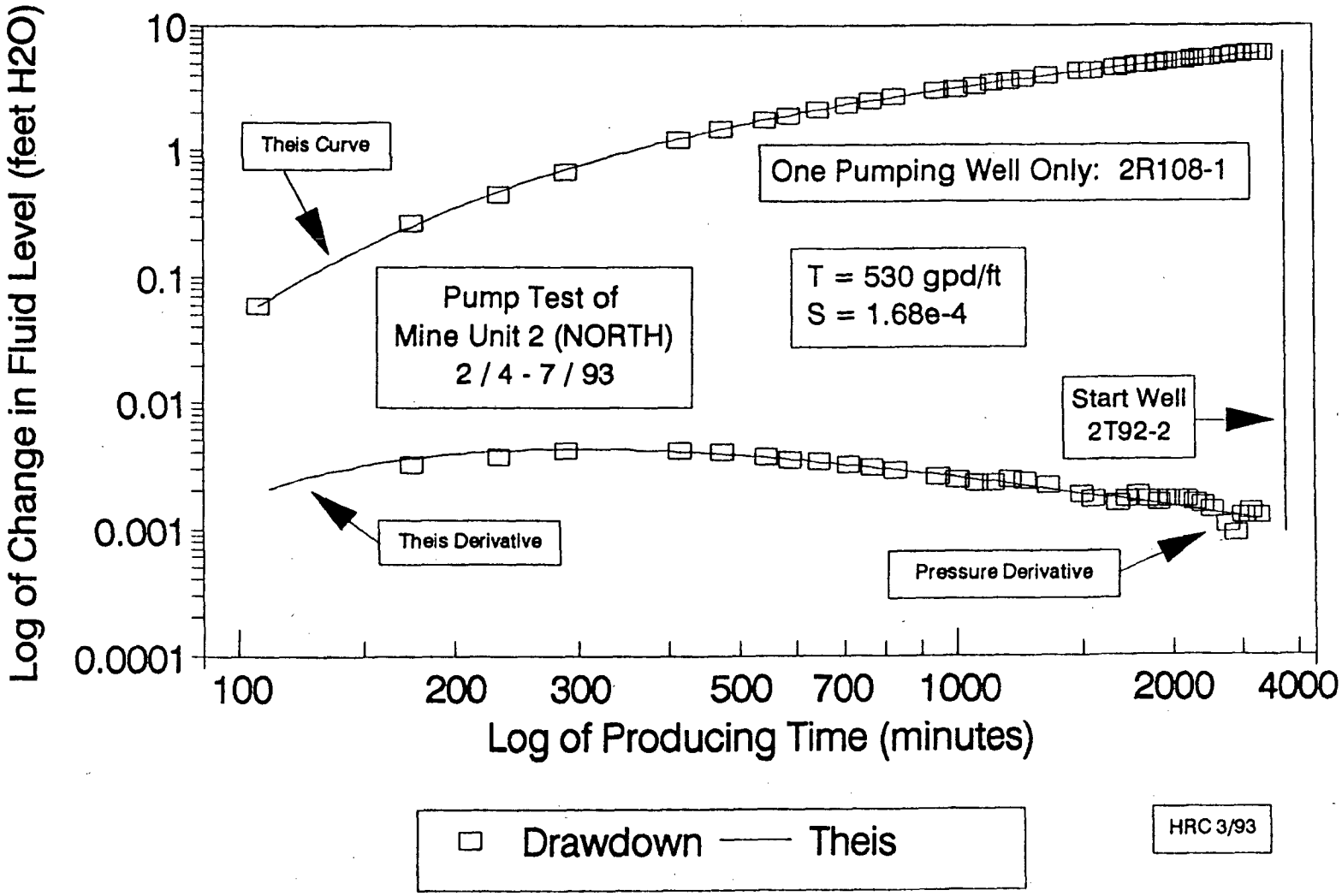

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Figure 20

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-107

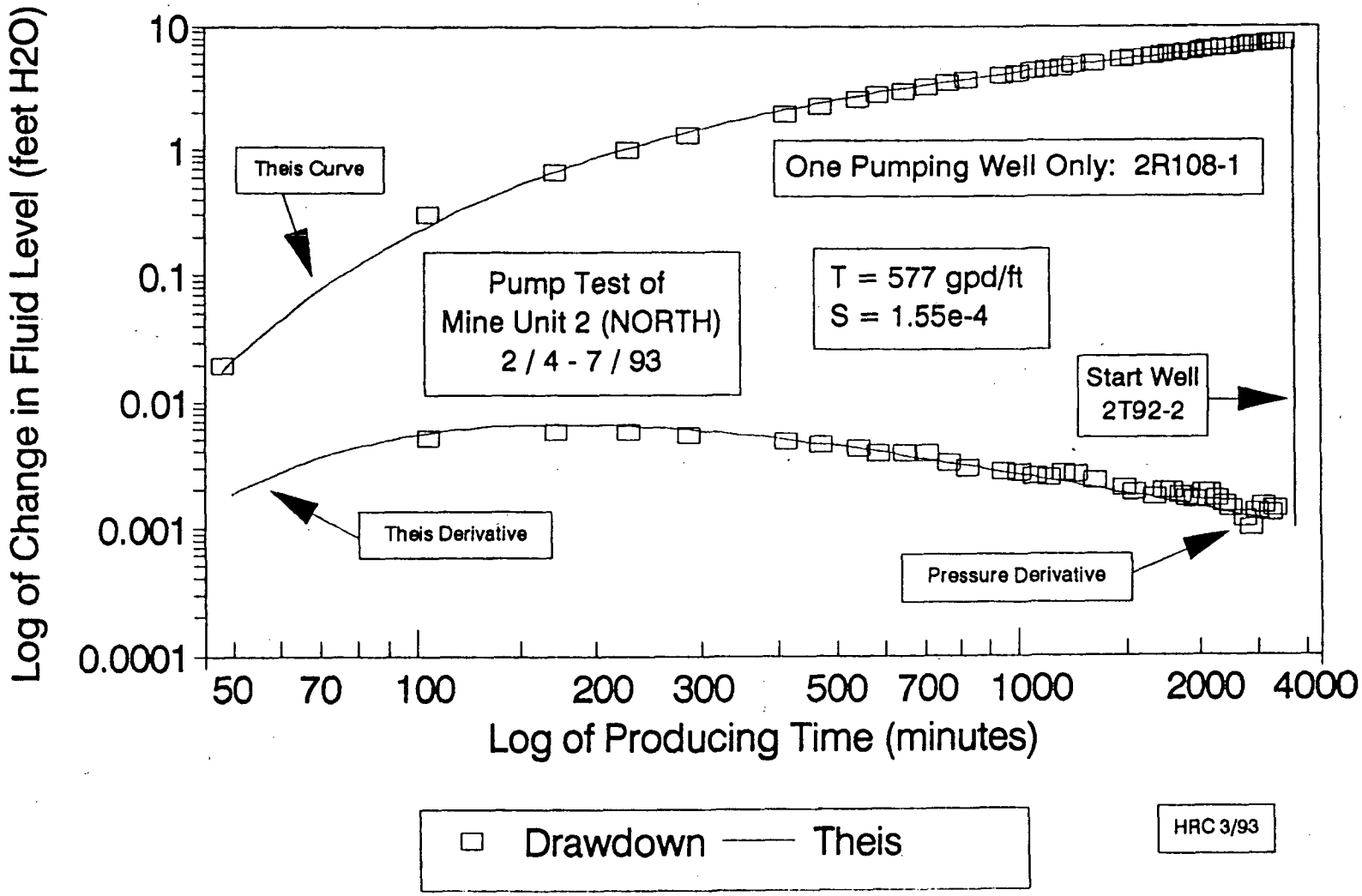

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Figure 21

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-108

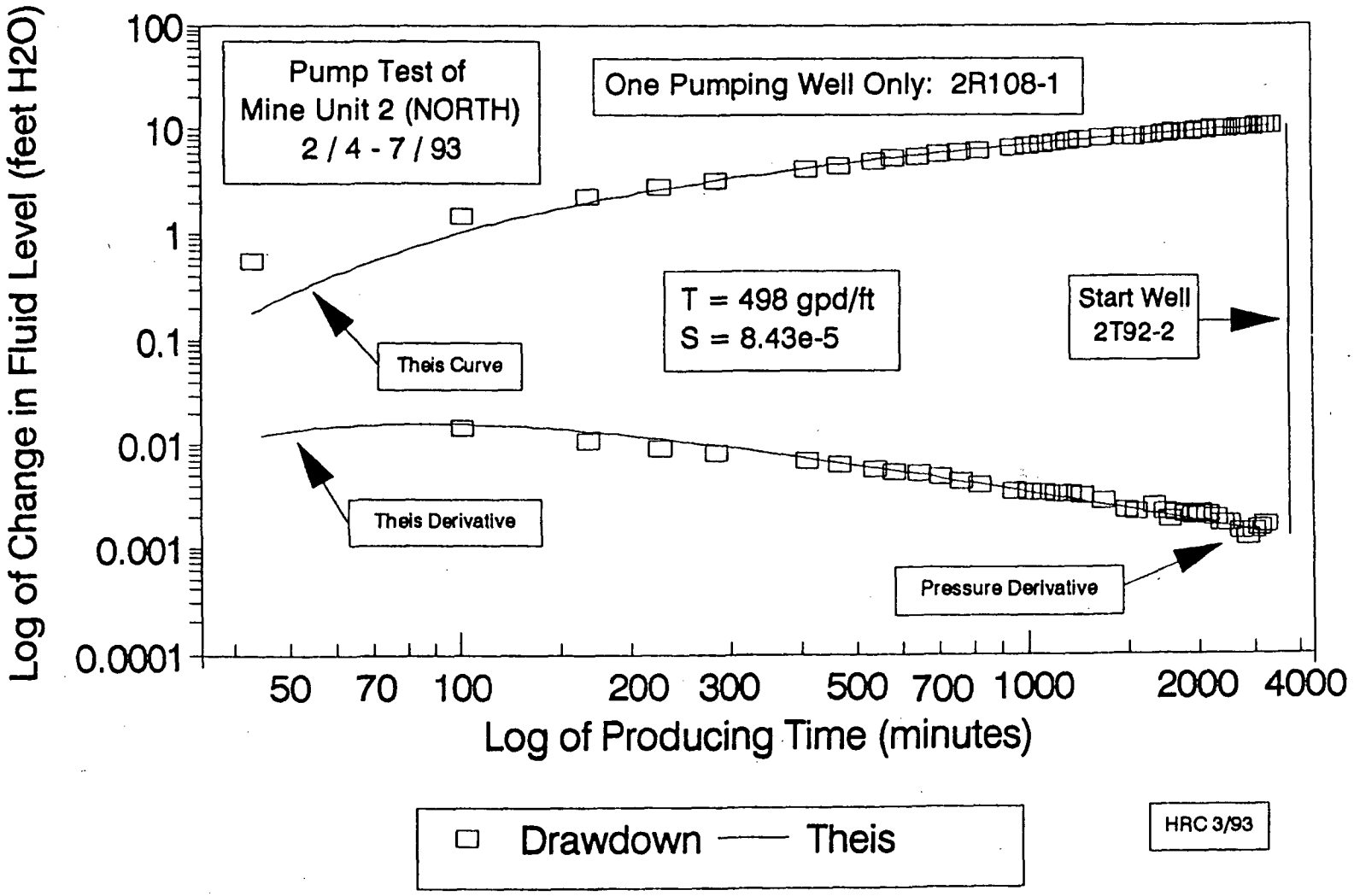

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Figure 22

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-109

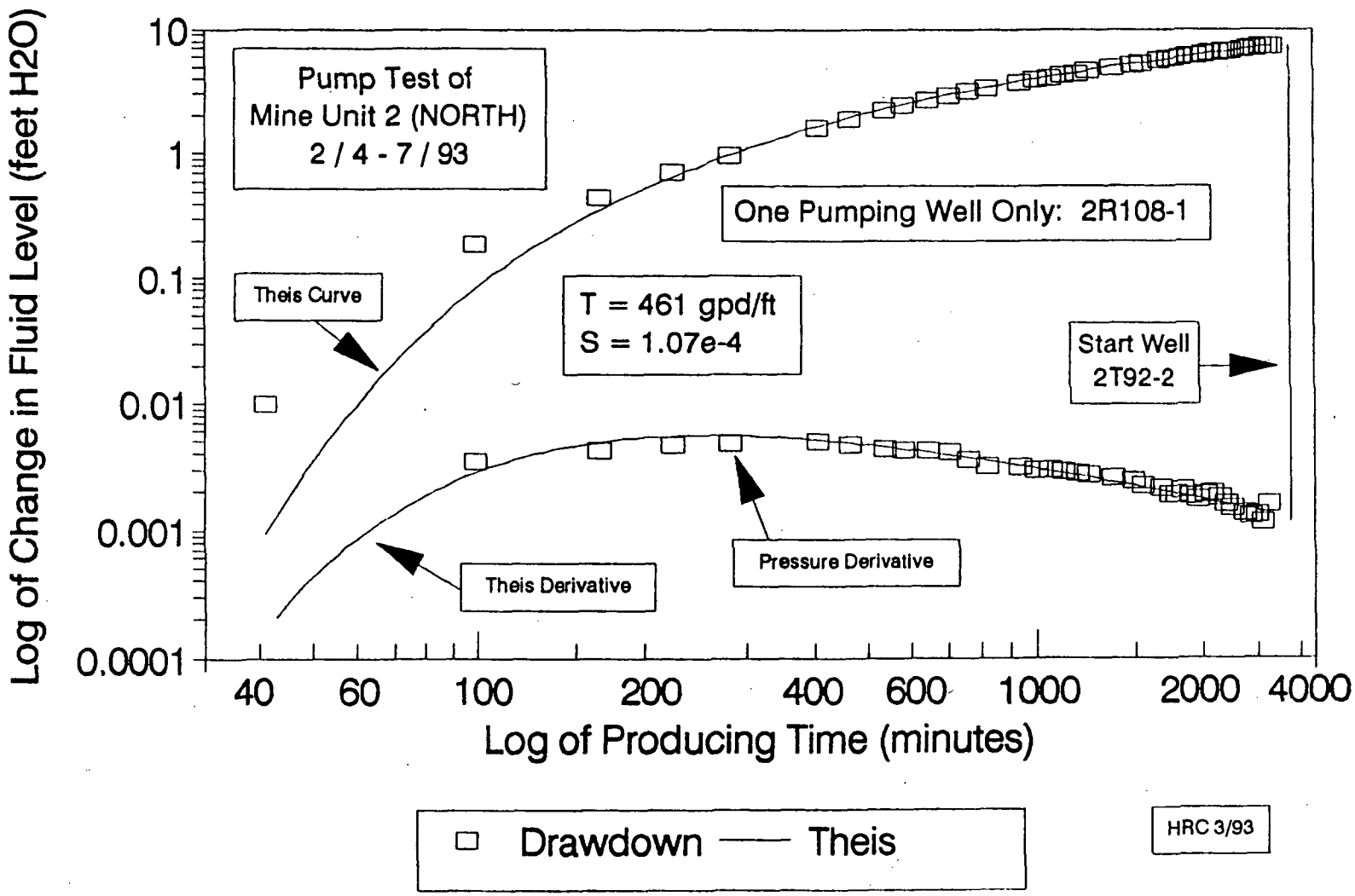

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Figure 23

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-110

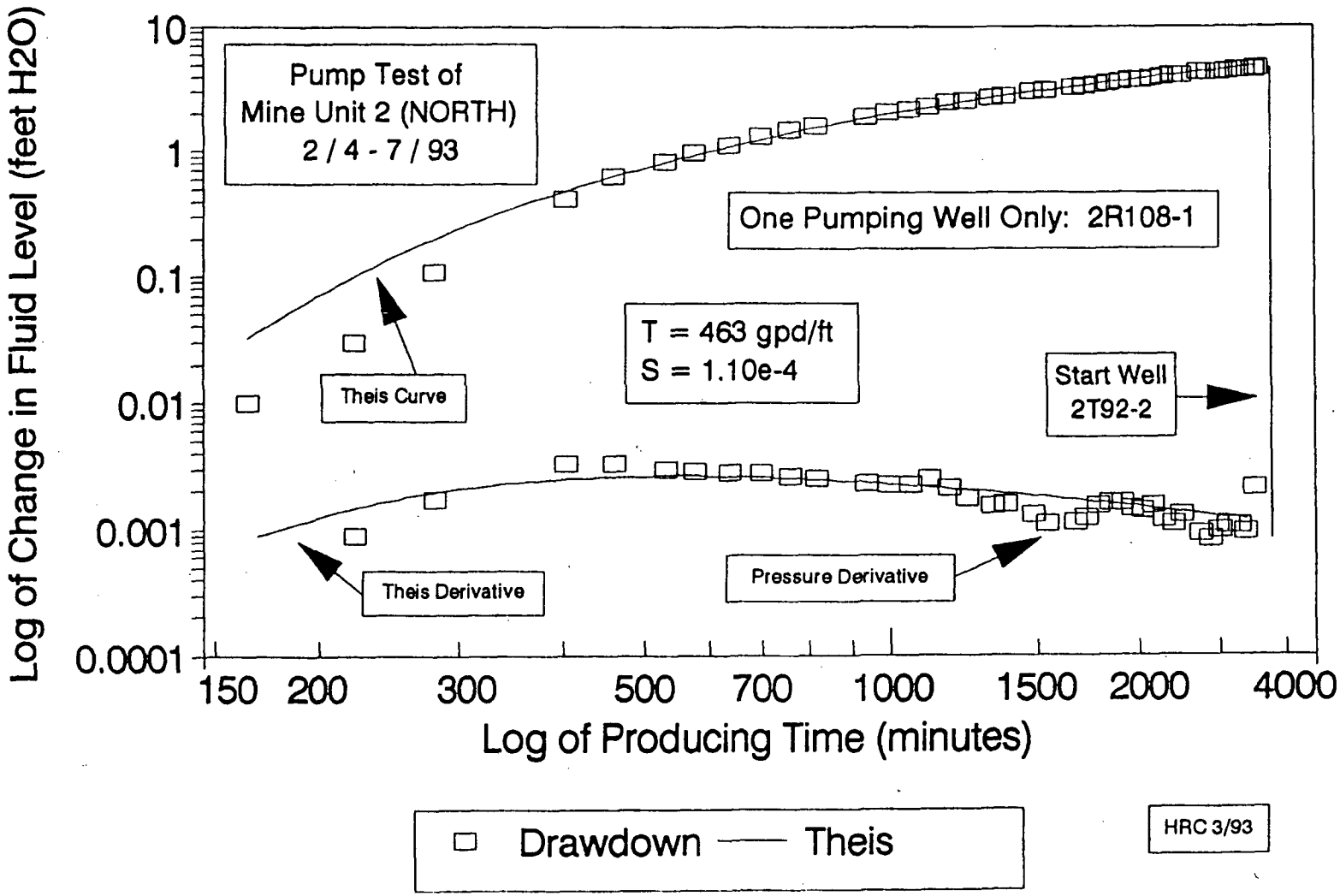

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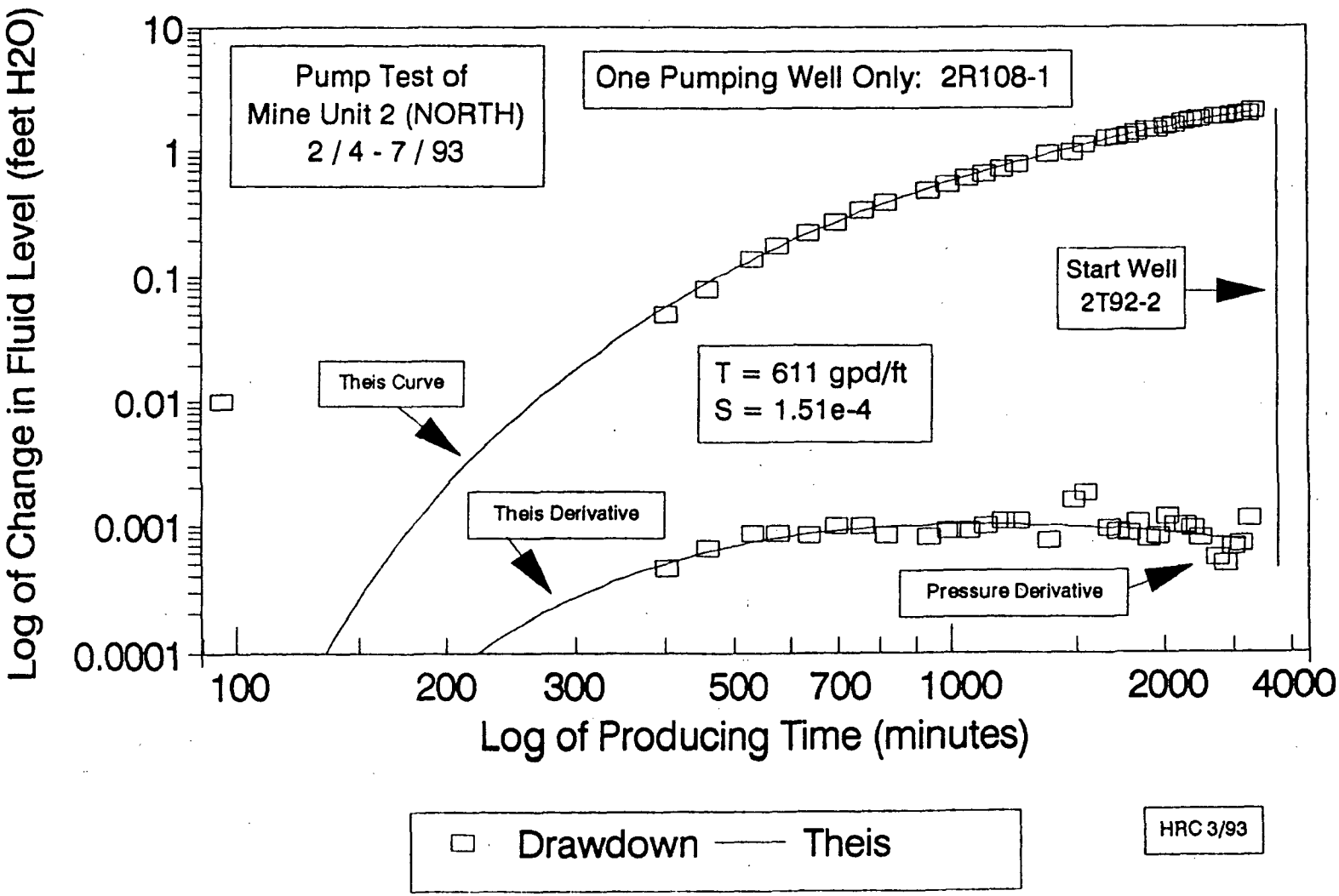
Figure 24

Total Minerals Corporation

Mine Unit 2 (NORTH): MW-111



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APPENDIX 7

TABLE 2
WATER LEVEL AND DRAW DOWN SUMMARY
AT END OF PUMPING TEST
MINE UNIT 2 NORTH

PUMPING WELLS								
WELL NO.	X	Y	Z	DISTANCE TO WELL 2T92-2 (FT)	DISTANCE TO WELL 2R108-1 (FT)	STATIC WATER LEVEL ELEVATION (FT)	FINAL WATER LEVEL ELEVATION (FT)	OBSERVED DRAWDOWN 02/07/93 (FT)
2T92-2	842097.7	1151268.7	4672.2		706			
2R108-1	841909.4	1151949.1	4649.2	706		4551.6	4404.16	-147.44

OBSERVATION WELLS								
PERIMETER ORE ZONE								
2V76-2	842333.7	1150588.8	4634.3	1,425	720	4559.51	4554.64	-4.87
MW-82	842036.3	1150428.7	4651.3	1,526	842	4556.90	4554.42	-2.48
MW-90	842774.7	1150951.3	4685.2	1,321	748	4562.71	4559.62	-3.09
MW-101	842627.0	1151375.6	4701.2	919	540	4559.98	4553.33	-6.65
MW-102	842535.4	1151818.1	4694.4	640	702	4557.78	4549.02	-8.76
MW-103	842481.6	1152267.7	4698.3	655	1,070	4557.03	4551.30	-5.73
MW-104	842229.7	1152642.8	4629.1	764	1,380	4553.81	4548.01	-5.80
MW-105	841785.4	1152691.2	4622.8	752	1,456	4550.89	4543.18	-7.71
MW-106	841612.7	1152472.8	4595.5	602	1,298	4549.47	4540.89	-8.58
MW-107	841486.7	1152218.1	4590.2	501	1,129	4549.59	4539.16	-10.43
MW-108	841468.8	1151917.3	4637.1	442	903	4549.92	4534.41	-15.51
MW-109	841396.6	1151559.7	4628.4	644	759	4549.78	4536.46	-13.32
MW-110	841503.9	1151119.8	4639.3	923	612	4550.65	4539.25	-11.40
MW-111	841678.6	1150701.0	4647.9	1,269	706	4553.33	4545.84	-7.49

OBSERVATION WELLS								
INTERIOR DEEP ZONE WELLS								
MW-97D	842314.7	1150898.0	4678.0	1,127	430	4550.27	4550.66	0.39
MW-99D	842069.7	1151597.7	4661.6	386	330	4547.83	4548.32	0.49
MW-113D	841942.5	1152214.4	4649.8	267	958	4546.88	4547.37	0.49

OBSERVATION WELLS								
INTERIOR SHALLOW ZONE WELLS								
MW-98S	843148.5	1150878.1	4677.5	1,638	1,121	4557.94	4558.24	0.30
MW-100S	843014.0	1151577.7	4659.4	1,165	967	4555.05	4555.35	0.30
MW-112S	843029.1	1152194.0	4650.0	1,146	1,313	4551.60	4551.92	0.32

APPENDIX 7

TABLE 3
FLUID LEVELS FOR PUMPING WELL
2R108-1

PUMP WELL NO.	2R108-1
SURFACE ELEVATION:	4649.20 ft. Above M.S.L.
EXTENSION:	0.86 ft.
COLLAR HEIGHT:	1.00 ft.
MEASURING POINT ELEVATION:	4651.06 ft. Above M.S.L.

DATE	TIME	TIME FROM START OF DRAWDOWN (Minutes)	W.L. BELOW SURFACE (FT)	W.L. ABOVE M.S.L. (FT)	MEASURED DRAWDOWN (FT)	TOTALIZER	CUM. GALS.	GPM
01-Feb-93	1111	-4279	99.04	4552.0	0.42			
03-Feb-93	1356	-1234	99.22	4551.8	0.24			
04-Feb-93	1029	-1	99.46	4551.6	0.00	INITIAL READING		
04-Feb-93	1030	0	99.46	4551.6	0.00	105485		
04-Feb-93	1031	1	124.10	4527.0	-24.64			
04-Feb-93	1032	2	140.72	4510.3	-41.26			
04-Feb-93	1033	3	150.86	4500.2	-51.40	105537	52	17.3
04-Feb-93	1034	4	159.31	4491.8	-59.85	105552	67	15.0
04-Feb-93	1035	5	167.04	4484.0	-67.58	105569	84	17.0
04-Feb-93	1036	6	173.22	4477.8	-73.76	105586	101	17.0
04-Feb-93	1037	7	178.03	4473.0	-78.57	105599	114	
04-Feb-93	1038	8	182.74	4468.3	-83.28	105619	134	20.0
04-Feb-93	1039	9	185.58	4465.5	-86.12	105632	147	13.0
04-Feb-93	1040	10	189.01	4462.1	-89.55			
04-Feb-93	1042	12	192.86	4458.2	-93.40	105681	196	16.3
04-Feb-93	1044	14	196.48	4454.6	-97.02	105714	229	16.5
04-Feb-93	1046	16	198.56	4452.5	-99.10	105743	258	14.5
04-Feb-93	1048	18	200.41	4450.7	-100.95	105774	289	15.5
04-Feb-93	1050	20	202.17	4448.9	-102.71	105810	325	18.0
04-Feb-93	1052	22	203.87	4447.2	-104.41			
04-Feb-93	1054	24	205.53	4445.5	-106.07	105874	389	16.0
04-Feb-93	1056	26	206.56	4444.5	-107.10	105904	419	15.0
04-Feb-93	1058	28	207.49	4443.6	-108.03	105939	454	17.5
04-Feb-93	1100	30	208.50	4442.6	-109.04	105982	497	21.5
04-Feb-93	1105	35	210.26	4440.8	-110.80	106054	569	14.4
04-Feb-93	1110	40	211.62	4439.4	-112.16	106129	644	15.0
04-Feb-93	1116	46	213.21	4437.9	-113.75	106236	751	17.8
04-Feb-93	1120	50	213.96	4437.1	-114.50	106291	806	13.8
04-Feb-93	1125	55	214.94	4436.1	-115.48	106371	886	16.0
04-Feb-93	1130	60	215.91	4435.2	-116.45	106449	964	15.6
04-Feb-93	1135	65	216.79	4434.3	-117.33	106531	1046	16.4
04-Feb-93	1140	70	217.38	4433.7	-117.92	106608	1123	15.4
04-Feb-93	1145	75	218.41	4432.7	-118.95	106689	1204	16.2
04-Feb-93	1150	80	219.09	4432.0	-119.63	106764	1279	15.0
04-Feb-93	1155	85	219.89	4431.2	-120.43	106857	1372	18.6
04-Feb-93	1200	90	220.36	4430.7	-120.90	106926	1441	13.8
04-Feb-93	1205	95	220.90	4430.2	-121.44	107008	1523	16.4
04-Feb-93	1210	100	221.32	4429.7	-121.86	107088	1603	16.0
04-Feb-93	1215	105	221.77	4429.3	-122.31	107169	1684	16.2
04-Feb-93	1220	110	222.05	4429.0	-122.59	107247	1762	15.6
04-Feb-93	1225	115	222.28	4428.8	-122.82			
04-Feb-93	1230	120	222.74	4428.3	-123.28	107407	1922	16.0
04-Feb-93	1240	130	223.34	4427.7	-123.88	107567	2082	16.0
04-Feb-93	1250	140	223.98	4427.1	-124.52	107731	2246	16.4
04-Feb-93	1300	150	224.28	4426.8	-124.82	107891	2406	16.0

APPENDIX 7

TABLE 3
FLUID LEVELS FOR PUMPING WELL
2R108-1

PUMP WELL NO.	**2R108-1**
SURFACE ELEVATION:	4649.20 ft. Above M.S.L.
EXTENSION:	0.86 ft.
COLLAR HEIGHT:	1.00 ft.
MEASURING POINT ELEVATION:	4651.06 ft. Above M.S.L.

DATE	TIME	TIME FROM START OF DRAWDOWN (Minutes)	W.L. BELOW SURFACE (FT)	W.L. ABOVE M.S.L. (FT)	MEASURED DRAWDOWN (FT)	TOTALIZER	CUM. GALS.	GPM
04-Feb-93	1310	160	224.84	4426.2	-125.38	108087	2602	19.6
04-Feb-93	1323	173	225.71	4425.4	-126.25			
04-Feb-93	1341	191	226.03	4425.0	-126.57	108391	2906	9.8
04-Feb-93	1351	201	226.39	4424.7	-126.93	108547	3062	15.6
04-Feb-93	1400	210	227.08	4424.0	-127.62	108867	3382	35.6
04-Feb-93	1411	221	227.33	4423.7	-127.87	109039	3554	15.6
04-Feb-93	1420	230	227.70	4423.4	-128.24	109169	3684	14.4
04-Feb-93	1430	240	227.93	4423.1	-128.47	109332	3847	16.3
04-Feb-93	1458	268	228.55	4422.5	-129.09	109770	4285	15.6
04-Feb-93	1625	355	229.92	4421.1	-130.46	111178	5693	16.2
04-Feb-93	1650	380	230.13	4420.9	-130.67	111567	6082	15.6
04-Feb-93	1759	449	231.69	4419.4	-132.23	112642	7157	15.6
04-Feb-93	1832	482	232.02	4419.0	-132.56	113200	7715	16.9
04-Feb-93	1913	523	232.19	4418.9	-132.73	113822	8337	15.2
04-Feb-93	2028	598	233.12	4417.9	-133.66	115015	9530	15.9
04-Feb-93	2128	658	233.77	4417.3	-134.31	115977	10492	16.0
04-Feb-93	2228	718	234.07	4417.0	-134.61	116944	11459	16.1
04-Feb-93	2329	779	234.61	4416.5	-135.15	117918	12433	16.0
05-Feb-93	26	836	234.97	4416.1	-135.51	118829	13344	16.0
05-Feb-93	228	958	235.50	4415.6	-136.04	120785	15300	16.0
05-Feb-93	327	1017	235.98	4415.1	-136.52	121723	16238	15.9
05-Feb-93	429	1079	236.57	4414.5	-137.11	122727	17242	16.2
05-Feb-93	526	1136	236.83	4414.2	-137.37	123642	18157	16.1
05-Feb-93	628	1198	236.59	4414.5	-137.13	124629	19144	15.9
05-Feb-93	729	1259	237.10	4414.0	-137.64	125634	20149	16.5
05-Feb-93	856	1346	237.63	4413.4	-138.17	127039	21554	16.1
05-Feb-93	956	1406	237.99	4413.1	-138.53	128002	22517	16.1
05-Feb-93	1100	1470	237.95	4413.1	-138.49	129020	23535	15.9
05-Feb-93	1159	1529	238.19	4412.9	-138.73	129963	24478	16.0
05-Feb-93	1357	1647	238.45	4412.6	-138.99	131857	26372	16.1
05-Feb-93	1459	1709	238.53	4412.5	-139.07	132852	27367	16.0
05-Feb-93	1557	1767	238.70	4412.4	-139.24	133781	28296	16.0
05-Feb-93	1658	1828	239.00	4412.1	-139.54	134758	29273	16.0
05-Feb-93	1800	1890	239.28	4411.8	-139.82	135754	30269	16.1
05-Feb-93	1928	1978	239.08	4412.0	-139.62	137138	31653	15.7
05-Feb-93	2028	2038	239.63	4411.4	-140.17	138097	32612	16.0
05-Feb-93	2128	2098	239.62	4411.4	-140.16	139062	33577	16.1
05-Feb-93	2229	2159	239.57	4411.5	-140.11	140044	34559	16.1
05-Feb-93	2329	2219	239.82	4411.2	-140.36	141003	35518	16.0
06-Feb-93	27	2277	239.92	4411.1	-140.46	141933	36448	16.0
06-Feb-93	228	2398	240.28	4410.8	-140.82	143877	38392	16.1
06-Feb-93	328	2458	240.52	4410.5	-141.06	144841	39356	16.1
06-Feb-93	429	2519	240.70	4410.4	-141.24	145823	40338	16.1
06-Feb-93	529	2579	240.49	4410.6	-141.03	146787	41302	16.1
06-Feb-93	638	2648	240.88	4410.2	-141.42	147900	42415	16.1
06-Feb-93	700	2670	240.80	4410.3	-141.34	148278	42793	17.2

APPENDIX 7

TABLE 3
FLUID LEVELS FOR PUMPING WELL
2R108-1

PUMP WELL NO.	**2R108-1**
SURFACE ELEVATION:	4649.20 ft. Above M.S.L.
EXTENSION:	0.86 ft.
COLLAR HEIGHT:	1.00 ft.
MEASURING POINT ELEVATION:	4651.06 ft. Above M.S.L.

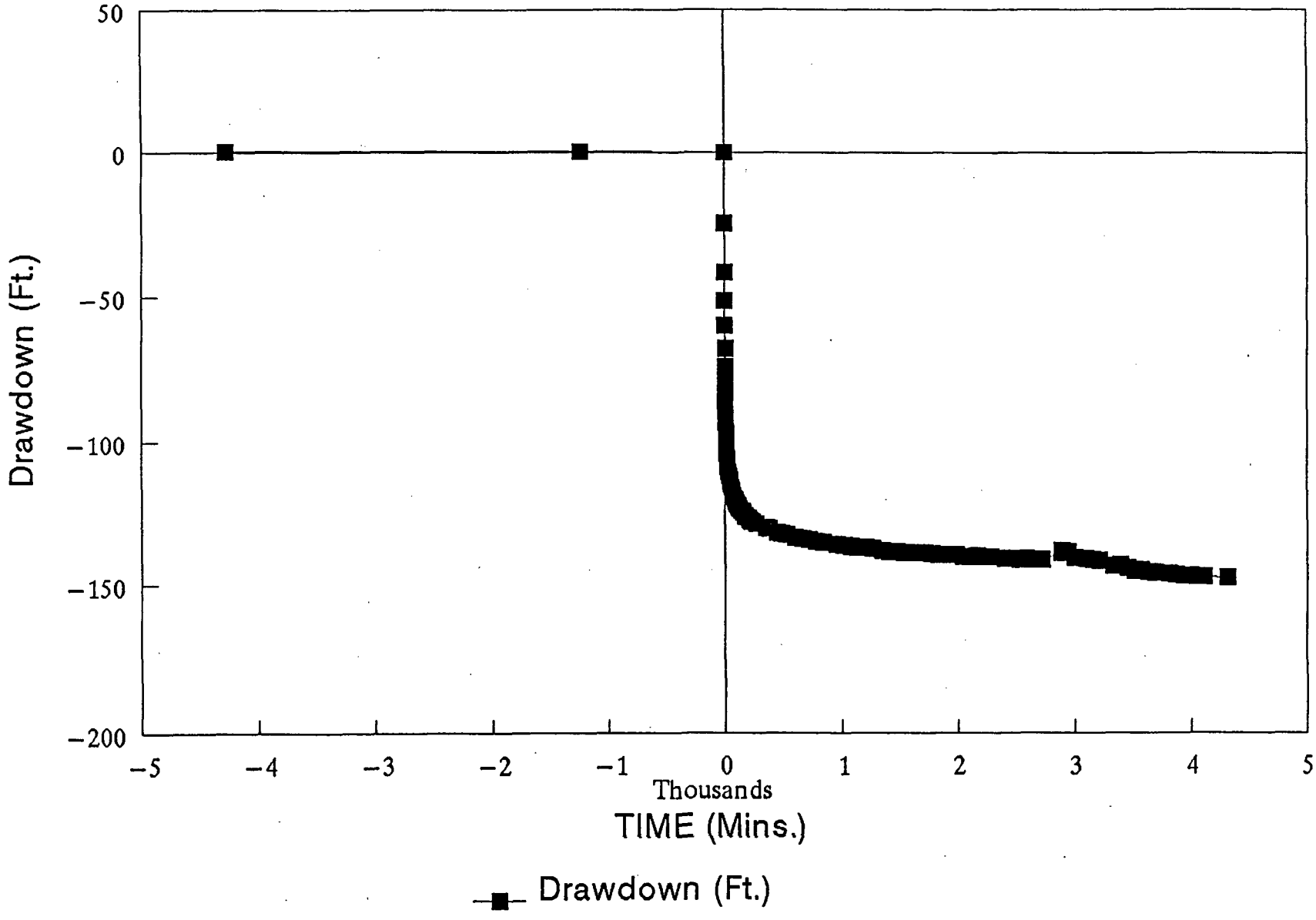
DATE	TIME	TIME FROM START OF DRAWDOWN (Minutes)	W.L. BELOW SURFACE (FT)	W.L. ABOVE M.S.L. (FT)	MEASURED DRAWDOWN (FT)	TOTALIZER	CUM. GALS.	GPM
06-Feb-93	745	2715	240.66	4410.4	-141.20	149000	43515	16.0
06-Feb-93	1031	2881	238.50	4412.6	-139.04	151663	46178	16.0
06-Feb-93	1039	2889	237.60	4413.5	-138.14			
06-Feb-93	1123	2933	238.10	4413.0	-138.64	152471	46986	15.5
06-Feb-93	1226	2996	240.17	4410.9	-140.71	153475	47990	15.9
06-Feb-93	1359	3089	240.56	4410.5	-141.10	154956	49471	15.9
06-Feb-93	1455	3145	240.95	4410.1	-141.49	155849	50364	15.9
06-Feb-93	1556	3206	241.23	4409.8	-141.77	156820	51335	15.9
06-Feb-93	1758	3328	242.83	4408.2	-143.37	158771	53286	16.0
06-Feb-93	1901	3391	242.47	4408.6	-143.01	159784	54299	16.1
06-Feb-93	2000	3450	243.50	4407.6	-144.04	160701	55216	15.5
06-Feb-93	2058	3508	244.50	4406.6	-145.04	161653	56168	16.4
06-Feb-93	2200	3570	244.32	4406.7	-144.86	162670	57185	16.4
06-Feb-93	2301	3631	244.75	4406.3	-145.29	163636	58151	15.8
06-Feb-93	2358	3688	245.50	4405.6	-146.04	164543	59058	15.9
07-Feb-93	202	3812	245.64	4405.4	-146.18	166535	61050	16.1
07-Feb-93	300	3870	245.87	4405.2	-146.41	167453	61968	15.8
07-Feb-93	400	3930	246.19	4404.9	-146.73	168411	62926	16.0
07-Feb-93	500	3990	246.44	4404.6	-146.98	169363	63878	15.9
07-Feb-93	600	4050	246.65	4404.4	-147.19	170324	64839	16.0
07-Feb-93	704	4114	246.72	4404.3	-147.26	171377	65892	16.5
07-Feb-93	1026	4316	246.90	4404.2	-147.44	174602	69117	16.0
07-Feb-93	1030	4320				174663	69178	15.3

TOTAL GALLONS PUMPED
69,178

AVERAGE GPM
16.2

Total Minerals Corporation

Mine Unit 2 – Pump Well No. 2R108–1



APPENDIX 7

TABLE 4
FLUID LEVELS FOR PUMPING WELL
2T92-2

PUMP WELL NO. 2T92-2
MEASURING POINT ELEVATION: 4672.2 ft. Above M.S.L.

DATE	TIME	TIME FROM START OF DRAWDOWN (Minutes)	W.L. BELOW SURFACE (FT)	W.L. ABOVE M.S.L. (FT)	MEASURED DRAWDOWN (FT)	TOTALIZER	CUM. GALS.	GPM
01-Feb-93	1054	-4296	119.22	4553.0	0.49			
03-Feb-93	1453	-1177	117.97	4554.2	1.74			
04-Feb-93	942	-48	119.58	4552.6	0.13	INITIAL READING		
04-Feb-93	1030	0	119.71	4552.5	0			
04-Feb-93	1704	394	120.78	4551.4	-1.07	21366		
05-Feb-93	1733	1863	126.30	4545.9	-6.59			
06-Feb-93	740	2710	127.98	4544.2	-8.27			
06-Feb-93	1023	2873	128.11	4544.1	-8.4	21366	0	0.0
06-Feb-93	1030	2880				21366	0	0.0
06-Feb-93	1033	2883				21407	41	13.7
06-Feb-93	1037	2887				21459	93	13.0
06-Feb-93	1040	2890						
06-Feb-93	1043	2893				21561	195	14.6
06-Feb-93	1047	2897				21625	259	16.0
06-Feb-93	1059	2909				21818	452	16.1
06-Feb-93	1158	2968				22756	1390	15.9
06-Feb-93	1226	2996				23206	1840	16.1
06-Feb-93	1358	3088				24669	3303	15.9
06-Feb-93	1455	3145				25578	4212	15.9
06-Feb-93	1559	3209				26606	5240	16.1
06-Feb-93	1659	3269				27537	6171	15.5
06-Feb-93	1759	3329				28532	7166	16.6
06-Feb-93	1904	3394				29544	8178	15.6
06-Feb-93	2001	3451				30458	9092	16.0
06-Feb-93	2101	3511				31417	10051	16.0
06-Feb-93	2201	3571				32376	11010	16.0
06-Feb-93	2305	3635				33399	12033	16.0
07-Feb-93	0	3690				34280	12914	16.0
07-Feb-93	206	3816				36290	14924	16.0
07-Feb-93	303	3873				37200	15834	16.0
07-Feb-93	402	3932				38144	16778	16.0
07-Feb-93	502	3992				39100	17734	15.9
07-Feb-93	600	4050				40026	18660	16.0
07-Feb-93	702	4112				41014	19648	15.9
07-Feb-93	1028	4318			-16.8			
07-Feb-93	1030	4320				44350	22984	16.0

TOTAL GALLONS PUMPED
22,984

AVERAGE GPM
15.7

WELL 2R108-1:	TIME	W.L.
	2881	4412.6
	4316	4404.2
DRAWDOWN		-8.4

NOTE - SINCE THERE WAS NO FINAL WATER LEVEL MEASUREMENT FOR PUMPING WELL 2T92-2, AN ESTIMATE IS MADE FOR THE PURPOSE OF PRODUCING A MORE REALISTIC PIEZOMETRIC CONTOUR MAP OF THE PRODUCTION ZONE AT THE END OF PUMPING. IT IS ASSUMED IN THIS CASE THAT PUMPING WELL 2T92-2 HAD THE SAME AMOUNT OF DRAWDOWN AS PUMPING WELL 2R108-1 IN THE SAME AMOUNT OF TIME (SEE BOX ABOVE). THIS DRAWDOWN IS THEN ADDED TO THE DRAWDOWN OF WELL 2T92-2 AT THE TIME IT WAS TURNED ON.

APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
2V76-2

SURFACE ELEVATION:	4634.3 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.0 ft.
MEASURING POINT ELEVATION:	4635.8 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1042	-4308	76.32	4559.44	-0.06
03-Feb-93	1325	-1265	76.30	4559.46	-0.04
04-Feb-93	918	-72	76.26	4559.50	0.00
04-Feb-93	1104	34	76.25	4559.51	0.01
04-Feb-93	1206	96	76.25	4559.51	0.01
04-Feb-93	1309	159	76.23	4559.53	0.03
04-Feb-93	1411	221	76.20	4559.56	0.06
04-Feb-93	1506	276	76.21	4559.55	0.05
04-Feb-93	1708	398	76.20	4559.56	0.06
04-Feb-93	1808	458	76.21	4559.55	0.05
04-Feb-93	1911	521	76.23	4559.53	0.03
04-Feb-93	2007	577	76.24	4559.52	0.02
04-Feb-93	2105	635	76.25	4559.51	0.01
04-Feb-93	2206	696	76.27	4559.49	-0.01
04-Feb-93	2306	756	76.30	4559.46	-0.04
05-Feb-93	6	816	76.31	4559.45	-0.05
05-Feb-93	207	937	76.33	4559.43	-0.07
05-Feb-93	306	996	76.36	4559.40	-0.10
05-Feb-93	406	1056	76.36	4559.40	-0.10
05-Feb-93	506	1116	76.38	4559.38	-0.12
05-Feb-93	606	1176	76.41	4559.35	-0.15
05-Feb-93	700	1230	76.44	4559.32	-0.18
05-Feb-93	909	1359	76.53	4559.23	-0.27
05-Feb-93	1007	1417	76.57	4559.19	-0.31
05-Feb-93	1107	1477	76.60	4559.16	-0.34
05-Feb-93	1209	1539	76.65	4559.11	-0.39
05-Feb-93	1413	1663	76.70	4559.06	-0.44
05-Feb-93	1510	1720	76.73	4559.03	-0.47
05-Feb-93	1609	1779	76.76	4559.00	-0.50
05-Feb-93	1707	1837	76.80	4558.96	-0.54
05-Feb-93	1809	1899	76.84	4558.92	-0.58
05-Feb-93	1906	1956	76.87	4558.89	-0.61
05-Feb-93	2005	2015	76.92	4558.84	-0.66
05-Feb-93	2105	2075	76.98	4558.78	-0.72

APPENDIX 7

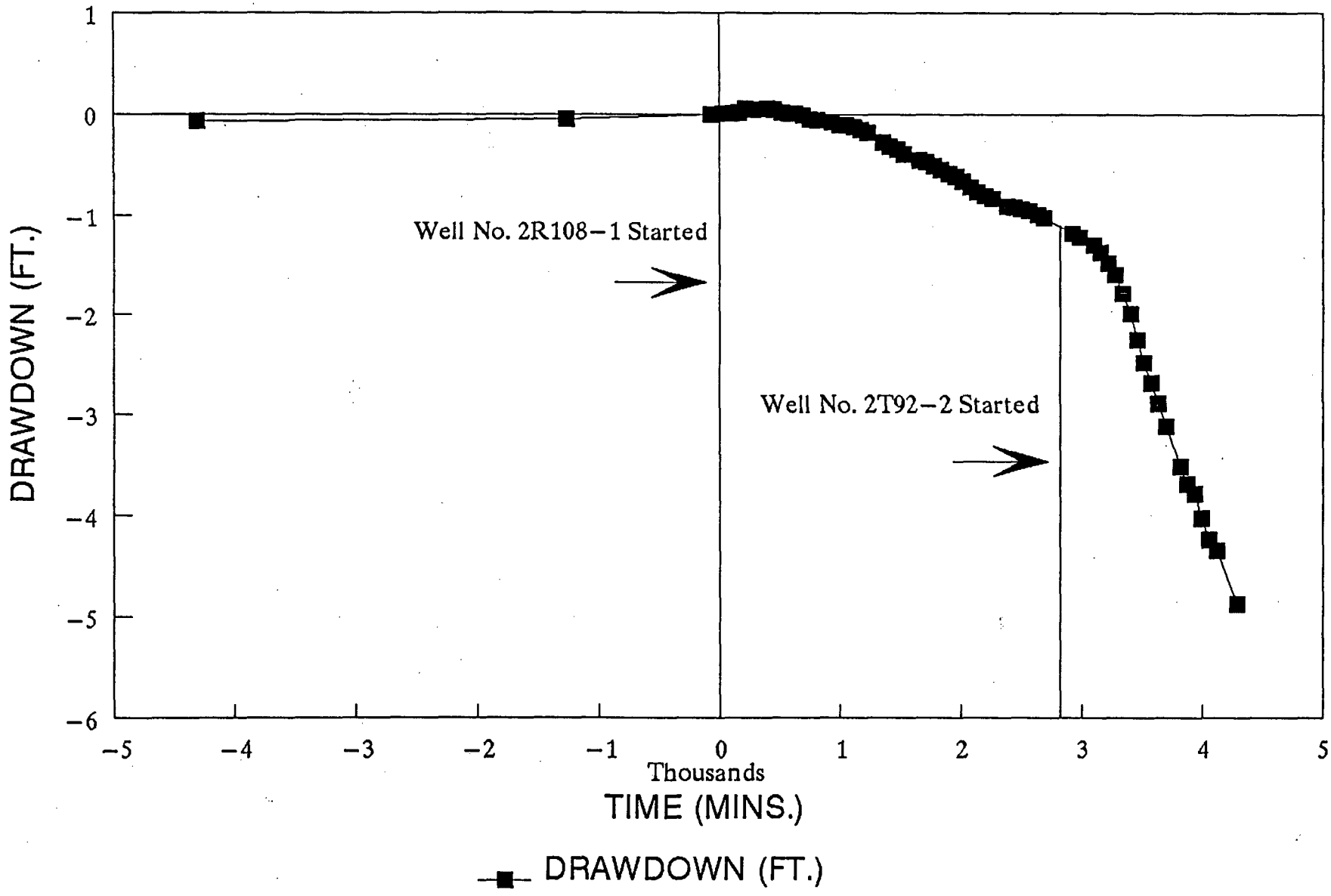
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
2V76-2

SURFACE ELEVATION:	4634.3 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.0 ft.
MEASURING POINT ELEVATION:	4635.8 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2207	2137	77.02	4558.74	-0.76
05-Feb-93	2306	2196	77.06	4558.70	-0.80
06-Feb-93	6	2256	77.09	4558.67	-0.83
06-Feb-93	206	2376	77.16	4558.60	-0.90
06-Feb-93	306	2436	77.18	4558.58	-0.92
06-Feb-93	406	2496	77.20	4558.56	-0.94
06-Feb-93	506	2556	77.21	4558.55	-0.95
06-Feb-93	615	2625	77.25	4558.51	-0.99
06-Feb-93	705	2675	77.28	4558.48	-1.02
06-Feb-93	1106	2916	77.45	4558.31	-1.19
06-Feb-93	1205	2975	77.48	4558.28	-1.22
06-Feb-93	1409	3099	77.56	4558.20	-1.30
06-Feb-93	1508	3158	77.64	4558.12	-1.38
06-Feb-93	1606	3216	77.74	4558.02	-1.48
06-Feb-93	1704	3274	77.86	4557.90	-1.60
06-Feb-93	1807	3337	78.05	4557.71	-1.79
06-Feb-93	1913	3403	78.25	4557.51	-1.99
06-Feb-93	2007	3457	78.52	4557.24	-2.26
06-Feb-93	2105	3515	78.75	4557.01	-2.49
06-Feb-93	2208	3578	78.95	4556.81	-2.69
06-Feb-93	2309	3639	79.15	4556.61	-2.89
07-Feb-93	6	3696	79.38	4556.38	-3.12
07-Feb-93	209	3819	79.78	4555.98	-3.52
07-Feb-93	308	3878	79.95	4555.81	-3.69
07-Feb-93	407	3937	80.05	4555.71	-3.79
07-Feb-93	507	3997	80.29	4555.47	-4.03
07-Feb-93	607	4057	80.50	4555.26	-4.24
07-Feb-93	710	4120	80.61	4555.15	-4.35
07-Feb-93	1000	4290	81.13	4554.63	-4.87

Total Minerals Corporation

Mine Unit 2 – Well No. 2V76–2



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW82

SURFACE ELEVATION:	4651.3 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.8 ft.
MEASURING POINT ELEVATION:	4652.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1021	-4266	95.72	4556.88	-0.02
03-Feb-93	1129	-1381	95.77	4556.83	-0.07
04-Feb-93	823	-127	95.70	4556.90	0.00
04-Feb-93	1105	35	95.70	4556.90	0.00
04-Feb-93	1203	93	95.70	4556.90	0.00
04-Feb-93	1310	160	95.70	4556.90	0.00
04-Feb-93	1408	218	95.68	4556.92	0.02
04-Feb-93	1506	276	95.67	4556.93	0.03
04-Feb-93	1711	401	95.67	4556.93	0.03
04-Feb-93	1807	457	95.68	4556.92	0.02
04-Feb-93	1920	530	95.69	4556.91	0.01
04-Feb-93	2004	574	95.70	4556.90	0.00
04-Feb-93	2104	634	95.70	4556.90	0.00
04-Feb-93	2204	694	95.73	4556.87	-0.03
04-Feb-93	2305	755	95.74	4556.86	-0.04
05-Feb-93	3	813	95.74	4556.86	-0.04
05-Feb-93	203	933	95.74	4556.86	-0.04
05-Feb-93	304	994	95.74	4556.86	-0.04
05-Feb-93	404	1054	95.75	4556.85	-0.05
05-Feb-93	503	1113	95.75	4556.85	-0.05
05-Feb-93	605	1175	95.77	4556.83	-0.07
05-Feb-93	706	1236	95.79	4556.81	-0.09
05-Feb-93	917	1367	95.85	4556.75	-0.15
05-Feb-93	1111	1481	95.89	4556.71	-0.19
05-Feb-93	1209	1539	95.89	4556.71	-0.19
05-Feb-93	1414	1664	95.92	4556.68	-0.22
05-Feb-93	1507	1717	95.94	4556.66	-0.24
05-Feb-93	1605	1775	95.96	4556.64	-0.26
05-Feb-93	1704	1834	95.97	4556.63	-0.27
05-Feb-93	1807	1897	96.01	4556.59	-0.31
05-Feb-93	1904	1954	96.03	4556.57	-0.33
05-Feb-93	2005	2015	96.05	4556.55	-0.35
05-Feb-93	2104	2074	96.09	4556.51	-0.39
05-Feb-93	2206	2136	96.13	4556.47	-0.43

APPENDIX 7

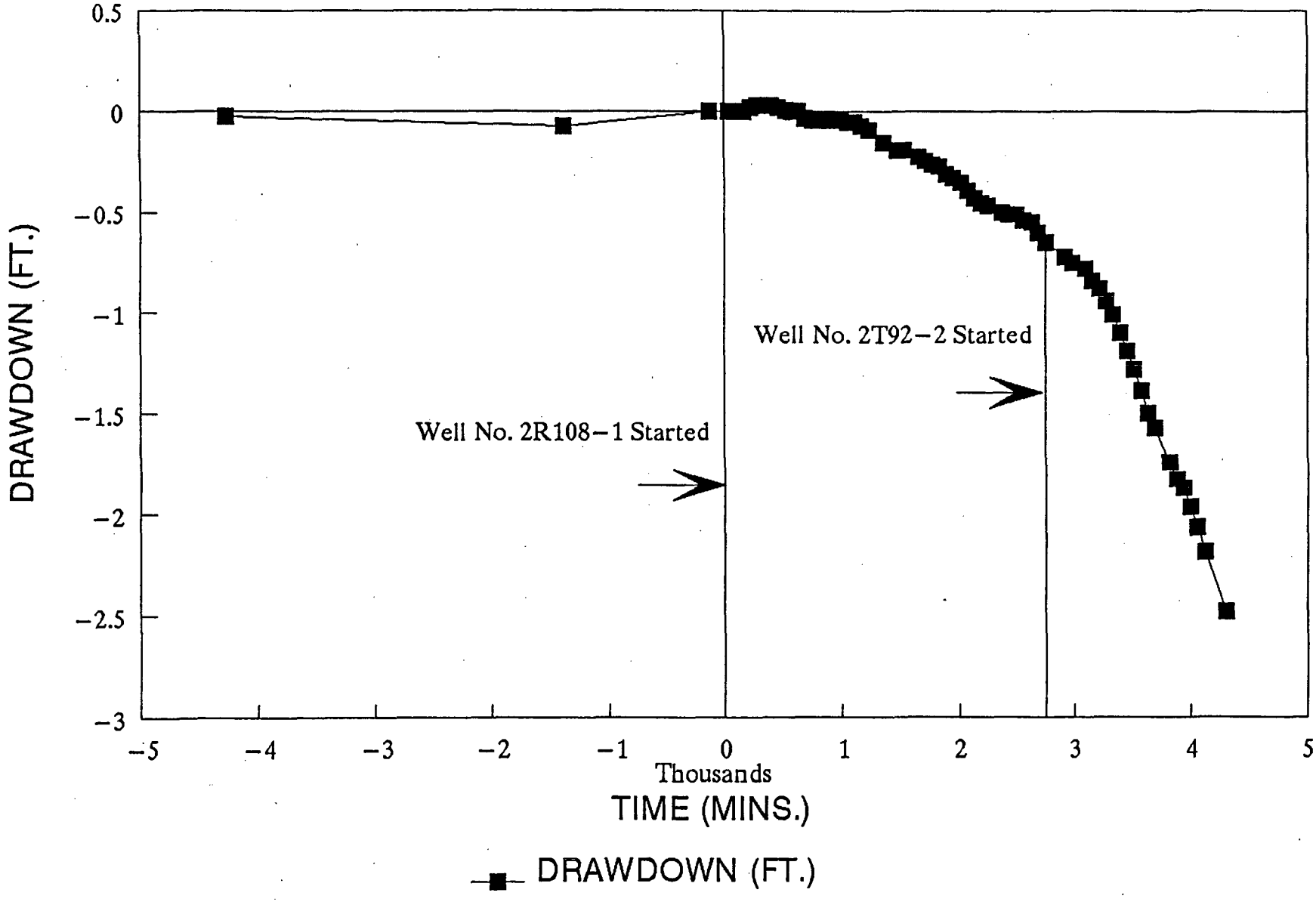
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW82

SURFACE ELEVATION:	4651.3 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.8 ft.
MEASURING POINT ELEVATION:	4652.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2305	2195	96.15	4556.45	-0.45
06-Feb-93	4	2254	96.17	4556.43	-0.47
06-Feb-93	204	2374	96.20	4556.40	-0.50
06-Feb-93	304	2434	96.21	4556.39	-0.51
06-Feb-93	405	2495	96.21	4556.39	-0.51
06-Feb-93	504	2554	96.24	4556.36	-0.54
06-Feb-93	616	2626	96.25	4556.35	-0.55
06-Feb-93	709	2679	96.30	4556.30	-0.60
06-Feb-93	817	2747	96.35	4556.25	-0.65
06-Feb-93	1105	2915	96.42	4556.18	-0.72
06-Feb-93	1204	2974	96.45	4556.15	-0.75
06-Feb-93	1404	3094	96.48	4556.12	-0.78
06-Feb-93	1503	3153	96.54	4556.06	-0.84
06-Feb-93	1605	3215	96.58	4556.02	-0.88
06-Feb-93	1704	3274	96.64	4555.96	-0.94
06-Feb-93	1805	3335	96.71	4555.89	-1.01
06-Feb-93	1910	3400	96.80	4555.80	-1.10
06-Feb-93	2008	3458	96.89	4555.71	-1.19
06-Feb-93	2107	3517	96.98	4555.62	-1.28
06-Feb-93	2207	3577	97.09	4555.51	-1.39
06-Feb-93	2312	3642	97.20	4555.40	-1.50
07-Feb-93	7	3697	97.27	4555.33	-1.57
07-Feb-93	212	3822	97.44	4555.16	-1.74
07-Feb-93	310	3880	97.53	4555.07	-1.83
07-Feb-93	410	3940	97.57	4555.03	-1.87
07-Feb-93	507	3997	97.67	4554.93	-1.97
07-Feb-93	607	4057	97.77	4554.83	-2.07
07-Feb-93	709	4119	97.89	4554.71	-2.19
07-Feb-93	1012	4302	98.18	4554.42	-2.48

Total Minerals Corporation

Mine Unit 2 – Well No. MW82



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW90

SURFACE ELEVATION:	4685.2 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.5 ft.
MEASURING POINT ELEVATION:	4686.2 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	911	-4399	123.54	4562.65	-0.06
03-Feb-93	1325	-1265	123.57	4562.62	-0.09
04-Feb-93	922	-68	123.48	4562.71	0.00
04-Feb-93	1107	37	123.43	4562.76	0.05
04-Feb-93	1210	100	123.47	4562.72	0.01
04-Feb-93	1311	161	123.48	4562.71	0.00
04-Feb-93	1415	225	123.44	4562.75	0.04
04-Feb-93	1510	280	123.43	4562.76	0.05
04-Feb-93	1712	402	123.45	4562.74	0.03
04-Feb-93	1807	457	123.44	4562.75	0.04
04-Feb-93	1916	526	123.48	4562.71	0.00
04-Feb-93	2011	581	123.51	4562.68	-0.03
04-Feb-93	2109	639	123.52	4562.67	-0.04
04-Feb-93	2210	700	123.55	4562.64	-0.07
04-Feb-93	2311	761	123.56	4562.63	-0.08
05-Feb-93	10	820	123.56	4562.63	-0.08
05-Feb-93	211	941	123.59	4562.60	-0.11
05-Feb-93	310	1000	123.60	4562.59	-0.12
05-Feb-93	411	1061	123.61	4562.58	-0.13
05-Feb-93	510	1120	123.63	4562.56	-0.15
05-Feb-93	611	1181	123.64	4562.55	-0.16
05-Feb-93	702	1232	123.67	4562.52	-0.19
05-Feb-93	912	1362	123.75	4562.44	-0.27
05-Feb-93	1012	1422	123.77	4562.42	-0.29
05-Feb-93	1111	1481	123.80	4562.39	-0.32
05-Feb-93	1213	1543	123.82	4562.37	-0.34
05-Feb-93	1416	1666	123.85	4562.34	-0.37
05-Feb-93	1514	1724	123.87	4562.32	-0.39
05-Feb-93	1613	1783	123.90	4562.29	-0.42
05-Feb-93	1710	1840	123.93	4562.26	-0.45
05-Feb-93	1813	1903	123.96	4562.23	-0.48
05-Feb-93	1910	1960	123.99	4562.20	-0.51
05-Feb-93	2009	2019	124.03	4562.16	-0.55
05-Feb-93	2110	2080	124.07	4562.12	-0.59

APPENDIX 7

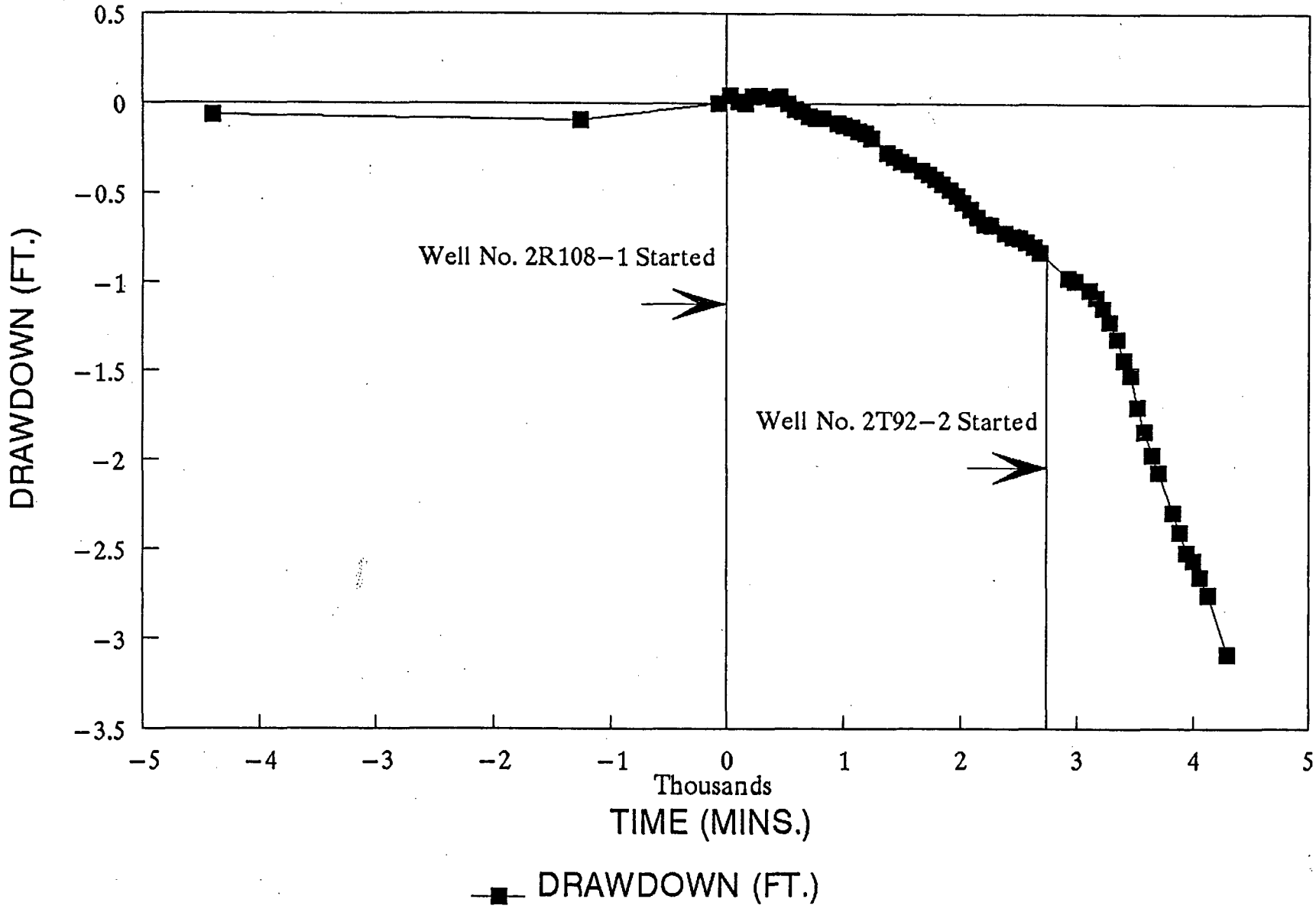
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW90

SURFACE ELEVATION:	4685.2 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.5 ft.
MEASURING POINT ELEVATION:	4686.2 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2211	2141	124.11	4562.08	-0.63
05-Feb-93	2310	2200	124.15	4562.04	-0.67
06-Feb-93	11	2261	124.16	4562.03	-0.68
06-Feb-93	211	2381	124.20	4561.99	-0.72
06-Feb-93	311	2441	124.22	4561.97	-0.74
06-Feb-93	411	2501	124.23	4561.96	-0.75
06-Feb-93	510	2560	124.25	4561.94	-0.77
06-Feb-93	619	2629	124.28	4561.91	-0.80
06-Feb-93	709	2679	124.31	4561.88	-0.83
06-Feb-93	1109	2919	124.45	4561.74	-0.97
06-Feb-93	1209	2979	124.47	4561.72	-0.99
06-Feb-93	1412	3102	124.52	4561.67	-1.04
06-Feb-93	1511	3161	124.56	4561.63	-1.08
06-Feb-93	1611	3221	124.62	4561.57	-1.14
06-Feb-93	1707	3277	124.70	4561.49	-1.22
06-Feb-93	1811	3341	124.80	4561.39	-1.32
06-Feb-93	1917	3407	124.92	4561.27	-1.44
06-Feb-93	2012	3462	125.00	4561.19	-1.52
06-Feb-93	2110	3520	125.18	4561.01	-1.70
06-Feb-93	2213	3583	125.32	4560.87	-1.84
06-Feb-93	2313	3643	125.45	4560.74	-1.97
07-Feb-93	10	3700	125.55	4560.64	-2.07
07-Feb-93	214	3824	125.78	4560.41	-2.30
07-Feb-93	312	3882	125.89	4560.30	-2.41
07-Feb-93	411	3941	126.00	4560.19	-2.52
07-Feb-93	511	4001	126.05	4560.14	-2.57
07-Feb-93	611	4061	126.14	4560.05	-2.66
07-Feb-93	713	4123	126.24	4559.95	-2.76
07-Feb-93	1004	4294	126.57	4559.62	-3.09

Total Minerals Corporation

Mine Unit 2 – Well No. MW90



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW101

SURFACE ELEVATION:	4701.2 ft.
EXTENSION:	1.58 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4703.5 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	858	-4412	143.50	4560.00	0.02
03-Feb-93	956	-1474	143.55	4559.95	-0.03
04-Feb-93	808	-142	143.52	4559.98	0.00
04-Feb-93	1109	39	143.51	4559.99	0.01
04-Feb-93	1212	102	143.50	4560.00	0.02
04-Feb-93	1310	160	143.49	4560.01	0.03
04-Feb-93	1417	227	143.50	4560.00	0.02
04-Feb-93	1715	405	143.57	4559.93	-0.05
04-Feb-93	1815	465	143.60	4559.90	-0.08
04-Feb-93	1919	529	143.70	4559.80	-0.18
04-Feb-93	2015	585	143.74	4559.76	-0.22
04-Feb-93	2114	644	143.84	4559.66	-0.32
04-Feb-93	2212	702	143.89	4559.61	-0.37
04-Feb-93	2313	763	143.98	4559.52	-0.46
05-Feb-93	12	822	144.04	4559.46	-0.52
05-Feb-93	213	943	144.17	4559.33	-0.65
05-Feb-93	313	1003	144.22	4559.28	-0.70
05-Feb-93	413	1063	144.27	4559.23	-0.75
05-Feb-93	512	1122	144.33	4559.17	-0.81
05-Feb-93	613	1183	144.37	4559.13	-0.85
05-Feb-93	700	1230	144.43	4559.07	-0.91
05-Feb-93	811	1301	144.46	4559.04	-0.94
05-Feb-93	914	1364	144.53	4558.97	-1.01
05-Feb-93	1015	1425	144.55	4558.95	-1.03
05-Feb-93	1113	1483	144.58	4558.92	-1.06
05-Feb-93	1217	1547	144.63	4558.87	-1.11
05-Feb-93	1418	1668	144.73	4558.77	-1.21
05-Feb-93	1517	1727	144.79	4558.71	-1.27
05-Feb-93	1615	1785	144.83	4558.67	-1.31
05-Feb-93	1711	1841	144.88	4558.62	-1.36
05-Feb-93	1816	1906	144.95	4558.55	-1.43
05-Feb-93	1912	1962	145.02	4558.48	-1.50
05-Feb-93	2012	2022	145.07	4558.43	-1.55
05-Feb-93	2112	2082	145.13	4558.37	-1.61

APPENDIX 7

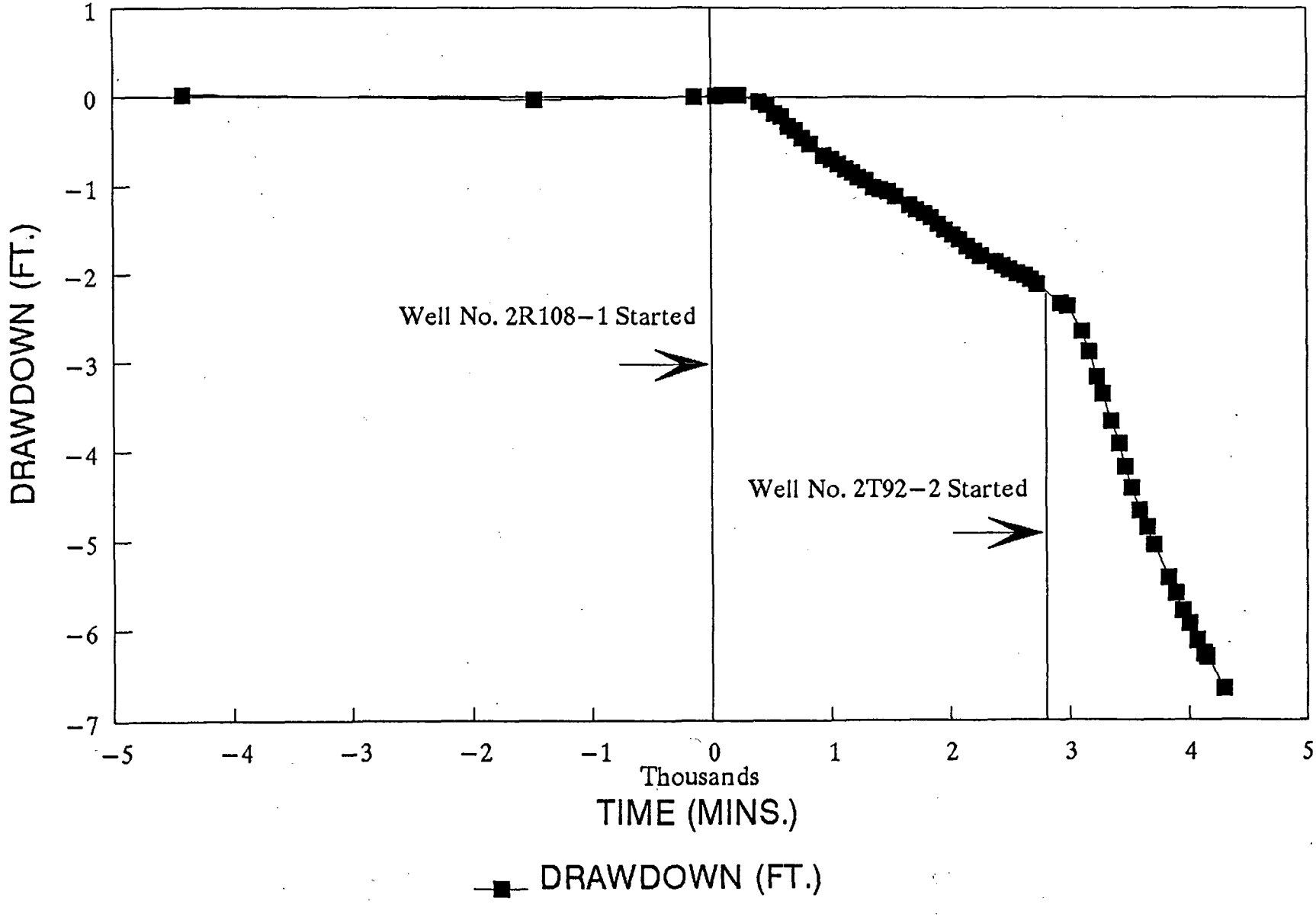
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW101

SURFACE ELEVATION:	4701.2 ft.
EXTENSION:	1.58 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4703.5 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2214	2144	145.20	4558.30	-1.68
05-Feb-93	2313	2203	145.26	4558.24	-1.74
06-Feb-93	13	2263	145.31	4558.19	-1.79
06-Feb-93	213	2383	145.38	4558.12	-1.86
06-Feb-93	313	2443	145.42	4558.08	-1.90
06-Feb-93	413	2503	145.46	4558.04	-1.94
06-Feb-93	513	2563	145.51	4557.99	-1.99
06-Feb-93	620	2630	145.53	4557.97	-2.01
06-Feb-93	710	2680	145.58	4557.92	-2.06
06-Feb-93	757	2727	145.63	4557.87	-2.11
06-Feb-93	1111	2921	145.85	4557.65	-2.33
06-Feb-93	1211	2981	145.88	4557.62	-2.36
06-Feb-93	1414	3104	146.17	4557.33	-2.65
06-Feb-93	1512	3162	146.40	4557.10	-2.88
06-Feb-93	1613	3223	146.68	4556.82	-3.16
06-Feb-93	1708	3278	146.87	4556.63	-3.35
06-Feb-93	1814	3344	147.17	4556.33	-3.65
06-Feb-93	1920	3410	147.43	4556.07	-3.91
06-Feb-93	2014	3464	147.69	4555.81	-4.17
06-Feb-93	2112	3522	147.93	4555.57	-4.41
06-Feb-93	2214	3584	148.18	4555.32	-4.66
06-Feb-93	2316	3646	148.37	4555.13	-4.85
07-Feb-93	13	3703	148.56	4554.94	-5.04
07-Feb-93	216	3826	148.94	4554.56	-5.42
07-Feb-93	314	3884	149.12	4554.38	-5.60
07-Feb-93	414	3944	149.31	4554.19	-5.79
07-Feb-93	513	4003	149.45	4554.05	-5.93
07-Feb-93	613	4063	149.64	4553.86	-6.12
07-Feb-93	715	4125	149.79	4553.71	-6.27
07-Feb-93	735	4145	149.82	4553.68	-6.30
07-Feb-93	1006	4296	150.17	4553.33	-6.65

Total Minerals Corporation

Mine Unit 2 – Well No. MW101



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW102

SURFACE ELEVATION:	4694.4 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.3 ft.
MEASURING POINT ELEVATION:	4696.2 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	919	-4391	138.44	4557.75	-0.03
03-Feb-93	1000	-1470	138.55	4557.64	-0.14
04-Feb-93	915	-75	138.41	4557.78	0.00
04-Feb-93	1112	42	138.33	4557.86	0.08
04-Feb-93	1215	105	138.38	4557.81	0.03
04-Feb-93	1318	168	138.50	4557.69	-0.09
04-Feb-93	1420	230	138.67	4557.52	-0.26
04-Feb-93	1518	288	138.84	4557.35	-0.43
04-Feb-93	1717	407	139.20	4556.99	-0.79
04-Feb-93	1819	469	139.38	4556.81	-0.97
04-Feb-93	1923	533	139.56	4556.63	-1.15
04-Feb-93	2017	587	139.70	4556.49	-1.29
04-Feb-93	2116	646	139.85	4556.34	-1.44
04-Feb-93	2215	705	140.00	4556.19	-1.59
04-Feb-93	2316	766	140.14	4556.05	-1.73
05-Feb-93	14	824	140.26	4555.93	-1.85
05-Feb-93	216	946	140.48	4555.71	-2.07
05-Feb-93	316	1006	140.59	4555.60	-2.18
05-Feb-93	416	1066	140.70	4555.49	-2.29
05-Feb-93	516	1126	140.79	4555.40	-2.38
05-Feb-93	616	1186	140.89	4555.30	-2.48
05-Feb-93	705	1235	140.98	4555.21	-2.57
05-Feb-93	920	1370	141.23	4554.96	-2.82
05-Feb-93	1018	1428	141.32	4554.87	-2.91
05-Feb-93	1116	1486	141.40	4554.79	-2.99
05-Feb-93	1221	1551	141.49	4554.70	-3.08
05-Feb-93	1421	1671	141.65	4554.54	-3.24
05-Feb-93	1519	1729	141.72	4554.47	-3.31
05-Feb-93	1617	1787	141.80	4554.39	-3.39
05-Feb-93	1714	1844	141.88	4554.31	-3.47
05-Feb-93	1819	1909	141.97	4554.22	-3.56
05-Feb-93	1915	1965	142.04	4554.15	-3.63
05-Feb-93	2015	2025	142.13	4554.06	-3.72
05-Feb-93	2115	2085	142.21	4553.98	-3.80

APPENDIX 7

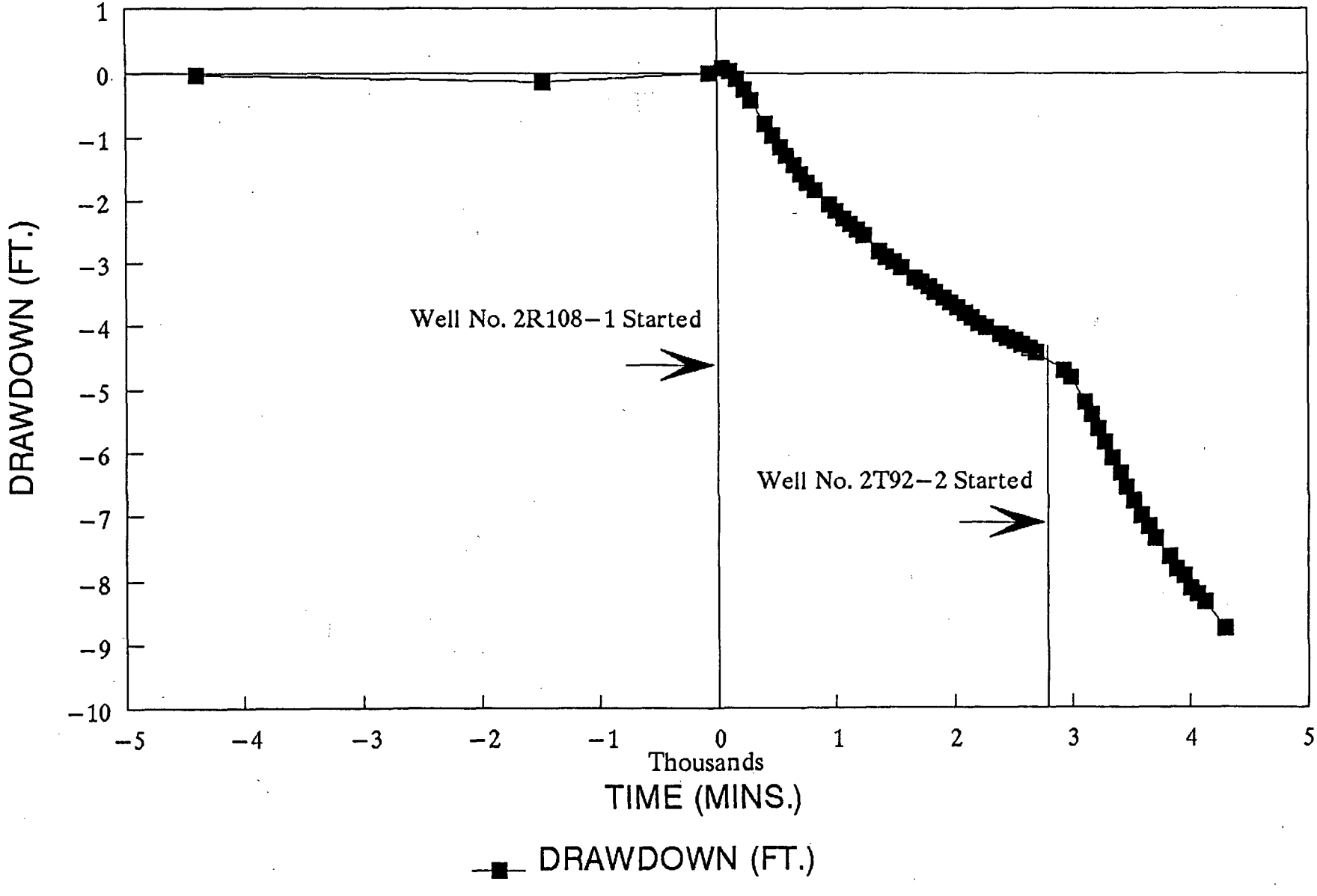
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW102

SURFACE ELEVATION:	4694.4 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.3 ft.
MEASURING POINT ELEVATION:	4696.2 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2216	2146	142.29	4553.90	-3.88
05-Feb-93	2315	2205	142.37	4553.82	-3.96
06-Feb-93	16	2266	142.44	4553.75	-4.03
06-Feb-93	216	2386	142.55	4553.64	-4.14
06-Feb-93	316	2446	142.60	4553.59	-4.19
06-Feb-93	417	2507	142.65	4553.54	-4.24
06-Feb-93	516	2566	142.72	4553.47	-4.31
06-Feb-93	623	2633	142.77	4553.42	-4.36
06-Feb-93	714	2684	142.84	4553.35	-4.43
06-Feb-93	1114	2924	143.11	4553.08	-4.70
06-Feb-93	1215	2985	143.23	4552.96	-4.82
06-Feb-93	1417	3107	143.61	4552.58	-5.20
06-Feb-93	1515	3165	143.81	4552.38	-5.40
06-Feb-93	1615	3225	144.04	4552.15	-5.63
06-Feb-93	1710	3280	144.24	4551.95	-5.83
06-Feb-93	1816	3346	144.50	4551.69	-6.09
06-Feb-93	1923	3413	144.74	4551.45	-6.33
06-Feb-93	2016	3466	144.97	4551.22	-6.56
06-Feb-93	2115	3525	145.18	4551.01	-6.77
06-Feb-93	2217	3587	145.40	4550.79	-6.99
06-Feb-93	2318	3648	145.58	4550.61	-7.17
07-Feb-93	15	3705	145.75	4550.44	-7.34
07-Feb-93	219	3829	146.05	4550.14	-7.64
07-Feb-93	317	3887	146.24	4549.95	-7.83
07-Feb-93	417	3947	146.35	4549.84	-7.94
07-Feb-93	516	4006	146.53	4549.66	-8.12
07-Feb-93	615	4065	146.63	4549.56	-8.22
07-Feb-93	719	4129	146.74	4549.45	-8.33
07-Feb-93	1009	4299	147.17	4549.02	-8.76

Total Minerals Corporation

Mine Unit 2 – Well No. MW102



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW103

SURFACE ELEVATION:	4698.3 ft.
EXTENSION:	1.60 ft.
COLLAR HEIGHT:	1.2 ft.
MEASURING POINT ELEVATION:	4701.1 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	924	-4326	144.13	4557.00	-0.03
03-Feb-93	1005	-1405	144.23	4556.90	-0.13
04-Feb-93	814	-76	144.10	4557.03	0.00
04-Feb-93	1114	44	144.10	4557.03	0.00
04-Feb-93	1217	107	144.10	4557.03	0.00
04-Feb-93	1315	165	144.13	4557.00	-0.03
04-Feb-93	1421	231	144.21	4556.92	-0.11
04-Feb-93	1519	289	144.32	4556.81	-0.22
04-Feb-93	1719	409	144.55	4556.58	-0.45
04-Feb-93	1821	471	144.68	4556.45	-0.58
04-Feb-93	1925	535	144.82	4556.31	-0.72
04-Feb-93	2020	590	144.91	4556.22	-0.81
04-Feb-93	2118	648	145.05	4556.08	-0.95
04-Feb-93	2217	707	145.15	4555.98	-1.05
04-Feb-93	2318	768	145.28	4555.85	-1.18
05-Feb-93	17	827	145.35	4555.78	-1.25
05-Feb-93	218	948	145.53	4555.60	-1.43
05-Feb-93	318	1008	145.62	4555.51	-1.52
05-Feb-93	419	1069	145.69	4555.44	-1.59
05-Feb-93	518	1128	145.80	4555.33	-1.70
05-Feb-93	618	1188	145.87	4555.26	-1.77
05-Feb-93	507	1117	145.92	4555.21	-1.82
05-Feb-93	820	1310	146.05	4555.08	-1.95
05-Feb-93	922	1372	146.08	4555.05	-1.98
05-Feb-93	1020	1430	146.10	4555.03	-2.00
05-Feb-93	1133	1503	146.20	4554.93	-2.10
05-Feb-93	1222	1552	146.20	4554.93	-2.10
05-Feb-93	1423	1673	146.35	4554.78	-2.25
05-Feb-93	1521	1731	146.40	4554.73	-2.30
05-Feb-93	1619	1789	146.49	4554.64	-2.39
05-Feb-93	1717	1847	146.56	4554.57	-2.46
05-Feb-93	1821	1911	146.66	4554.47	-2.56
05-Feb-93	1917	1967	146.72	4554.41	-2.62
05-Feb-93	2017	2027	146.80	4554.33	-2.70

APPENDIX 7

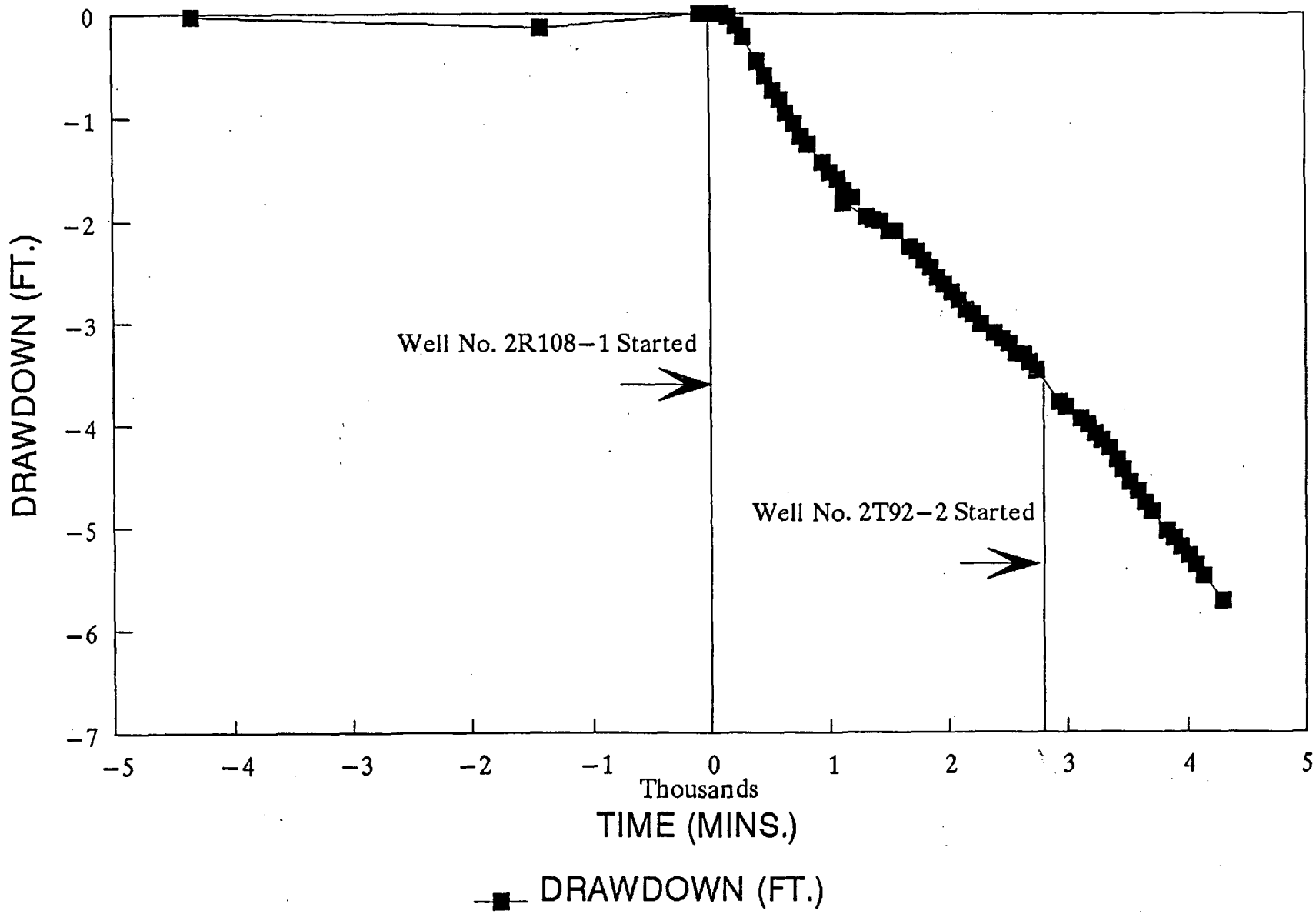
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW103

SURFACE ELEVATION:	4698.3 ft.
EXTENSION:	1.60 ft.
COLLAR HEIGHT:	1.2 ft.
MEASURING POINT ELEVATION:	4701.1 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2117	2087	146.88	4554.25	-2.78
05-Feb-93	2219	2149	146.97	4554.16	-2.87
05-Feb-93	2318	2208	147.02	4554.11	-2.92
06-Feb-93	18	2268	147.12	4554.01	-3.02
06-Feb-93	219	2389	147.21	4553.92	-3.11
06-Feb-93	318	2448	147.26	4553.87	-3.16
06-Feb-93	419	2509	147.31	4553.82	-3.21
06-Feb-93	518	2568	147.40	4553.73	-3.30
06-Feb-93	626	2636	147.42	4553.71	-3.32
06-Feb-93	716	2686	147.49	4553.64	-3.39
06-Feb-93	808	2738	147.57	4553.56	-3.47
06-Feb-93	1115	2925	147.88	4553.25	-3.78
06-Feb-93	1216	2986	147.92	4553.21	-3.82
06-Feb-93	1418	3108	148.04	4553.09	-3.94
06-Feb-93	1516	3166	148.10	4553.03	-4.00
06-Feb-93	1616	3226	148.18	4552.95	-4.08
06-Feb-93	1711	3281	148.25	4552.88	-4.15
06-Feb-93	1818	3348	148.33	4552.80	-4.23
06-Feb-93	1925	3415	148.44	4552.69	-4.34
06-Feb-93	2018	3468	148.54	4552.59	-4.44
06-Feb-93	2117	3527	148.66	4552.47	-4.56
06-Feb-93	2219	3589	148.75	4552.38	-4.65
06-Feb-93	2320	3650	148.87	4552.26	-4.77
07-Feb-93	17	3707	148.95	4552.18	-4.85
07-Feb-93	221	3831	149.14	4551.99	-5.04
07-Feb-93	319	3889	149.22	4551.91	-5.12
07-Feb-93	418	3948	149.30	4551.83	-5.20
07-Feb-93	518	4008	149.39	4551.74	-5.29
07-Feb-93	617	4067	149.49	4551.64	-5.39
07-Feb-93	720	4130	149.59	4551.54	-5.49
07-Feb-93	1011	4301	149.83	4551.30	-5.73

Total Minerals Corporation

Mine Unit 2 – Well No. MW103



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW104

SURFACE ELEVATION:	4629.1 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.0 ft.
MEASURING POINT ELEVATION:	4630.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	933	-4377	76.77	4553.79	-0.02
03-Feb-93	1015	-1455	76.88	4553.68	-0.13
04-Feb-93	900	-90	76.75	4553.81	0.00
04-Feb-93	1116	46	76.66	4553.90	0.09
04-Feb-93	1219	109	76.65	4553.91	0.10
04-Feb-93	1322	172	76.69	4553.87	0.06
04-Feb-93	1424	234	76.77	4553.79	-0.02
04-Feb-93	1522	292	76.85	4553.71	-0.10
04-Feb-93	1723	413	77.10	4553.46	-0.35
04-Feb-93	1824	474	77.25	4553.31	-0.50
04-Feb-93	1929	539	77.38	4553.18	-0.63
04-Feb-93	2023	593	77.51	4553.05	-0.76
04-Feb-93	2120	650	77.64	4552.92	-0.89
04-Feb-93	2220	710	77.77	4552.79	-1.02
04-Feb-93	2321	771	77.90	4552.66	-1.15
05-Feb-93	20	830	78.00	4552.56	-1.25
05-Feb-93	221	951	78.22	4552.34	-1.47
05-Feb-93	321	1011	78.31	4552.25	-1.56
05-Feb-93	422	1072	78.41	4552.15	-1.66
05-Feb-93	521	1131	78.51	4552.05	-1.76
05-Feb-93	621	1191	78.61	4551.95	-1.86
05-Feb-93	711	1241	78.71	4551.85	-1.96
05-Feb-93	930	1380	78.95	4551.61	-2.20
05-Feb-93	1023	1433	79.04	4551.52	-2.29
05-Feb-93	1137	1507	79.15	4551.41	-2.40
05-Feb-93	1225	1555	79.21	4551.35	-2.46
05-Feb-93	1426	1676	79.37	4551.19	-2.62
05-Feb-93	1524	1734	79.45	4551.11	-2.70
05-Feb-93	1622	1792	79.53	4551.03	-2.78
05-Feb-93	1720	1850	79.61	4550.95	-2.86
05-Feb-93	1823	1913	79.70	4550.86	-2.95
05-Feb-93	1920	1970	79.79	4550.77	-3.04
05-Feb-93	2020	2030	79.87	4550.69	-3.12
05-Feb-93	2120	2090	79.95	4550.61	-3.20

APPENDIX 7

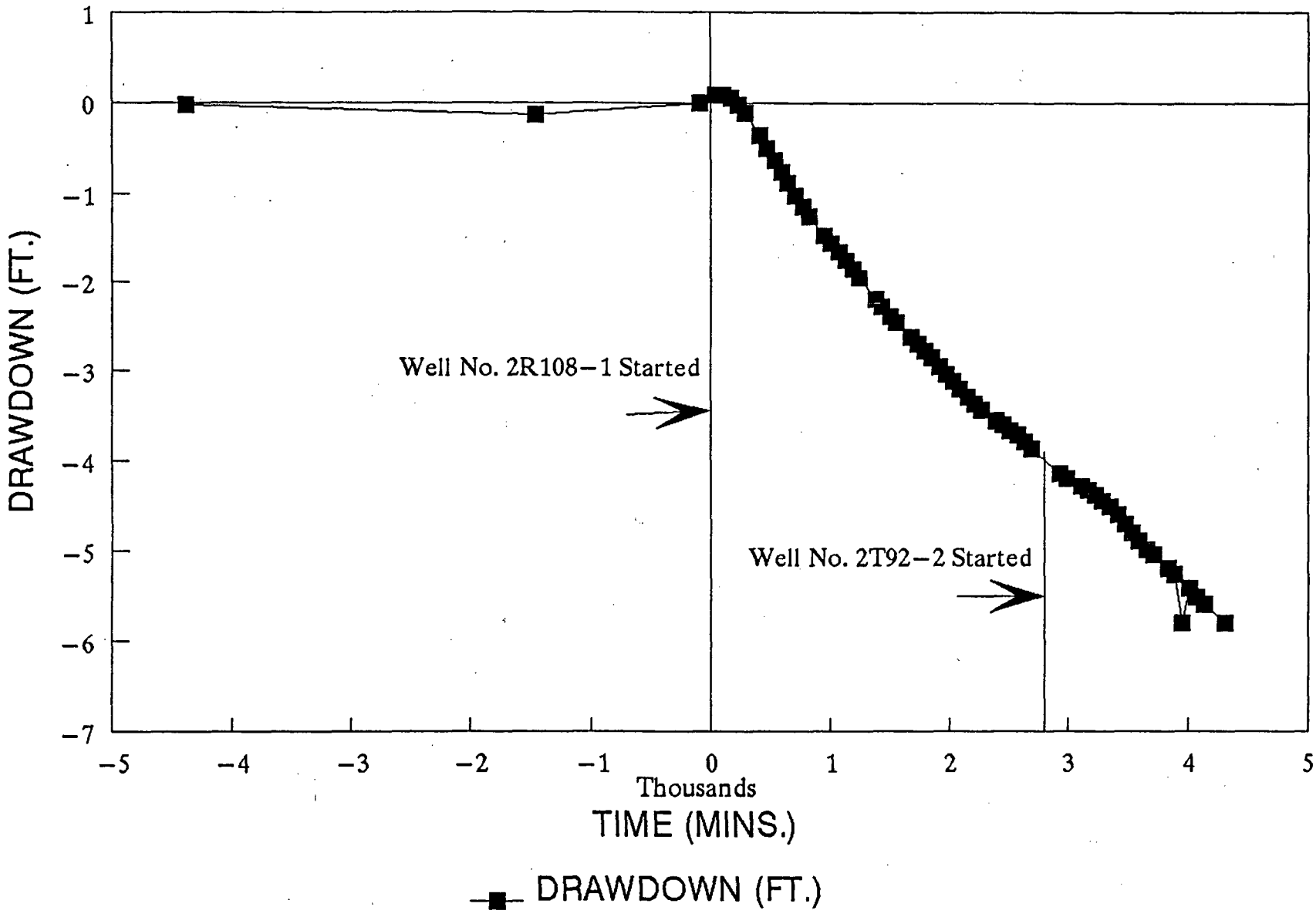
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW104

SURFACE ELEVATION:	4629.1 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.0 ft.
MEASURING POINT ELEVATION:	4630.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2222	2152	80.04	4550.52	-3.29
05-Feb-93	2321	2211	80.12	4550.44	-3.37
06-Feb-93	21	2271	80.18	4550.38	-3.43
06-Feb-93	222	2392	80.31	4550.25	-3.56
06-Feb-93	321	2451	80.35	4550.21	-3.60
06-Feb-93	422	2512	80.41	4550.15	-3.66
06-Feb-93	521	2571	80.46	4550.10	-3.71
06-Feb-93	628	2638	80.54	4550.02	-3.79
06-Feb-93	719	2689	80.61	4549.95	-3.86
06-Feb-93	1118	2928	80.88	4549.68	-4.13
06-Feb-93	1219	2989	80.94	4549.62	-4.19
06-Feb-93	1421	3111	81.03	4549.53	-4.28
06-Feb-93	1519	3169	81.07	4549.49	-4.32
06-Feb-93	1619	3229	81.13	4549.43	-4.38
06-Feb-93	1714	3284	81.19	4549.37	-4.44
06-Feb-93	1820	3350	81.26	4549.30	-4.51
06-Feb-93	1926	3416	81.35	4549.21	-4.60
06-Feb-93	2021	3471	81.46	4549.10	-4.71
06-Feb-93	2119	3529	81.55	4549.01	-4.80
06-Feb-93	2221	3591	81.65	4548.91	-4.90
06-Feb-93	2323	3653	81.74	4548.82	-4.99
07-Feb-93	19	3709	81.80	4548.76	-5.05
07-Feb-93	223	3833	81.95	4548.61	-5.20
07-Feb-93	322	3892	82.02	4548.54	-5.27
07-Feb-93	420	3950	82.55	4548.01	-5.80
07-Feb-93	520	4010	82.17	4548.39	-5.42
07-Feb-93	620	4070	82.27	4548.29	-5.52
07-Feb-93	723	4133	82.35	4548.21	-5.60
07-Feb-93	1014	4304	82.55	4548.01	-5.80

Total Minerals Corporation

Mine Unit 2 – Well No. MW104



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW105

SURFACE ELEVATION:	4622.8 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.1 ft.
MEASURING POINT ELEVATION:	4624.4 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	945	-4365	73.57	4550.79	-0.10
03-Feb-93	1113	-1397	73.68	4550.68	-0.21
04-Feb-93	838	-112	73.47	4550.89	0.00
04-Feb-93	1122	52	73.50	4550.86	-0.03
04-Feb-93	1220	110	73.53	4550.83	-0.06
04-Feb-93	1328	178	73.61	4550.75	-0.14
04-Feb-93	1424	234	73.72	4550.64	-0.25
04-Feb-93	1521	291	73.88	4550.48	-0.41
04-Feb-93	1726	416	74.30	4550.06	-0.83
04-Feb-93	1827	477	74.55	4549.81	-1.08
04-Feb-93	1937	547	74.77	4549.59	-1.30
04-Feb-93	2020	590	74.92	4549.44	-1.45
04-Feb-93	2122	652	75.12	4549.24	-1.65
04-Feb-93	2223	713	75.32	4549.04	-1.85
04-Feb-93	2324	774	75.49	4548.87	-2.02
05-Feb-93	21	831	75.64	4548.72	-2.17
05-Feb-93	223	953	75.95	4548.41	-2.48
05-Feb-93	321	1011	76.07	4548.29	-2.60
05-Feb-93	424	1074	76.22	4548.14	-2.75
05-Feb-93	521	1131	76.36	4548.00	-2.89
05-Feb-93	623	1193	76.50	4547.86	-3.03
05-Feb-93	721	1251	76.65	4547.71	-3.18
05-Feb-93	903	1353	76.89	4547.47	-3.42
05-Feb-93	1127	1497	77.18	4547.18	-3.71
05-Feb-93	1226	1556	77.27	4547.09	-3.80
05-Feb-93	1433	1683	77.49	4546.87	-4.02
05-Feb-93	1526	1736	77.59	4546.77	-4.12
05-Feb-93	1623	1793	77.68	4546.68	-4.21
05-Feb-93	1719	1849	77.78	4546.58	-4.31
05-Feb-93	1825	1915	77.90	4546.46	-4.43
05-Feb-93	1922	1972	77.98	4546.38	-4.51
05-Feb-93	2022	2032	78.07	4546.29	-4.60
05-Feb-93	2122	2092	78.19	4546.17	-4.72
05-Feb-93	2224	2154	78.28	4546.08	-4.81

APPENDIX 7

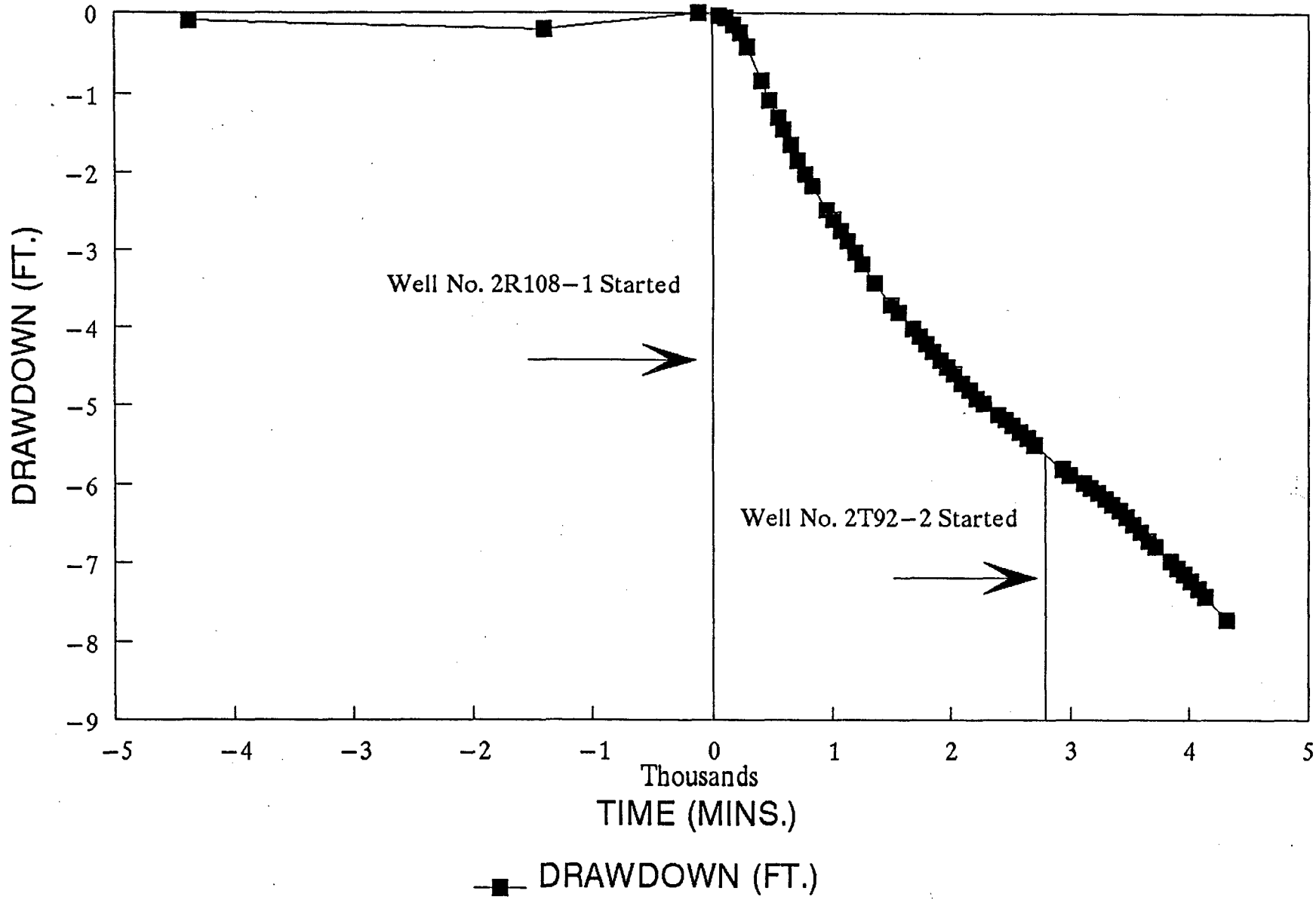
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW105

SURFACE ELEVATION:	4622.8 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.1 ft.
MEASURING POINT ELEVATION:	4624.4 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2323	2213	78.38	4545.98	-4.91
06-Feb-93	22	2272	78.45	4545.91	-4.98
06-Feb-93	222	2392	78.60	4545.76	-5.13
06-Feb-93	322	2452	78.66	4545.70	-5.19
06-Feb-93	423	2513	78.73	4545.63	-5.26
06-Feb-93	522	2572	78.81	4545.55	-5.34
06-Feb-93	633	2643	78.89	4545.47	-5.42
06-Feb-93	726	2696	78.98	4545.38	-5.51
06-Feb-93	1122	2932	79.28	4545.08	-5.81
06-Feb-93	1218	2988	79.35	4545.01	-5.88
06-Feb-93	1421	3111	79.45	4544.91	-5.98
06-Feb-93	1516	3166	79.50	4544.86	-6.03
06-Feb-93	1621	3231	79.57	4544.79	-6.10
06-Feb-93	1720	3290	79.64	4544.72	-6.17
06-Feb-93	1822	3352	79.72	4544.64	-6.25
06-Feb-93	1927	3417	79.79	4544.57	-6.32
06-Feb-93	2024	3474	79.88	4544.48	-6.41
06-Feb-93	2124	3534	79.98	4544.38	-6.51
06-Feb-93	2224	3594	80.07	4544.29	-6.60
06-Feb-93	2329	3659	80.18	4544.18	-6.71
07-Feb-93	24	3714	80.26	4544.10	-6.79
07-Feb-93	230	3840	80.44	4543.92	-6.97
07-Feb-93	330	3900	80.53	4543.83	-7.06
07-Feb-93	427	3957	80.61	4543.75	-7.14
07-Feb-93	525	4015	80.69	4543.67	-7.22
07-Feb-93	624	4074	80.79	4543.57	-7.32
07-Feb-93	726	4136	80.89	4543.47	-7.42
07-Feb-93	1022	4312	81.18	4543.18	-7.71

Total Minerals Corporation

Mine Unit 2 – Well No. MW105



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW106

SURFACE ELEVATION:	4595.5 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4596.7 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	947	-4363	47.36	4549.35	-0.12
03-Feb-93	1110	-1400	47.41	4549.30	-0.17
04-Feb-93	836	-114	47.24	4549.47	0.00
04-Feb-93	1120	50	47.23	4549.48	0.01
04-Feb-93	1217	107	47.30	4549.41	-0.06
04-Feb-93	1325	175	47.51	4549.20	-0.27
04-Feb-93	1421	231	47.70	4549.01	-0.46
04-Feb-93	1518	288	47.93	4548.78	-0.69
04-Feb-93	1724	414	48.46	4548.25	-1.22
04-Feb-93	1824	474	48.71	4548.00	-1.47
04-Feb-93	1934	544	48.98	4547.73	-1.74
04-Feb-93	2018	588	49.14	4547.57	-1.90
04-Feb-93	2119	649	49.35	4547.36	-2.11
04-Feb-93	2221	711	49.56	4547.15	-2.32
04-Feb-93	2321	771	49.75	4546.96	-2.51
05-Feb-93	18	828	49.92	4546.79	-2.68
05-Feb-93	220	950	50.24	4546.47	-3.00
05-Feb-93	319	1009	50.39	4546.32	-3.15
05-Feb-93	421	1071	50.54	4546.17	-3.30
05-Feb-93	518	1128	50.67	4546.04	-3.43
05-Feb-93	620	1190	50.82	4545.89	-3.58
05-Feb-93	720	1250	50.97	4545.74	-3.73
05-Feb-93	901	1351	51.20	4545.51	-3.96
05-Feb-93	1125	1495	51.51	4545.20	-4.27
05-Feb-93	1223	1553	51.61	4545.10	-4.37
05-Feb-93	1430	1680	51.83	4544.88	-4.59
05-Feb-93	1523	1733	51.91	4544.80	-4.67
05-Feb-93	1620	1790	52.02	4544.69	-4.78
05-Feb-93	1716	1846	52.12	4544.59	-4.88
05-Feb-93	1823	1913	52.23	4544.48	-4.99
05-Feb-93	1919	1969	52.32	4544.39	-5.08
05-Feb-93	2020	2030	52.43	4544.28	-5.19
05-Feb-93	2120	2090	52.53	4544.18	-5.29
05-Feb-93	2222	2152	52.64	4544.07	-5.40

APPENDIX 7

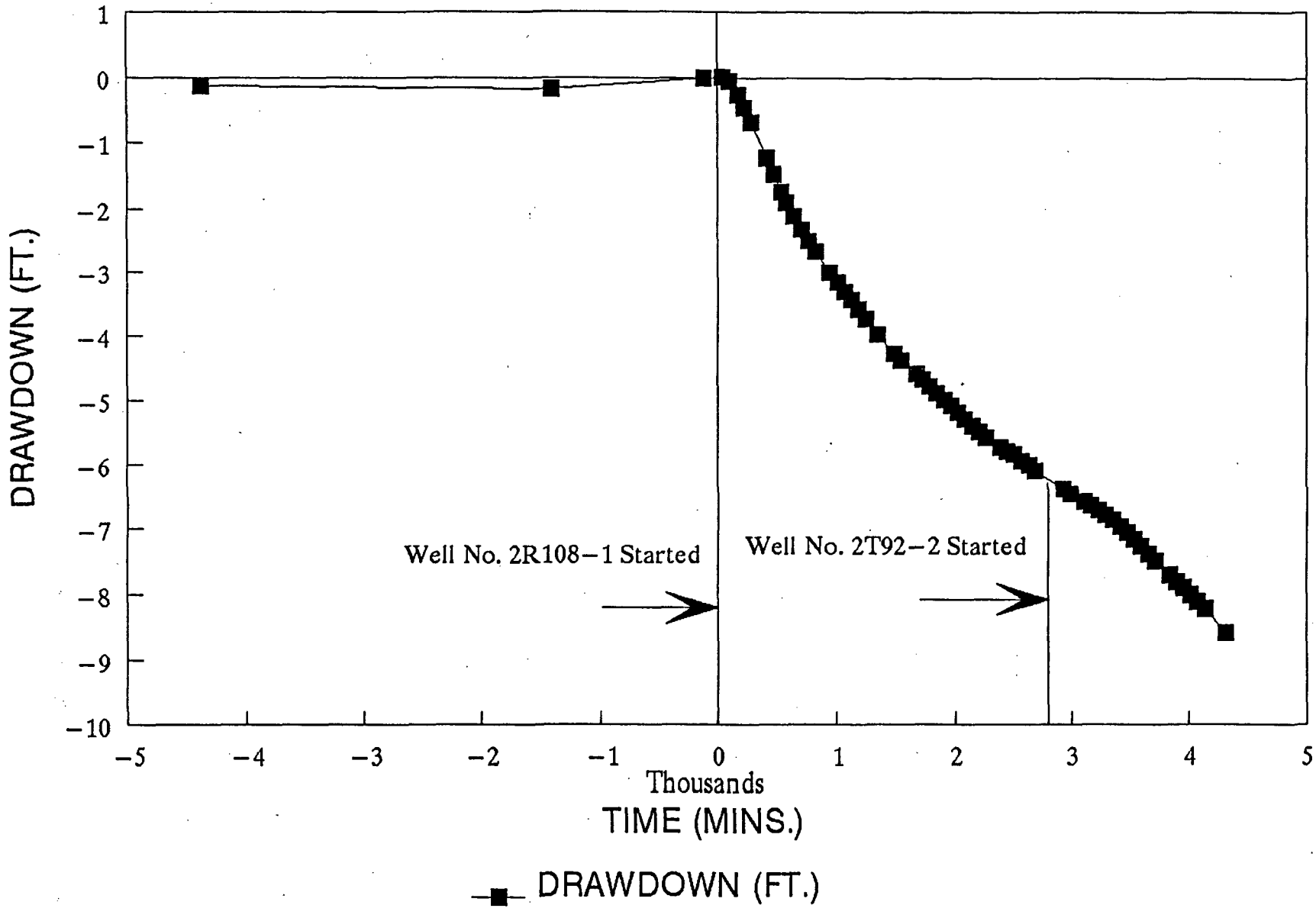
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW106

SURFACE ELEVATION:	4595.5 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4596.7 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2321	2211	52.73	4543.98	-5.49
06-Feb-93	20	2270	52.82	4543.89	-5.58
06-Feb-93	220	2390	52.97	4543.74	-5.73
06-Feb-93	320	2450	53.03	4543.68	-5.79
06-Feb-93	421	2511	53.08	4543.63	-5.84
06-Feb-93	520	2570	53.18	4543.53	-5.94
06-Feb-93	631	2641	53.25	4543.46	-6.01
06-Feb-93	724	2694	53.33	4543.38	-6.09
06-Feb-93	1119	2929	53.63	4543.08	-6.39
06-Feb-93	1216	2986	53.70	4543.01	-6.46
06-Feb-93	1416	3106	53.82	4542.89	-6.58
06-Feb-93	1514	3164	53.87	4542.84	-6.63
06-Feb-93	1619	3229	53.95	4542.76	-6.71
06-Feb-93	1718	3288	54.03	4542.68	-6.79
06-Feb-93	1819	3349	54.10	4542.61	-6.86
06-Feb-93	1925	3415	54.20	4542.51	-6.96
06-Feb-93	2022	3472	54.30	4542.41	-7.06
06-Feb-93	2122	3532	54.40	4542.31	-7.16
06-Feb-93	2221	3591	54.51	4542.20	-7.27
06-Feb-93	2327	3657	54.63	4542.08	-7.39
07-Feb-93	22	3712	54.73	4541.98	-7.49
07-Feb-93	228	3838	54.95	4541.76	-7.71
07-Feb-93	327	3897	55.05	4541.66	-7.81
07-Feb-93	425	3955	55.14	4541.57	-7.90
07-Feb-93	523	4013	55.24	4541.47	-8.00
07-Feb-93	622	4072	55.35	4541.36	-8.11
07-Feb-93	724	4134	55.46	4541.25	-8.22
07-Feb-93	1021	4311	55.82	4540.89	-8.58

Total Minerals Corporation

Mine Unit 2 – Well No. MW106



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW107

SURFACE ELEVATION:	4590.2 ft.
EXTENSION:	1.60 ft.
COLLAR HEIGHT:	1.1 ft.
MEASURING POINT ELEVATION:	4592.9 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	955	-4353	43.40	4549.49	-0.10
03-Feb-93	1104	-1404	43.47	4549.42	-0.17
04-Feb-93	834	-114	43.30	4549.59	0.00
04-Feb-93	1118	48	43.32	4549.57	-0.02
04-Feb-93	1215	105	43.60	4549.29	-0.30
04-Feb-93	1323	173	43.97	4548.92	-0.67
04-Feb-93	1419	229	44.30	4548.59	-1.00
04-Feb-93	1516	286	44.62	4548.27	-1.32
04-Feb-93	1722	412	45.27	4547.62	-1.97
04-Feb-93	1821	471	45.55	4547.34	-2.25
04-Feb-93	1932	542	45.87	4547.02	-2.57
04-Feb-93	2016	586	46.05	4546.84	-2.75
04-Feb-93	2117	647	46.28	4546.61	-2.98
04-Feb-93	2218	708	46.53	4546.36	-3.23
04-Feb-93	2318	768	46.75	4546.14	-3.45
05-Feb-93	16	826	46.92	4545.97	-3.62
05-Feb-93	218	948	47.29	4545.60	-3.99
05-Feb-93	317	1007	47.45	4545.44	-4.15
05-Feb-93	418	1068	47.62	4545.27	-4.32
05-Feb-93	516	1126	47.76	4545.13	-4.46
05-Feb-93	618	1188	47.92	4544.97	-4.62
05-Feb-93	717	1247	48.09	4544.80	-4.79
05-Feb-93	849	1339	48.30	4544.59	-5.00
05-Feb-93	1122	1492	48.68	4544.21	-5.38
05-Feb-93	1220	1550	48.79	4544.10	-5.49
05-Feb-93	1427	1677	49.03	4543.86	-5.73
05-Feb-93	1519	1729	49.12	4543.77	-5.82
05-Feb-93	1618	1788	49.25	4543.64	-5.95
05-Feb-93	1715	1845	49.35	4543.54	-6.05
05-Feb-93	1820	1910	49.47	4543.42	-6.17
05-Feb-93	1917	1967	49.56	4543.33	-6.26
05-Feb-93	2018	2028	49.67	4543.22	-6.37
05-Feb-93	2117	2087	49.79	4543.10	-6.49
05-Feb-93	2219	2149	49.90	4542.99	-6.60

APPENDIX 7

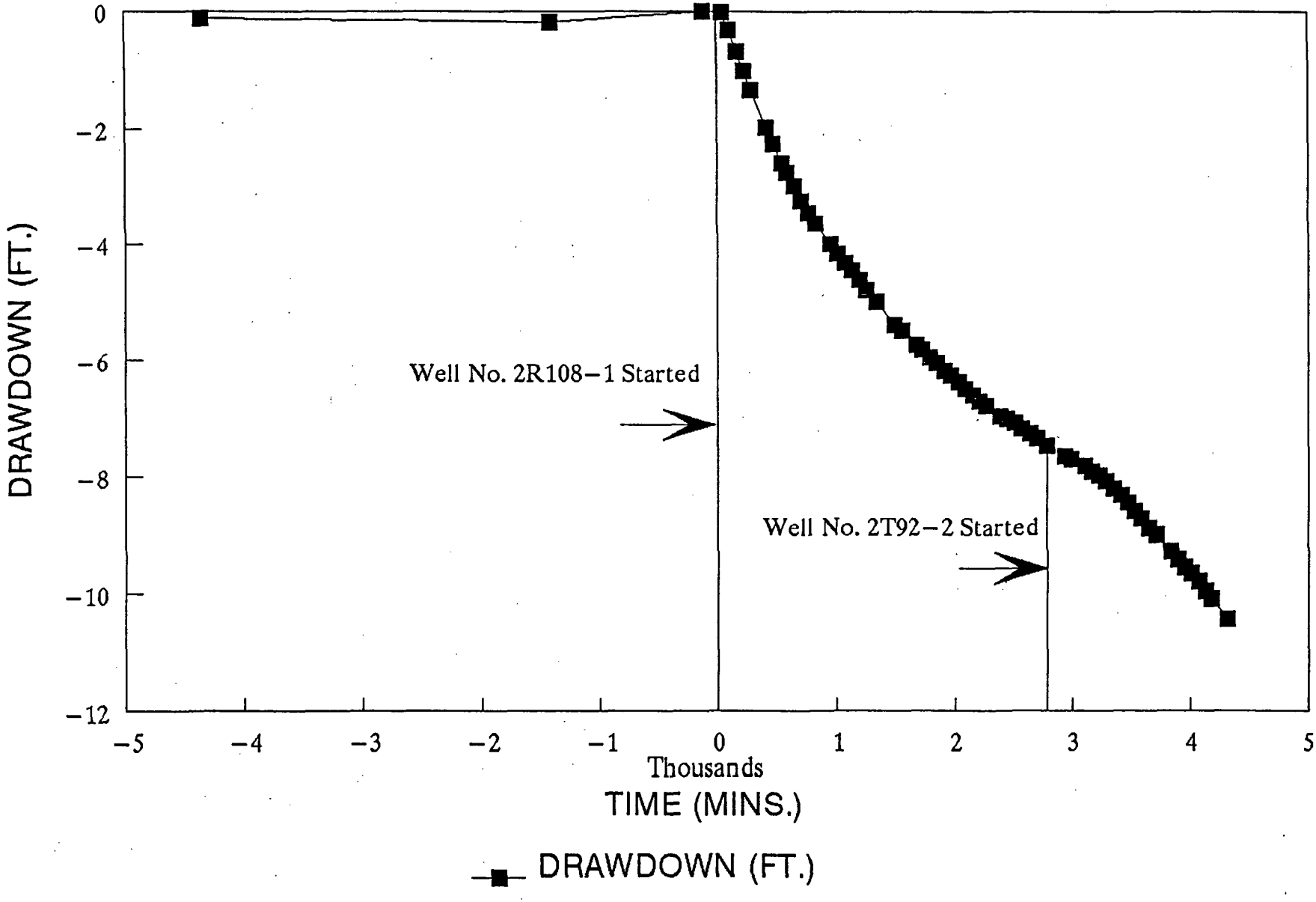
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW107

SURFACE ELEVATION:	4590.2 ft.
EXTENSION:	1.60 ft.
COLLAR HEIGHT:	1.1 ft.
MEASURING POINT ELEVATION:	4592.9 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2318	2208	50.00	4542.89	-6.70
06-Feb-93	17	2267	50.08	4542.81	-6.78
06-Feb-93	217	2387	50.26	4542.63	-6.96
06-Feb-93	317	2447	50.32	4542.57	-7.02
06-Feb-93	418	2508	50.38	4542.51	-7.08
06-Feb-93	518	2568	50.48	4542.41	-7.18
06-Feb-93	629	2639	50.57	4542.32	-7.27
06-Feb-93	721	2691	50.64	4542.25	-7.34
06-Feb-93	848	2778	50.77	4542.12	-7.47
06-Feb-93	1118	2928	50.95	4541.94	-7.65
06-Feb-93	1214	2984	51.00	4541.89	-7.70
06-Feb-93	1417	3107	51.11	4541.78	-7.81
06-Feb-93	1512	3162	51.21	4541.68	-7.91
06-Feb-93	1617	3227	51.29	4541.60	-7.99
06-Feb-93	1715	3285	51.39	4541.50	-8.09
06-Feb-93	1818	3348	51.51	4541.38	-8.21
06-Feb-93	1922	3412	51.63	4541.26	-8.33
06-Feb-93	2020	3470	51.76	4541.13	-8.46
06-Feb-93	2120	3530	51.90	4540.99	-8.60
06-Feb-93	2219	3589	52.05	4540.84	-8.75
06-Feb-93	2324	3654	52.21	4540.68	-8.91
07-Feb-93	20	3710	52.32	4540.57	-9.02
07-Feb-93	225	3835	52.60	4540.29	-9.30
07-Feb-93	324	3894	52.74	4540.15	-9.44
07-Feb-93	422	3952	52.86	4540.03	-9.56
07-Feb-93	520	4010	52.97	4539.92	-9.67
07-Feb-93	619	4069	53.10	4539.79	-9.80
07-Feb-93	722	4132	53.25	4539.64	-9.95
07-Feb-93	806	4176	53.39	4539.50	-10.09
07-Feb-93	1020	4310	53.73	4539.16	-10.43

Total Minerals Corporation

Mine Unit 2 – Well No. MW107



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW108

SURFACE ELEVATION:	4637.1 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.9 ft.
MEASURING POINT ELEVATION:	4638.5 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	937	-4373	88.62	4549.86	-0.06
03-Feb-93	1100	-1410	88.78	4549.70	-0.22
04-Feb-93	857	-93	88.56	4549.92	0.00
04-Feb-93	1113	42	89.12	4549.36	-0.56
04-Feb-93	1211	100	90.05	4548.43	-1.49
04-Feb-93	1318	167	90.85	4547.63	-2.29
04-Feb-93	1416	225	91.41	4547.07	-2.85
04-Feb-93	1513	282	91.90	4546.58	-3.34
04-Feb-93	1719	408	92.83	4545.65	-4.27
04-Feb-93	1817	466	93.21	4545.27	-4.65
04-Feb-93	1929	538	93.64	4544.84	-5.08
04-Feb-93	2013	582	93.88	4544.60	-5.32
04-Feb-93	2114	643	94.20	4544.28	-5.64
04-Feb-93	2215	704	94.50	4543.98	-5.94
04-Feb-93	2315	764	94.78	4543.70	-6.22
05-Feb-93	13	822	95.02	4543.46	-6.46
05-Feb-93	214	943	95.47	4543.01	-6.91
05-Feb-93	313	1002	95.67	4542.81	-7.11
05-Feb-93	415	1064	95.88	4542.60	-7.32
05-Feb-93	512	1121	96.07	4542.41	-7.51
05-Feb-93	615	1184	96.27	4542.21	-7.71
05-Feb-93	714	1243	96.46	4542.02	-7.90
05-Feb-93	910	1359	96.80	4541.68	-8.24
05-Feb-93	1119	1488	97.14	4541.34	-8.58
05-Feb-93	1217	1546	97.26	4541.22	-8.70
05-Feb-93	1423	1672	97.56	4540.92	-9.00
05-Feb-93	1534	1743	97.74	4540.74	-9.18
05-Feb-93	1615	1784	97.82	4540.66	-9.26
05-Feb-93	1711	1840	97.92	4540.56	-9.36
05-Feb-93	1817	1906	98.08	4540.40	-9.52
05-Feb-93	1914	1963	98.18	4540.30	-9.62
05-Feb-93	2014	2023	98.31	4540.17	-9.75
05-Feb-93	2114	2083	98.43	4540.05	-9.87
05-Feb-93	2216	2145	98.56	4539.92	-10.00

APPENDIX 7

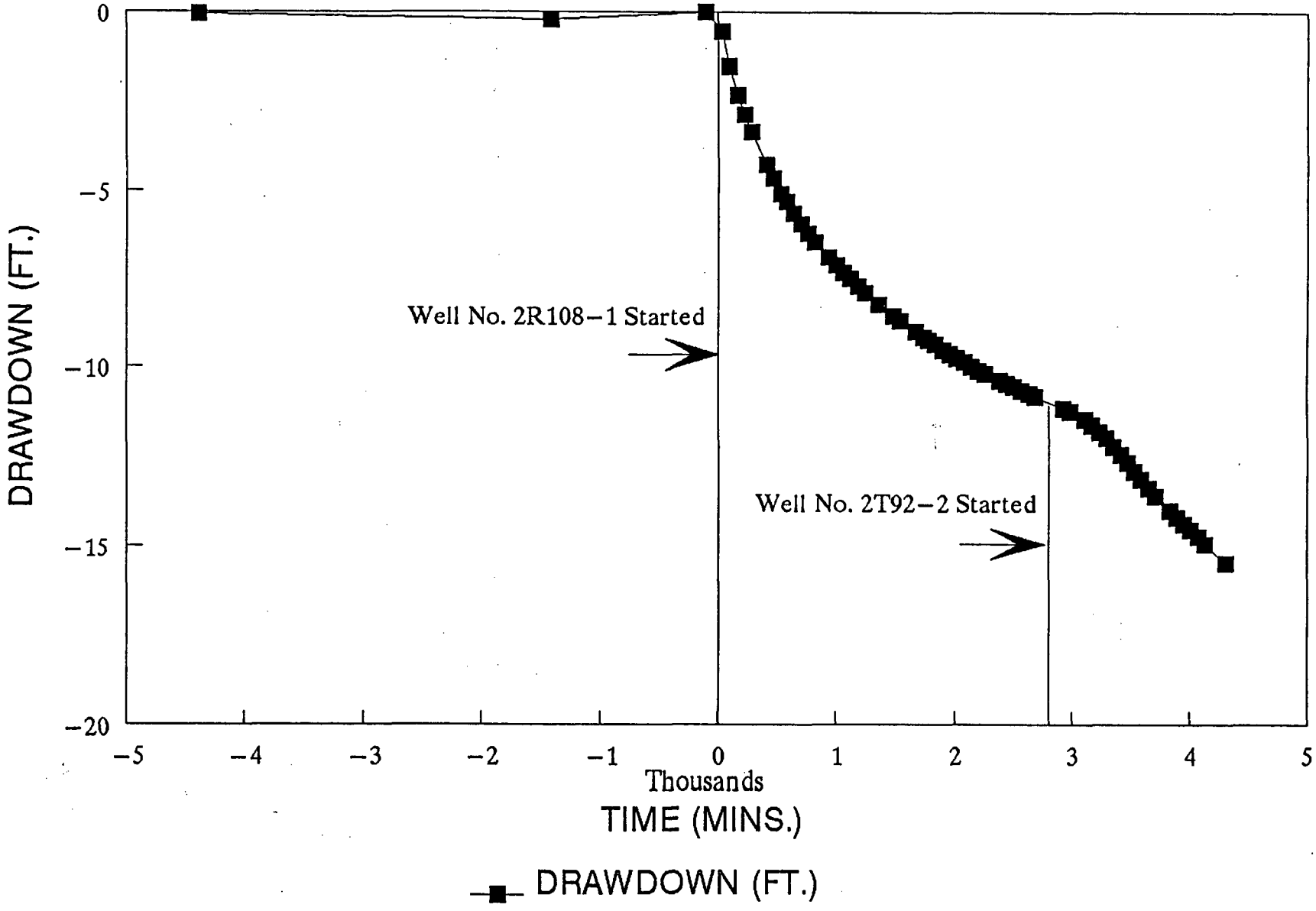
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW108

SURFACE ELEVATION:	4637.1 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.9 ft.
MEASURING POINT ELEVATION:	4638.5 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2315	2204	98.66	4539.82	-10.10
06-Feb-93	14	2263	98.76	4539.72	-10.20
06-Feb-93	214	2383	98.95	4539.53	-10.39
06-Feb-93	314	2443	99.03	4539.45	-10.47
06-Feb-93	414	2503	99.10	4539.38	-10.54
06-Feb-93	514	2563	99.20	4539.28	-10.64
06-Feb-93	626	2635	99.30	4539.18	-10.74
06-Feb-93	717	2686	99.39	4539.09	-10.83
06-Feb-93	1114	2923	99.71	4538.77	-11.15
06-Feb-93	1211	2980	99.78	4538.70	-11.22
06-Feb-93	1412	3101	100.00	4538.48	-11.44
06-Feb-93	1509	3158	100.16	4538.32	-11.60
06-Feb-93	1613	3222	100.35	4538.13	-11.79
06-Feb-93	1712	3281	100.54	4537.94	-11.98
06-Feb-93	1815	3344	100.76	4537.72	-12.20
06-Feb-93	1919	3408	101.00	4537.48	-12.44
06-Feb-93	2017	3466	101.22	4537.26	-12.66
06-Feb-93	2117	3526	101.45	4537.03	-12.89
06-Feb-93	2216	3585	101.68	4536.80	-13.12
06-Feb-93	2321	3650	101.93	4536.55	-13.37
07-Feb-93	16	3705	102.13	4536.35	-13.57
07-Feb-93	222	3831	102.56	4535.92	-14.00
07-Feb-93	320	3889	102.75	4535.73	-14.19
07-Feb-93	419	3948	102.93	4535.55	-14.37
07-Feb-93	518	4007	103.12	4535.36	-14.56
07-Feb-93	616	4065	103.30	4535.18	-14.74
07-Feb-93	719	4128	103.51	4534.97	-14.95
07-Feb-93	1018	4307	104.07	4534.41	-15.51

Total Minerals Corporation

Mine Unit 2 – Well No. MW108



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW109

SURFACE ELEVATION:	4628.4 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.9 ft.
MEASURING POINT ELEVATION:	4629.8 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1000	-4350	80.05	4549.72	-0.06
03-Feb-93	1118	-1392	80.17	4549.60	-0.18
04-Feb-93	854	-96	79.99	4549.78	0.00
04-Feb-93	1111	41	80.00	4549.77	-0.01
04-Feb-93	1209	99	80.18	4549.59	-0.19
04-Feb-93	1316	166	80.44	4549.33	-0.45
04-Feb-93	1414	224	80.71	4549.06	-0.72
04-Feb-93	1511	281	80.98	4548.79	-0.99
04-Feb-93	1717	407	81.61	4548.16	-1.62
04-Feb-93	1814	464	81.90	4547.87	-1.91
04-Feb-93	1927	537	82.22	4547.55	-2.23
04-Feb-93	2011	581	82.41	4547.36	-2.42
04-Feb-93	2112	642	82.67	4547.10	-2.68
04-Feb-93	2213	703	82.93	4546.84	-2.94
04-Feb-93	2312	762	83.17	4546.60	-3.18
05-Feb-93	11	821	83.35	4546.42	-3.36
05-Feb-93	211	941	83.77	4546.00	-3.78
05-Feb-93	311	1001	83.95	4545.82	-3.96
05-Feb-93	412	1062	84.13	4545.64	-4.14
05-Feb-93	510	1120	84.30	4545.47	-4.31
05-Feb-93	612	1182	84.48	4545.29	-4.49
05-Feb-93	711	1241	84.64	4545.13	-4.65
05-Feb-93	923	1373	85.01	4544.76	-5.02
05-Feb-93	1117	1487	85.29	4544.48	-5.30
05-Feb-93	1215	1545	85.43	4544.34	-5.44
05-Feb-93	1420	1670	85.67	4544.10	-5.68
05-Feb-93	1532	1742	85.83	4543.94	-5.84
05-Feb-93	1612	1782	85.90	4543.87	-5.91
05-Feb-93	1709	1839	86.02	4543.75	-6.03
05-Feb-93	1814	1904	86.15	4543.62	-6.16
05-Feb-93	1911	1961	86.25	4543.52	-6.26
05-Feb-93	2012	2022	86.36	4543.41	-6.37
05-Feb-93	2111	2081	86.48	4543.29	-6.49
05-Feb-93	2213	2143	86.60	4543.17	-6.61

APPENDIX 7

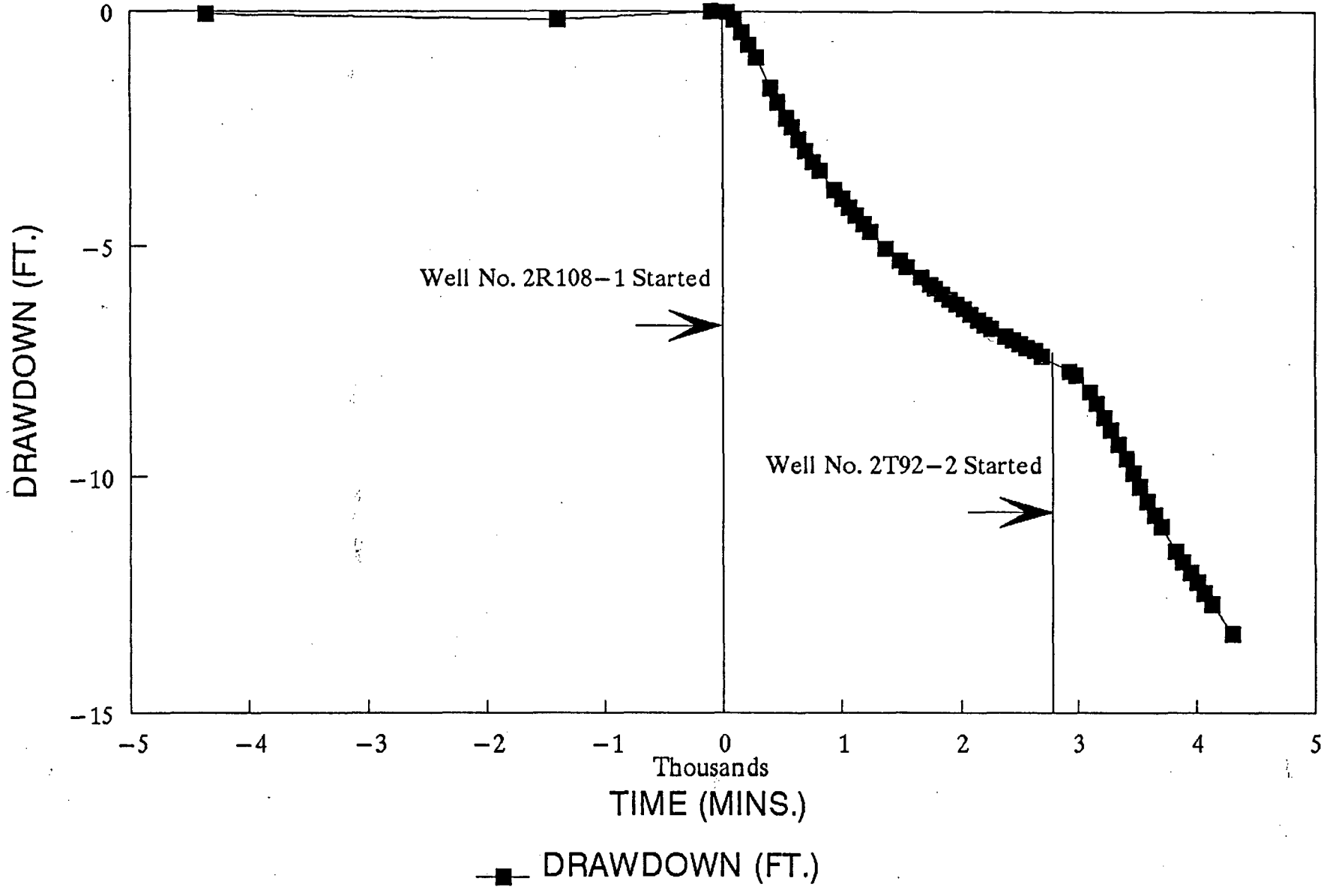
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW109

SURFACE ELEVATION:	4628.4 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.9 ft.
MEASURING POINT ELEVATION:	4629.8 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2312	2202	86.70	4543.07	-6.71
06-Feb-93	11	2261	86.79	4542.98	-6.80
06-Feb-93	211	2381	86.96	4542.81	-6.97
06-Feb-93	311	2441	87.04	4542.73	-7.05
06-Feb-93	412	2502	87.12	4542.65	-7.13
06-Feb-93	511	2561	87.20	4542.57	-7.21
06-Feb-93	623	2633	87.27	4542.50	-7.28
06-Feb-93	715	2685	87.38	4542.39	-7.39
06-Feb-93	1111	2921	87.71	4542.06	-7.72
06-Feb-93	1209	2979	87.80	4541.97	-7.81
06-Feb-93	1410	3100	88.17	4541.60	-8.18
06-Feb-93	1507	3157	88.41	4541.36	-8.42
06-Feb-93	1610	3220	88.71	4541.06	-8.72
06-Feb-93	1710	3280	88.99	4540.78	-9.00
06-Feb-93	1813	3343	89.30	4540.47	-9.31
06-Feb-93	1917	3407	89.60	4540.17	-9.61
06-Feb-93	2015	3465	89.91	4539.86	-9.92
06-Feb-93	2114	3524	90.21	4539.56	-10.22
06-Feb-93	2214	3584	90.50	4539.27	-10.51
06-Feb-93	2319	3649	90.80	4538.97	-10.81
07-Feb-93	14	3704	91.05	4538.72	-11.06
07-Feb-93	219	3829	91.58	4538.19	-11.59
07-Feb-93	317	3887	91.80	4537.97	-11.81
07-Feb-93	417	3947	92.02	4537.75	-12.03
07-Feb-93	515	4005	92.24	4537.53	-12.25
07-Feb-93	613	4063	92.45	4537.32	-12.46
07-Feb-93	717	4127	92.69	4537.08	-12.70
07-Feb-93	1016	4306	93.31	4536.46	-13.32

Total Minerals Corporation

Mine Unit 2 – Well No. MW109



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW110

SURFACE ELEVATION:	4639.3 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4641.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1007	-4343	91.02	4550.61	-0.04
03-Feb-93	1120	-1390	91.10	4550.53	-0.12
04-Feb-93	846	-104	90.98	4550.65	0.00
04-Feb-93	1109	39	90.95	4550.68	0.03
04-Feb-93	1207	97	90.96	4550.67	0.02
04-Feb-93	1314	164	90.99	4550.64	-0.01
04-Feb-93	1412	222	91.01	4550.62	-0.03
04-Feb-93	1509	279	91.09	4550.54	-0.11
04-Feb-93	1714	404	91.40	4550.23	-0.42
04-Feb-93	1811	461	91.61	4550.02	-0.63
04-Feb-93	1923	533	91.81	4549.82	-0.83
04-Feb-93	2008	578	91.95	4549.68	-0.97
04-Feb-93	2108	638	92.11	4549.52	-1.13
04-Feb-93	2208	698	92.29	4549.34	-1.31
04-Feb-93	2309	759	92.45	4549.18	-1.47
05-Feb-93	7	817	92.60	4549.03	-1.62
05-Feb-93	208	938	92.88	4548.75	-1.90
05-Feb-93	308	998	93.02	4548.61	-2.04
05-Feb-93	409	1059	93.15	4548.48	-2.17
05-Feb-93	507	1117	93.29	4548.34	-2.31
05-Feb-93	609	1179	93.45	4548.18	-2.47
05-Feb-93	709	1239	93.55	4548.08	-2.57
05-Feb-93	836	1326	93.72	4547.91	-2.74
05-Feb-93	921	1371	93.78	4547.85	-2.80
05-Feb-93	1114	1484	94.03	4547.60	-3.05
05-Feb-93	1212	1542	94.08	4547.55	-3.10
05-Feb-93	1417	1667	94.28	4547.35	-3.30
05-Feb-93	1510	1720	94.33	4547.30	-3.35
05-Feb-93	1609	1779	94.42	4547.21	-3.44
05-Feb-93	1707	1837	94.51	4547.12	-3.53
05-Feb-93	1812	1902	94.62	4547.01	-3.64
05-Feb-93	1909	1959	94.71	4546.92	-3.73
05-Feb-93	2009	2019	94.79	4546.84	-3.81
05-Feb-93	2108	2078	94.88	4546.75	-3.90

APPENDIX 7

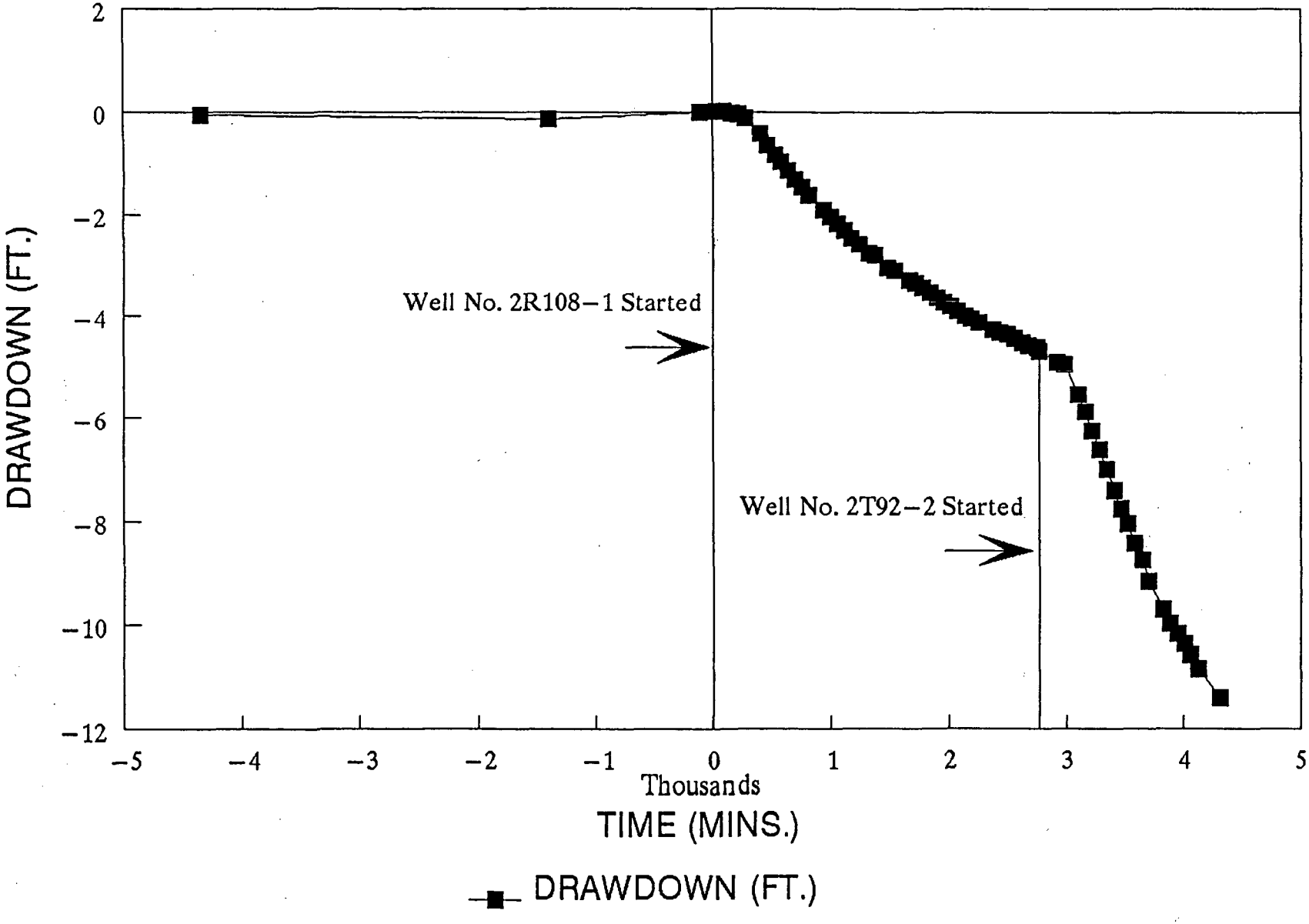
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW110

SURFACE ELEVATION:	4639.3 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4641.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2211	2141	94.98	4546.65	-4.00
05-Feb-93	2309	2199	95.03	4546.60	-4.05
06-Feb-93	8	2258	95.11	4546.52	-4.13
06-Feb-93	209	2379	95.25	4546.38	-4.27
06-Feb-93	308	2438	95.30	4546.33	-4.32
06-Feb-93	408	2498	95.35	4546.28	-4.37
06-Feb-93	508	2558	95.42	4546.21	-4.44
06-Feb-93	620	2630	95.49	4546.14	-4.51
06-Feb-93	712	2682	95.55	4546.08	-4.57
06-Feb-93	819	2749	95.60	4546.03	-4.62
06-Feb-93	842	2772	95.66	4545.97	-4.68
06-Feb-93	1109	2919	95.88	4545.75	-4.90
06-Feb-93	1207	2977	95.92	4545.71	-4.94
06-Feb-93	1407	3097	96.50	4545.13	-5.52
06-Feb-93	1506	3156	96.85	4544.78	-5.87
06-Feb-93	1608	3218	97.25	4544.38	-6.27
06-Feb-93	1708	3278	97.61	4544.02	-6.63
06-Feb-93	1810	3340	98.00	4543.63	-7.02
06-Feb-93	1914	3404	98.39	4543.24	-7.41
06-Feb-93	2012	3462	98.73	4542.90	-7.75
06-Feb-93	2111	3521	99.02	4542.61	-8.04
06-Feb-93	2211	3581	99.40	4542.23	-8.42
06-Feb-93	2316	3646	99.73	4541.90	-8.75
07-Feb-93	11	3701	100.15	4541.48	-9.17
07-Feb-93	216	3826	100.70	4540.93	-9.72
07-Feb-93	315	3885	100.96	4540.67	-9.98
07-Feb-93	414	3944	101.15	4540.48	-10.17
07-Feb-93	513	4003	101.35	4540.28	-10.37
07-Feb-93	610	4060	101.56	4540.07	-10.58
07-Feb-93	715	4125	101.82	4539.81	-10.84
07-Feb-93	1014	4304	102.38	4539.25	-11.40

Total Minerals Corporation

Mine Unit 2 – Well No. MW110



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW111

SURFACE ELEVATION:	4647.9 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.3 ft.
MEASURING POINT ELEVATION:	4649.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1015	-4330	96.35	4553.29	-0.04
03-Feb-93	1127	-1383	96.41	4553.23	-0.10
04-Feb-93	837	-113	96.31	4553.33	0.00
04-Feb-93	1107	37	96.31	4553.33	0.00
04-Feb-93	1206	96	96.32	4553.32	-0.01
04-Feb-93	1312	162	96.31	4553.33	0.00
04-Feb-93	1410	220	96.29	4553.35	0.02
04-Feb-93	1508	278	96.29	4553.35	0.02
04-Feb-93	1713	403	96.36	4553.28	-0.05
04-Feb-93	1810	460	96.39	4553.25	-0.08
04-Feb-93	1922	532	96.45	4553.19	-0.14
04-Feb-93	2007	577	96.49	4553.15	-0.18
04-Feb-93	2107	637	96.54	4553.10	-0.23
04-Feb-93	2207	697	96.59	4553.05	-0.28
04-Feb-93	2308	758	96.66	4552.98	-0.35
05-Feb-93	6	816	96.71	4552.93	-0.40
05-Feb-93	206	936	96.81	4552.83	-0.50
05-Feb-93	307	997	96.86	4552.78	-0.55
05-Feb-93	408	1058	96.92	4552.72	-0.61
05-Feb-93	506	1116	96.97	4552.67	-0.66
05-Feb-93	608	1178	97.04	4552.60	-0.73
05-Feb-93	708	1238	97.10	4552.54	-0.79
05-Feb-93	919	1369	97.26	4552.38	-0.95
05-Feb-93	1113	1483	97.30	4552.34	-0.99
05-Feb-93	1211	1541	97.43	4552.21	-1.12
05-Feb-93	1417	1667	97.55	4552.09	-1.24
05-Feb-93	1510	1720	97.60	4552.04	-1.29
05-Feb-93	1609	1779	97.65	4551.99	-1.34
05-Feb-93	1706	1836	97.70	4551.94	-1.39
05-Feb-93	1810	1900	97.78	4551.86	-1.47
05-Feb-93	1907	1957	97.80	4551.84	-1.49
05-Feb-93	2007	2017	97.88	4551.76	-1.57
05-Feb-93	2107	2077	97.94	4551.70	-1.63
05-Feb-93	2209	2139	98.00	4551.64	-1.69

APPENDIX 7

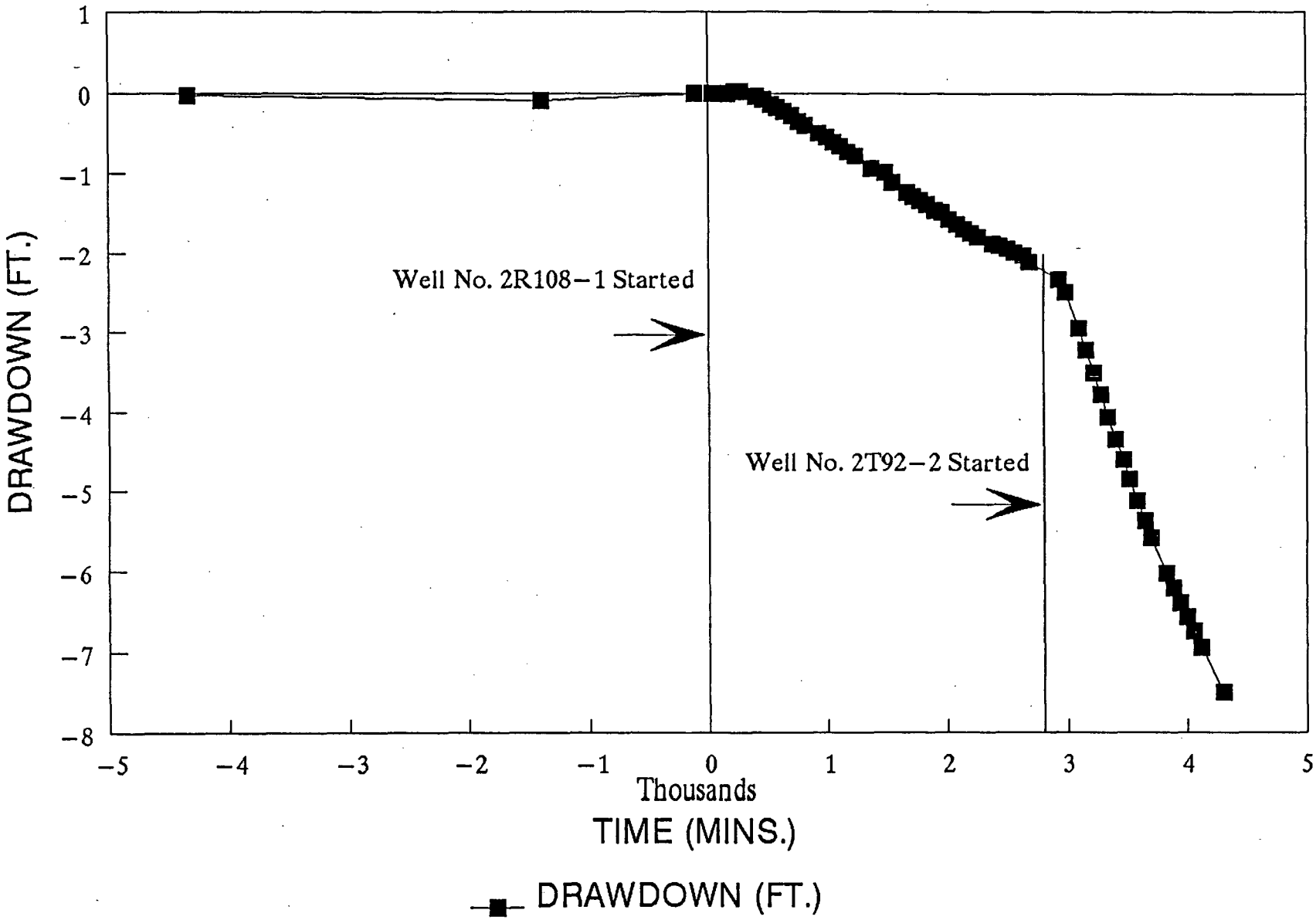
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW111

SURFACE ELEVATION:	4647.9 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	1.3 ft.
MEASURING POINT ELEVATION:	4649.6 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2308	2198	98.06	4551.58	-1.75
06-Feb-93	6	2256	98.11	4551.53	-1.80
06-Feb-93	207	2377	98.19	4551.45	-1.88
06-Feb-93	307	2437	98.22	4551.42	-1.91
06-Feb-93	408	2498	98.25	4551.39	-1.94
06-Feb-93	506	2556	98.30	4551.34	-1.99
06-Feb-93	619	2629	98.34	4551.30	-2.03
06-Feb-93	711	2681	98.42	4551.22	-2.11
06-Feb-93	1108	2918	98.65	4550.99	-2.34
06-Feb-93	1206	2976	98.81	4550.83	-2.50
06-Feb-93	1406	3096	99.26	4550.38	-2.95
06-Feb-93	1505	3155	99.53	4550.11	-3.22
06-Feb-93	1607	3217	99.82	4549.82	-3.51
06-Feb-93	1707	3277	100.09	4549.55	-3.78
06-Feb-93	1808	3338	100.37	4549.27	-4.06
06-Feb-93	1913	3403	100.65	4548.99	-4.34
06-Feb-93	2010	3460	100.91	4548.73	-4.60
06-Feb-93	2110	3520	101.16	4548.48	-4.85
06-Feb-93	2210	3580	101.43	4548.21	-5.12
06-Feb-93	2315	3645	101.69	4547.95	-5.38
07-Feb-93	10	3700	101.89	4547.75	-5.58
07-Feb-93	215	3825	102.33	4547.31	-6.02
07-Feb-93	313	3883	102.52	4547.12	-6.21
07-Feb-93	412	3942	102.70	4546.94	-6.39
07-Feb-93	511	4001	102.88	4546.76	-6.57
07-Feb-93	609	4059	103.05	4546.59	-6.74
07-Feb-93	711	4121	103.25	4546.39	-6.94
07-Feb-93	1014	4304	103.80	4545.84	-7.49

Total Minerals Corporation

Mine Unit 2 – Well No. MW111



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW97D

SURFACE ELEVATION:	4678.0 ft.
EXTENSION:	1.58 ft.
COLLAR HEIGHT:	0.4 ft.
MEASURING POINT ELEVATION:	4680.0 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1030	-4320	129.68	4550.33	0.06
03-Feb-93	1136	-1374	129.75	4550.26	-0.01
04-Feb-93	909	-81	129.74	4550.27	0.00
04-Feb-93	1102	32	129.74	4550.27	0.00
04-Feb-93	1200	90	129.75	4550.26	-0.01
04-Feb-93	1304	154	129.70	4550.31	0.04
04-Feb-93	1404	214	129.70	4550.31	0.04
04-Feb-93	1503	273	129.69	4550.32	0.05
04-Feb-93	1708	398	129.68	4550.33	0.06
04-Feb-93	1803	453	129.68	4550.33	0.06
04-Feb-93	1916	526	129.68	4550.33	0.06
04-Feb-93	2000	570	129.69	4550.32	0.05
04-Feb-93	2100	630	129.70	4550.31	0.04
04-Feb-93	2200	690	129.71	4550.30	0.03
04-Feb-93	2301	751	129.71	4550.30	0.03
05-Feb-93	0	810	129.71	4550.30	0.03
05-Feb-93	200	930	129.68	4550.33	0.06
05-Feb-93	300	990	129.66	4550.35	0.08
05-Feb-93	400	1050	129.65	4550.36	0.09
05-Feb-93	500	1110	129.64	4550.37	0.10
05-Feb-93	600	1170	129.63	4550.38	0.11
05-Feb-93	700	1230	129.63	4550.38	0.11
05-Feb-93	808	1298	129.63	4550.38	0.11
05-Feb-93	913	1363	129.63	4550.38	0.11
05-Feb-93	1105	1475	129.64	4550.37	0.10
05-Feb-93	1203	1533	129.63	4550.38	0.11
05-Feb-93	1410	1660	129.60	4550.41	0.14
05-Feb-93	1503	1713	129.59	4550.42	0.15
05-Feb-93	1602	1772	129.58	4550.43	0.16
05-Feb-93	1701	1831	129.57	4550.44	0.17
05-Feb-93	1803	1893	129.57	4550.44	0.17
05-Feb-93	1900	1950	129.58	4550.43	0.16
05-Feb-93	2001	2011	129.59	4550.42	0.15
05-Feb-93	2100	2070	129.60	4550.41	0.14

APPENDIX 7

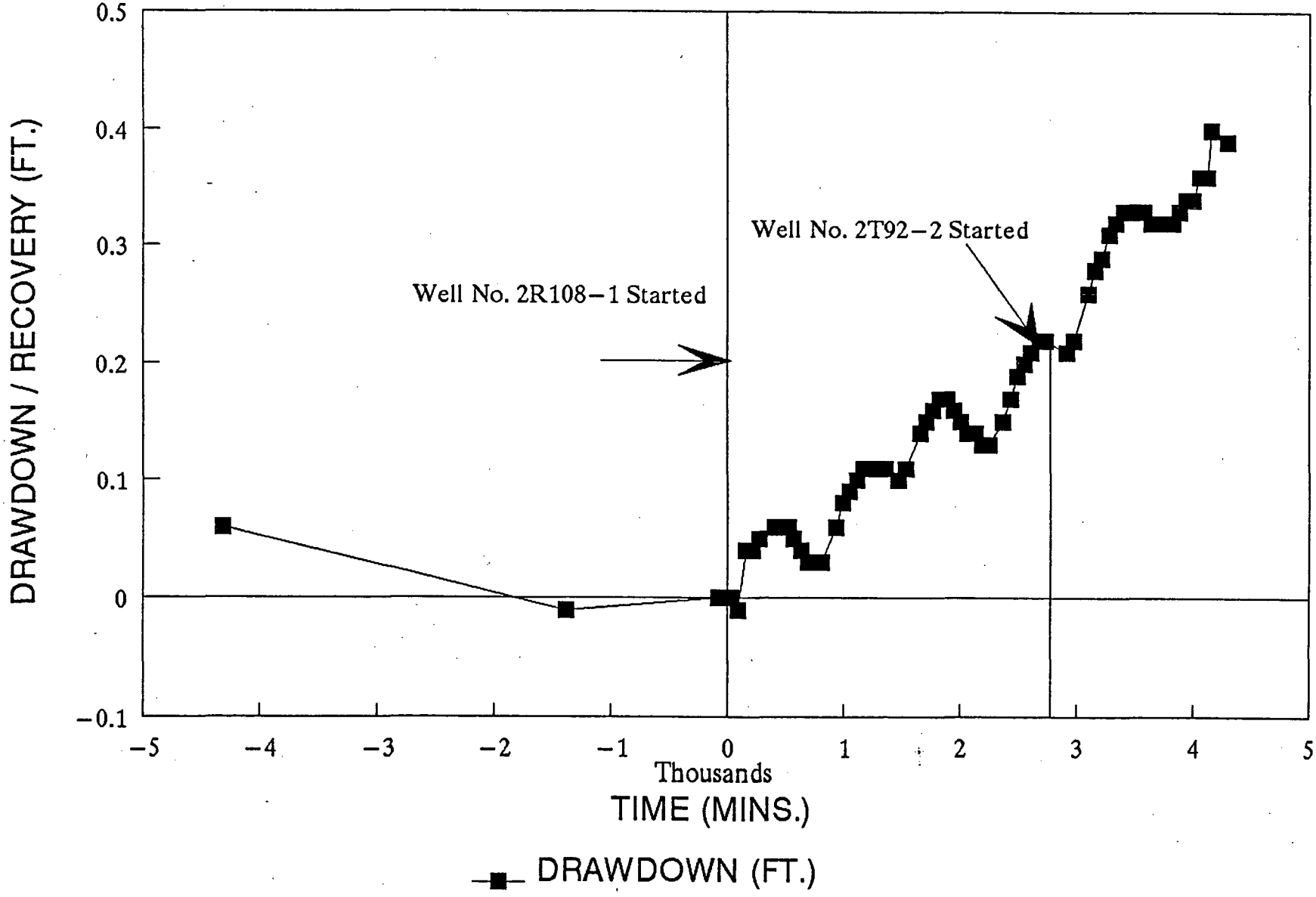
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW97D

SURFACE ELEVATION:	4678.0 ft.
EXTENSION:	1.58 ft.
COLLAR HEIGHT:	0.4 ft.
MEASURING POINT ELEVATION:	4680.0 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2202	2132	129.60	4550.41	0.14
05-Feb-93	2301	2191	129.61	4550.40	0.13
06-Feb-93	0	2250	129.61	4550.40	0.13
06-Feb-93	200	2370	129.59	4550.42	0.15
06-Feb-93	300	2430	129.57	4550.44	0.17
06-Feb-93	401	2491	129.55	4550.46	0.19
06-Feb-93	500	2550	129.54	4550.47	0.20
06-Feb-93	600	2610	129.53	4550.48	0.21
06-Feb-93	706	2676	129.52	4550.49	0.22
06-Feb-93	757	2727	129.52	4550.49	0.22
06-Feb-93	1102	2912	129.53	4550.48	0.21
06-Feb-93	1202	2972	129.52	4550.49	0.22
06-Feb-93	1401	3091	129.48	4550.53	0.26
06-Feb-93	1500	3150	129.46	4550.55	0.28
06-Feb-93	1602	3212	129.45	4550.56	0.29
06-Feb-93	1702	3272	129.43	4550.58	0.31
06-Feb-93	1802	3332	129.42	4550.59	0.32
06-Feb-93	1907	3397	129.41	4550.60	0.33
06-Feb-93	2004	3454	129.41	4550.60	0.33
06-Feb-93	2104	3514	129.41	4550.60	0.33
06-Feb-93	2203	3573	129.41	4550.60	0.33
06-Feb-93	2308	3638	129.42	4550.59	0.32
07-Feb-93	3	3693	129.42	4550.59	0.32
07-Feb-93	208	3818	129.42	4550.59	0.32
07-Feb-93	306	3876	129.41	4550.60	0.33
07-Feb-93	405	3935	129.40	4550.61	0.34
07-Feb-93	504	3994	129.40	4550.61	0.34
07-Feb-93	603	4053	129.38	4550.63	0.36
07-Feb-93	705	4115	129.38	4550.63	0.36
07-Feb-93	743	4153	129.34	4550.67	0.40
07-Feb-93	1000	4290	129.35	4550.66	0.39

Total Minerals Corporation

Mine Unit 2 – Well No. MW97D



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW99D

SURFACE ELEVATION:	4661.6 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.8 ft.
MEASURING POINT ELEVATION:	4662.9 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1102	-4288	115.00	4547.86	0.03
03-Feb-93	1309	-1281	115.06	4547.80	-0.03
04-Feb-93	934	-56	115.03	4547.83	0.00
04-Feb-93	1123	57	114.93	4547.93	0.10
04-Feb-93	1201	95	114.90	4547.96	0.13
04-Feb-93	1302	156	114.88	4547.98	0.15
04-Feb-93	1407	221	114.85	4548.01	0.18
04-Feb-93	1500	274	114.84	4548.02	0.19
04-Feb-93	1700	394	114.83	4548.03	0.20
04-Feb-93	1801	455	114.84	4548.02	0.19
04-Feb-93	1904	518	114.85	4548.01	0.18
04-Feb-93	2000	574	114.84	4548.02	0.19
04-Feb-93	2100	634	114.84	4548.02	0.19
04-Feb-93	2200	694	114.85	4548.01	0.18
04-Feb-93	2300	754	114.85	4548.01	0.18
05-Feb-93	0	814	114.84	4548.02	0.19
05-Feb-93	200	934	114.81	4548.05	0.22
05-Feb-93	300	994	114.79	4548.07	0.24
05-Feb-93	400	1054	114.77	4548.09	0.26
05-Feb-93	500	1114	114.76	4548.10	0.27
05-Feb-93	600	1174	114.75	4548.11	0.28
05-Feb-93	720	1254	114.74	4548.12	0.29
05-Feb-93	902	1356	114.76	4548.10	0.27
05-Feb-93	1001	1415	114.75	4548.11	0.28
05-Feb-93	1101	1475	114.75	4548.11	0.28
05-Feb-93	1200	1534	114.75	4548.11	0.28
05-Feb-93	1402	1656	114.73	4548.13	0.30
05-Feb-93	1502	1716	114.70	4548.16	0.33
05-Feb-93	1602	1776	114.70	4548.16	0.33
05-Feb-93	1701	1835	114.70	4548.16	0.33
05-Feb-93	1803	1897	114.70	4548.16	0.33
05-Feb-93	1900	1954	114.71	4548.15	0.32
05-Feb-93	2000	2014	114.71	4548.15	0.32
05-Feb-93	2100	2074	114.72	4548.14	0.31

APPENDIX 7

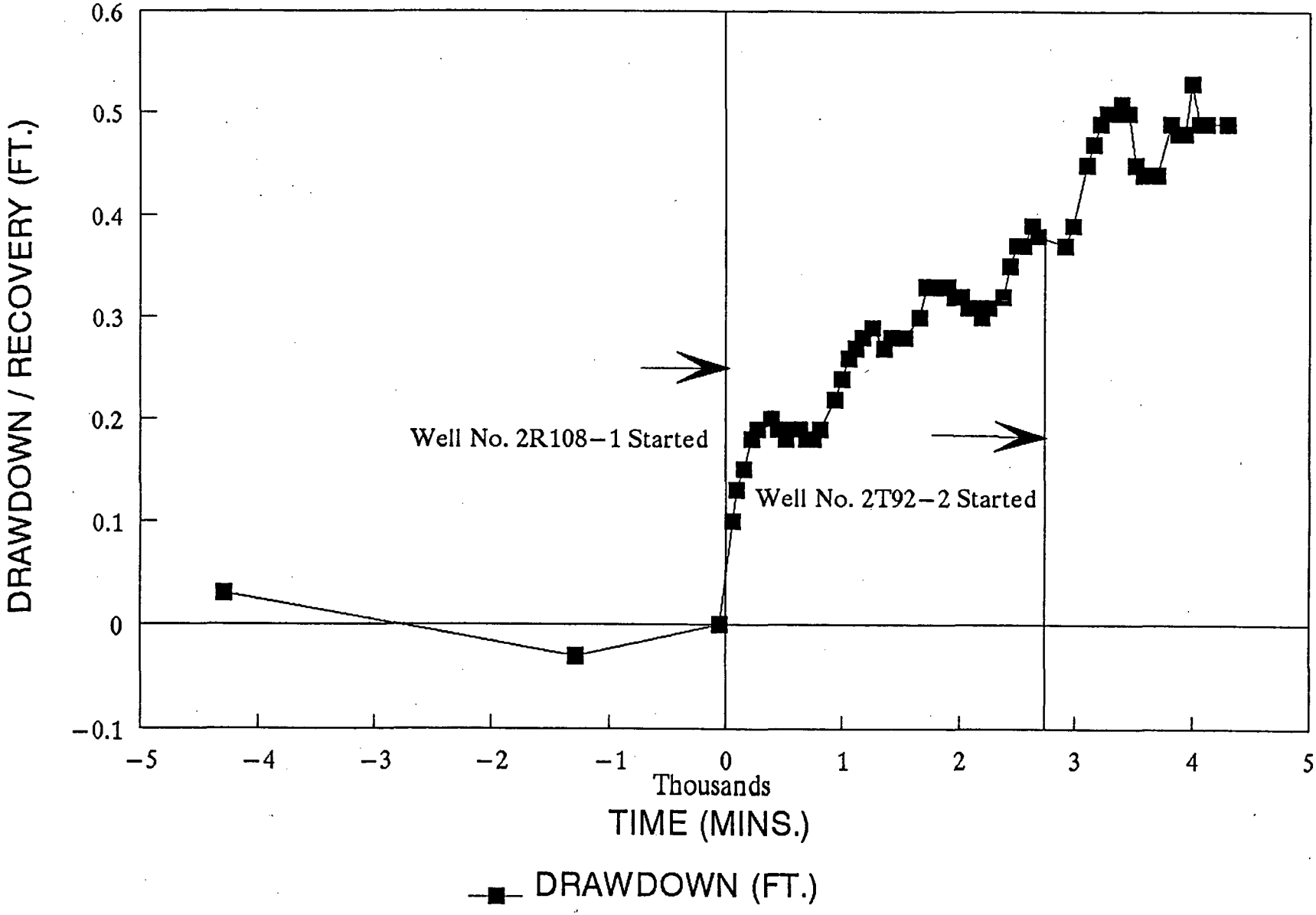
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW99D

SURFACE ELEVATION:	4661.6 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.8 ft.
MEASURING POINT ELEVATION:	4662.9 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2201	2135	114.72	4548.14	0.31
05-Feb-93	2300	2194	114.73	4548.13	0.30
06-Feb-93	0	2254	114.72	4548.14	0.31
06-Feb-93	200	2374	114.71	4548.15	0.32
06-Feb-93	300	2434	114.68	4548.18	0.35
06-Feb-93	400	2494	114.66	4548.20	0.37
06-Feb-93	500	2554	114.66	4548.20	0.37
06-Feb-93	609	2623	114.64	4548.22	0.39
06-Feb-93	700	2674	114.65	4548.21	0.38
06-Feb-93	1101	2915	114.66	4548.20	0.37
06-Feb-93	1201	2975	114.64	4548.22	0.39
06-Feb-93	1403	3097	114.58	4548.28	0.45
06-Feb-93	1502	3156	114.56	4548.30	0.47
06-Feb-93	1601	3215	114.54	4548.32	0.49
06-Feb-93	1700	3274	114.53	4548.33	0.50
06-Feb-93	1802	3336	114.53	4548.33	0.50
06-Feb-93	1906	3400	114.52	4548.34	0.51
06-Feb-93	2002	3456	114.53	4548.33	0.50
06-Feb-93	2101	3515	114.58	4548.28	0.45
06-Feb-93	2203	3577	114.59	4548.27	0.44
06-Feb-93	2304	3638	114.59	4548.27	0.44
07-Feb-93	1	3695	114.59	4548.27	0.44
07-Feb-93	204	3818	114.54	4548.32	0.49
07-Feb-93	303	3877	114.55	4548.31	0.48
07-Feb-93	402	3936	114.55	4548.31	0.48
07-Feb-93	502	3996	114.50	4548.36	0.53
07-Feb-93	601	4055	114.54	4548.32	0.49
07-Feb-93	703	4117	114.54	4548.32	0.49
07-Feb-93	956	4290	114.54	4548.32	0.49

Total Minerals Corporation

Mine Unit 2 – Well No. MW99D



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW113D

SURFACE ELEVATION:	4649.8 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.9 ft.
MEASURING POINT ELEVATION:	4652.3 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1120	-4270	105.45	4546.84	-0.04
03-Feb-93	1022	-1448	105.47	4546.82	-0.06
04-Feb-93	826	-124	105.41	4546.88	0.00
04-Feb-93	1118	48	105.39	4546.90	0.02
04-Feb-93	1221	111	105.38	4546.91	0.03
04-Feb-93	1325	175	105.33	4546.96	0.08
04-Feb-93	1431	241	105.32	4546.97	0.09
04-Feb-93	1526	296	105.31	4546.98	0.10
04-Feb-93	1725	415	105.28	4547.01	0.13
04-Feb-93	1827	477	105.28	4547.01	0.13
04-Feb-93	1933	543	105.28	4547.01	0.13
04-Feb-93	2025	595	105.28	4547.01	0.13
04-Feb-93	2124	654	105.28	4547.01	0.13
04-Feb-93	2223	713	105.28	4547.01	0.13
05-Feb-93	23	833	105.27	4547.02	0.14
05-Feb-93	225	955	105.24	4547.05	0.17
05-Feb-93	324	1014	105.22	4547.07	0.19
05-Feb-93	425	1075	105.2	4547.09	0.21
05-Feb-93	524	1134	105.2	4547.09	0.21
05-Feb-93	625	1195	105.2	4547.09	0.21
05-Feb-93	715	1245	105.2	4547.09	0.21
05-Feb-93	831	1321	105.18	4547.11	0.23
05-Feb-93	933	1383	105.18	4547.11	0.23
05-Feb-93	1027	1437	105.18	4547.11	0.23
05-Feb-93	1134	1504	105.17	4547.12	0.24
05-Feb-93	1228	1558	105.16	4547.13	0.25
05-Feb-93	1431	1681	105.13	4547.16	0.28
05-Feb-93	1528	1738	105.13	4547.16	0.28
05-Feb-93	1624	1794	105.12	4547.17	0.29
05-Feb-93	1723	1853	105.11	4547.18	0.30
05-Feb-93	1827	1917	105.11	4547.18	0.30
05-Feb-93	1923	1973	105.11	4547.18	0.30
05-Feb-93	2023	2033	105.12	4547.17	0.29
05-Feb-93	2123	2093	105.12	4547.17	0.29

APPENDIX 7

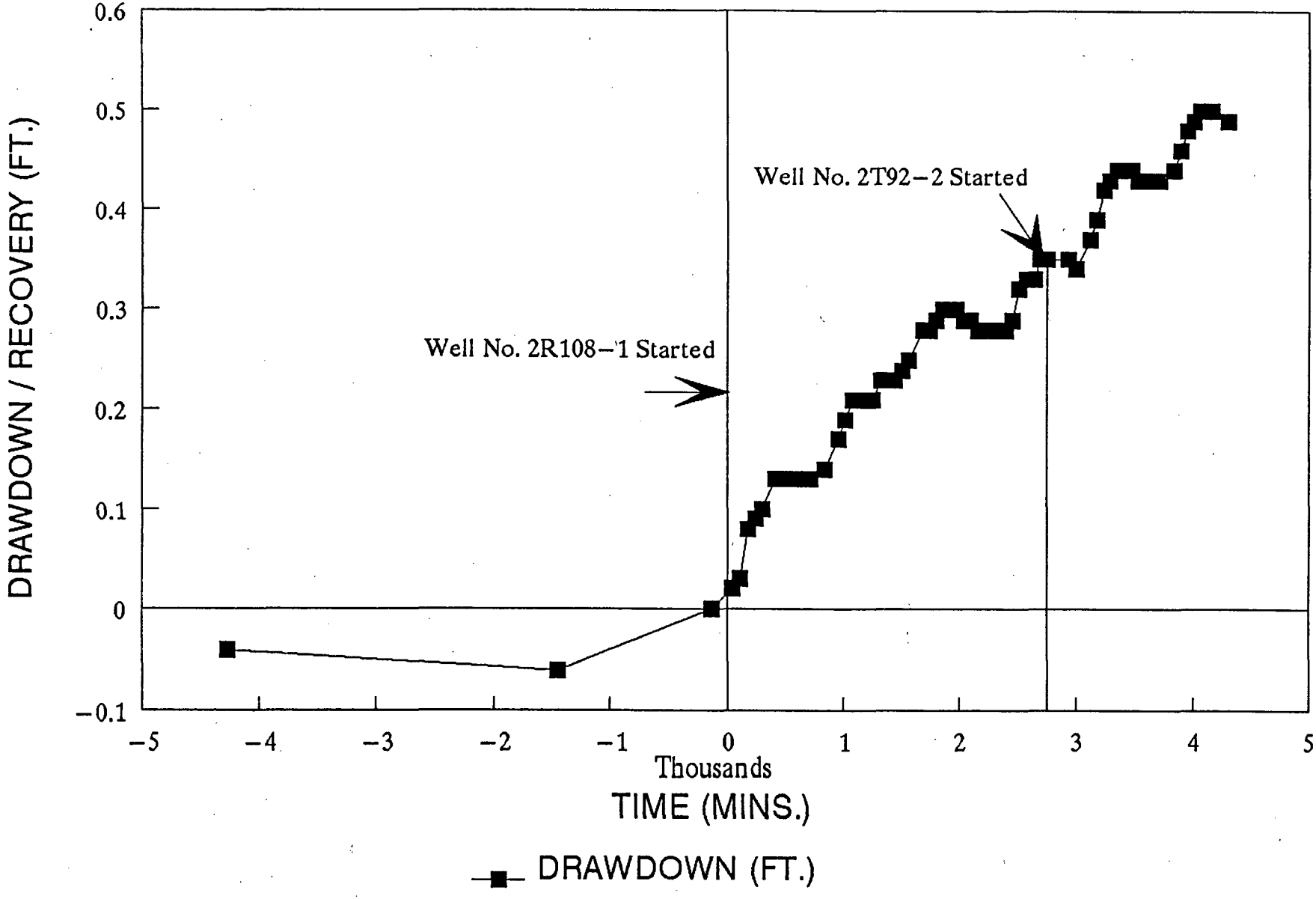
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW113D

SURFACE ELEVATION:	4649.8 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.9 ft.
MEASURING POINT ELEVATION:	4652.3 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2225	2155	105.13	4547.16	0.28
05-Feb-93	2324	2214	105.13	4547.16	0.28
06-Feb-93	24	2274	105.13	4547.16	0.28
06-Feb-93	224	2394	105.13	4547.16	0.28
06-Feb-93	324	2454	105.12	4547.17	0.29
06-Feb-93	425	2515	105.09	4547.20	0.32
06-Feb-93	524	2574	105.08	4547.21	0.33
06-Feb-93	630	2640	105.08	4547.21	0.33
06-Feb-93	722	2692	105.06	4547.23	0.35
06-Feb-93	819	2749	105.06	4547.23	0.35
06-Feb-93	1119	2929	105.06	4547.23	0.35
06-Feb-93	1222	2992	105.07	4547.22	0.34
06-Feb-93	1423	3113	105.04	4547.25	0.37
06-Feb-93	1521	3171	105.02	4547.27	0.39
06-Feb-93	1626	3236	104.99	4547.30	0.42
06-Feb-93	1717	3287	104.98	4547.31	0.43
06-Feb-93	1822	3352	104.97	4547.32	0.44
06-Feb-93	1930	3420	104.97	4547.32	0.44
06-Feb-93	2024	3474	104.97	4547.32	0.44
06-Feb-93	2122	3532	104.98	4547.31	0.43
06-Feb-93	2224	3594	104.98	4547.31	0.43
06-Feb-93	2325	3655	104.98	4547.31	0.43
07-Feb-93	22	3712	104.98	4547.31	0.43
07-Feb-93	226	3836	104.97	4547.32	0.44
07-Feb-93	324	3894	104.95	4547.34	0.46
07-Feb-93	423	3953	104.93	4547.36	0.48
07-Feb-93	522	4012	104.92	4547.37	0.49
07-Feb-93	621	4071	104.91	4547.38	0.50
07-Feb-93	724	4134	104.91	4547.38	0.50
07-Feb-93	757	4167	104.91	4547.38	0.50
07-Feb-93	1016	4306	104.92	4547.37	0.49

Total Minerals Corporation

Mine Unit 2 – Well No. MW113D



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW98S

SURFACE ELEVATION:	4677.5 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.3 ft.
MEASURING POINT ELEVATION:	4679.4 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1034	-4316	121.31	4558.13	0.19
01-Feb-93	1130	-4260	121.30	4558.14	0.20
01-Feb-93	1330	-4140	121.27	4558.17	0.23
01-Feb-93	1530	-4020	121.24	4558.20	0.26
01-Feb-93	1730	-3900	121.23	4558.21	0.27
01-Feb-93	1930	-3780	121.23	4558.21	0.27
01-Feb-93	2130	-3660	121.22	4558.22	0.28
01-Feb-93	2330	-3540	121.21	4558.23	0.29
02-Feb-93	130	-3420	121.20	4558.24	0.30
02-Feb-93	330	-3300	121.20	4558.24	0.30
02-Feb-93	530	-3180	121.20	4558.24	0.30
02-Feb-93	730	-3060	121.20	4558.24	0.30
02-Feb-93	930	-2940	121.21	4558.23	0.29
02-Feb-93	1130	-2820	121.23	4558.21	0.27
02-Feb-93	1330	-2700	121.23	4558.21	0.27
02-Feb-93	1530	-2580	121.23	4558.21	0.27
02-Feb-93	1730	-2460	121.25	4558.19	0.25
02-Feb-93	1930	-2340	121.29	4558.15	0.21
02-Feb-93	2130	-2220	121.33	4558.11	0.17
02-Feb-93	2330	-2100	121.35	4558.09	0.15
03-Feb-93	130	-1980	121.36	4558.08	0.14
03-Feb-93	330	-1860	121.38	4558.06	0.12
03-Feb-93	530	-1740	121.39	4558.05	0.11
03-Feb-93	730	-1620	121.40	4558.04	0.10
03-Feb-93	930	-1500	121.42	4558.02	0.08
03-Feb-93	1139	-1371	121.50	4557.94	0.00
03-Feb-93	1339	-1251	121.50	4557.94	0.00
03-Feb-93	1539	-1131	121.51	4557.93	-0.01
03-Feb-93	1739	-1011	121.51	4557.93	-0.01
03-Feb-93	1939	-891	121.51	4557.93	-0.01
03-Feb-93	2139	-771	121.51	4557.93	-0.01
03-Feb-93	2339	-651	121.52	4557.92	-0.02
04-Feb-93	139	-531	121.52	4557.92	-0.02
04-Feb-93	339	-411	121.51	4557.93	-0.01

APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW98S

SURFACE ELEVATION:	4677.5 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.3 ft.
MEASURING POINT ELEVATION:	4679.4 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
04-Feb-93	539	-291	121.50	4557.94	0.00
04-Feb-93	739	-171	121.50	4557.94	0.00
04-Feb-93	913	-77	121.50	4557.94	0.00
04-Feb-93	1103	33	121.50	4557.94	0.00
04-Feb-93	1201	91	121.50	4557.94	0.00
04-Feb-93	1306	156	121.50	4557.94	0.00
04-Feb-93	1405	215	121.49	4557.95	0.01
04-Feb-93	1504	274	121.48	4557.96	0.02
04-Feb-93	1709	399	121.47	4557.97	0.03
04-Feb-93	1804	454	121.47	4557.97	0.03
04-Feb-93	1917	527	121.47	4557.97	0.03
04-Feb-93	2001	571	121.47	4557.97	0.03
04-Feb-93	2101	631	121.48	4557.96	0.02
04-Feb-93	2201	691	121.48	4557.96	0.02
04-Feb-93	2302	752	121.48	4557.96	0.02
05-Feb-93	0	810	121.48	4557.96	0.02
05-Feb-93	200	930	121.48	4557.96	0.02
05-Feb-93	300	990	121.47	4557.97	0.03
05-Feb-93	401	1051	121.47	4557.97	0.03
05-Feb-93	501	1111	121.46	4557.98	0.04
05-Feb-93	601	1171	121.46	4557.98	0.04
05-Feb-93	703	1233	121.46	4557.98	0.04
05-Feb-93	808	1298	121.44	4558.00	0.06
05-Feb-93	913	1363	121.44	4558.00	0.06
05-Feb-93	1105	1475	121.44	4558.00	0.06
05-Feb-93	1204	1534	121.44	4558.00	0.06
05-Feb-93	1411	1661	121.42	4558.02	0.08
05-Feb-93	1503	1713	121.41	4558.03	0.09
05-Feb-93	1602	1772	121.4	4558.04	0.10
05-Feb-93	1701	1831	121.4	4558.04	0.10
05-Feb-93	1805	1895	121.4	4558.04	0.10
05-Feb-93	1901	1951	121.39	4558.05	0.11
05-Feb-93	2002	2012	121.39	4558.05	0.11
05-Feb-93	2101	2071	121.39	4558.05	0.11
05-Feb-93	2203	2133	121.39	4558.05	0.11

APPENDIX 7

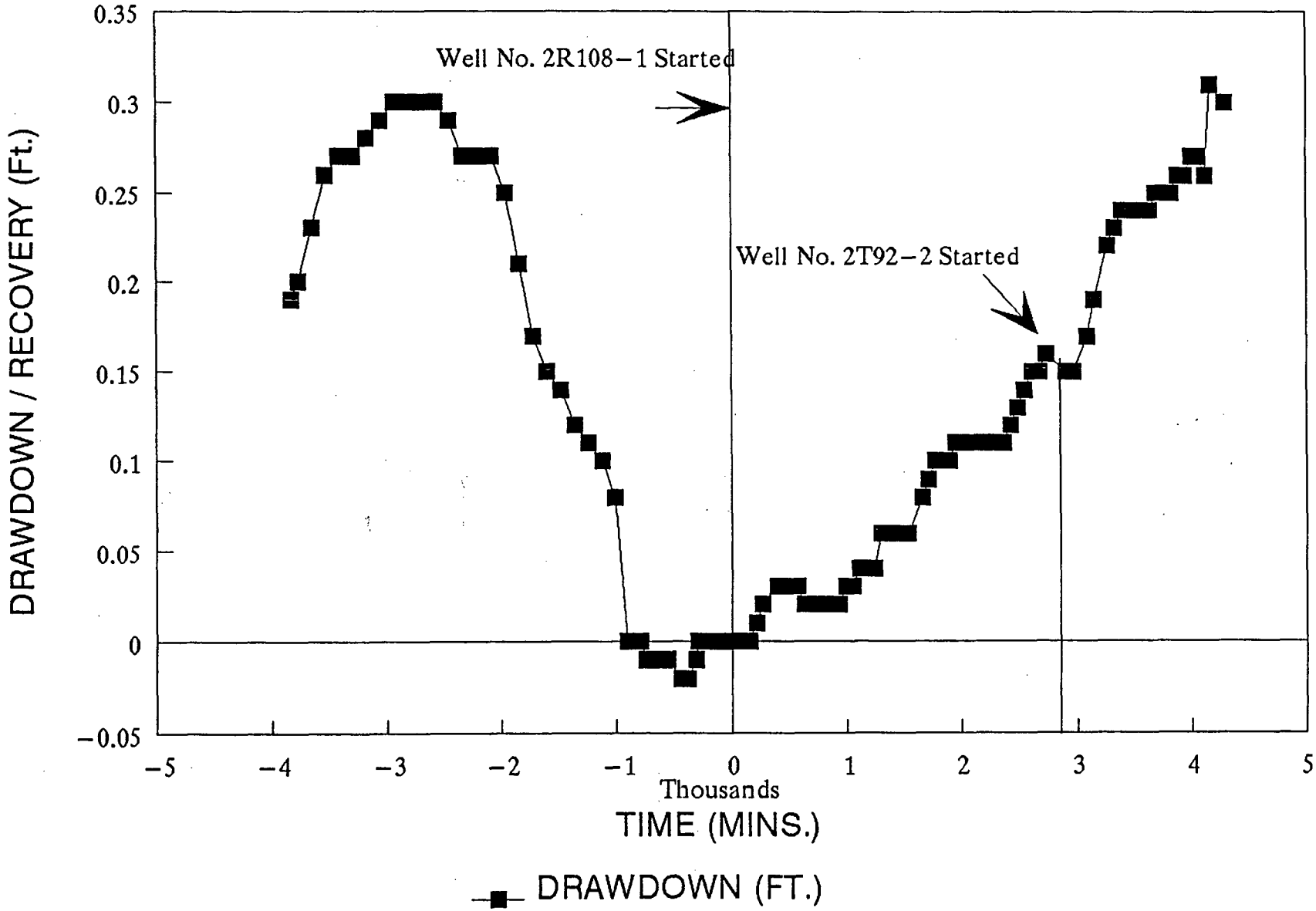
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW98S

SURFACE ELEVATION:	4677.5 ft.
EXTENSION:	1.59 ft.
COLLAR HEIGHT:	0.3 ft.
MEASURING POINT ELEVATION:	4679.4 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2302	2192	121.39	4558.05	0.11
06-Feb-93	1	2251	121.39	4558.05	0.11
06-Feb-93	201	2371	121.39	4558.05	0.11
06-Feb-93	301	2431	121.38	4558.06	0.12
06-Feb-93	402	2492	121.37	4558.07	0.13
06-Feb-93	501	2551	121.36	4558.08	0.14
06-Feb-93	612	2622	121.35	4558.09	0.15
06-Feb-93	707	2677	121.35	4558.09	0.15
06-Feb-93	811	2741	121.34	4558.10	0.16
06-Feb-93	1103	2913	121.35	4558.09	0.15
06-Feb-93	1202	2972	121.35	4558.09	0.15
06-Feb-93	1401	3091	121.33	4558.11	0.17
06-Feb-93	1501	3151	121.31	4558.13	0.19
06-Feb-93	1702	3272	121.28	4558.16	0.22
06-Feb-93	1803	3333	121.27	4558.17	0.23
06-Feb-93	1907	3397	121.26	4558.18	0.24
06-Feb-93	2005	3455	121.26	4558.18	0.24
06-Feb-93	2105	3515	121.26	4558.18	0.24
06-Feb-93	2204	3574	121.26	4558.18	0.24
06-Feb-93	2309	3639	121.26	4558.18	0.24
07-Feb-93	4	3694	121.25	4558.19	0.25
07-Feb-93	209	3819	121.25	4558.19	0.25
07-Feb-93	306	3876	121.24	4558.20	0.26
07-Feb-93	406	3936	121.24	4558.20	0.26
07-Feb-93	505	3995	121.23	4558.21	0.27
07-Feb-93	603	4053	121.23	4558.21	0.27
07-Feb-93	706	4116	121.24	4558.20	0.26
07-Feb-93	749	4159	121.19	4558.25	0.31
07-Feb-93	1001	4291	121.20	4558.24	0.30

Total Minerals Corporation

Mine Unit 2 – Well No. MW98S



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW100S

SURFACE ELEVATION:	4659.4 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4660.5 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1100	-4290	105.20	4555.35	0.30
03-Feb-93	1307	-1283	105.59	4554.96	-0.09
04-Feb-93	931	-59	105.50	4555.05	0.00
04-Feb-93	1124	54	105.46	4555.09	0.04
04-Feb-93	1202	92	105.44	4555.11	0.06
04-Feb-93	1303	153	105.43	4555.12	0.07
04-Feb-93	1408	218	105.40	4555.15	0.10
04-Feb-93	1501	271	105.39	4555.16	0.11
04-Feb-93	1701	391	105.39	4555.16	0.11
04-Feb-93	1802	452	105.41	4555.14	0.09
04-Feb-93	1905	515	105.41	4555.14	0.09
04-Feb-93	2001	571	105.41	4555.14	0.09
04-Feb-93	2101	631	105.41	4555.14	0.09
04-Feb-93	2201	691	105.42	4555.13	0.08
04-Feb-93	2301	751	105.42	4555.13	0.08
05-Feb-93	1	811	105.41	4555.14	0.09
05-Feb-93	201	931	105.40	4555.15	0.10
05-Feb-93	301	991	105.39	4555.16	0.11
05-Feb-93	401	1051	105.38	4555.17	0.12
05-Feb-93	501	1111	105.39	4555.16	0.11
05-Feb-93	601	1171	105.39	4555.16	0.11
05-Feb-93	721	1251	105.39	4555.16	0.11
05-Feb-93	903	1353	105.40	4555.15	0.10
05-Feb-93	1002	1412	105.40	4555.15	0.10
05-Feb-93	1102	1472	105.40	4555.15	0.10
05-Feb-93	1201	1531	105.37	4555.18	0.13
05-Feb-93	1403	1653	105.32	4555.23	0.18
05-Feb-93	1503	1713	105.31	4555.24	0.19
05-Feb-93	1603	1773	105.32	4555.23	0.18
05-Feb-93	1702	1832	105.32	4555.23	0.18
05-Feb-93	1804	1894	105.31	4555.24	0.19
05-Feb-93	1901	1951	105.32	4555.23	0.18
05-Feb-93	2001	2011	105.31	4555.24	0.19
05-Feb-93	2101	2071	105.32	4555.23	0.18

APPENDIX 7

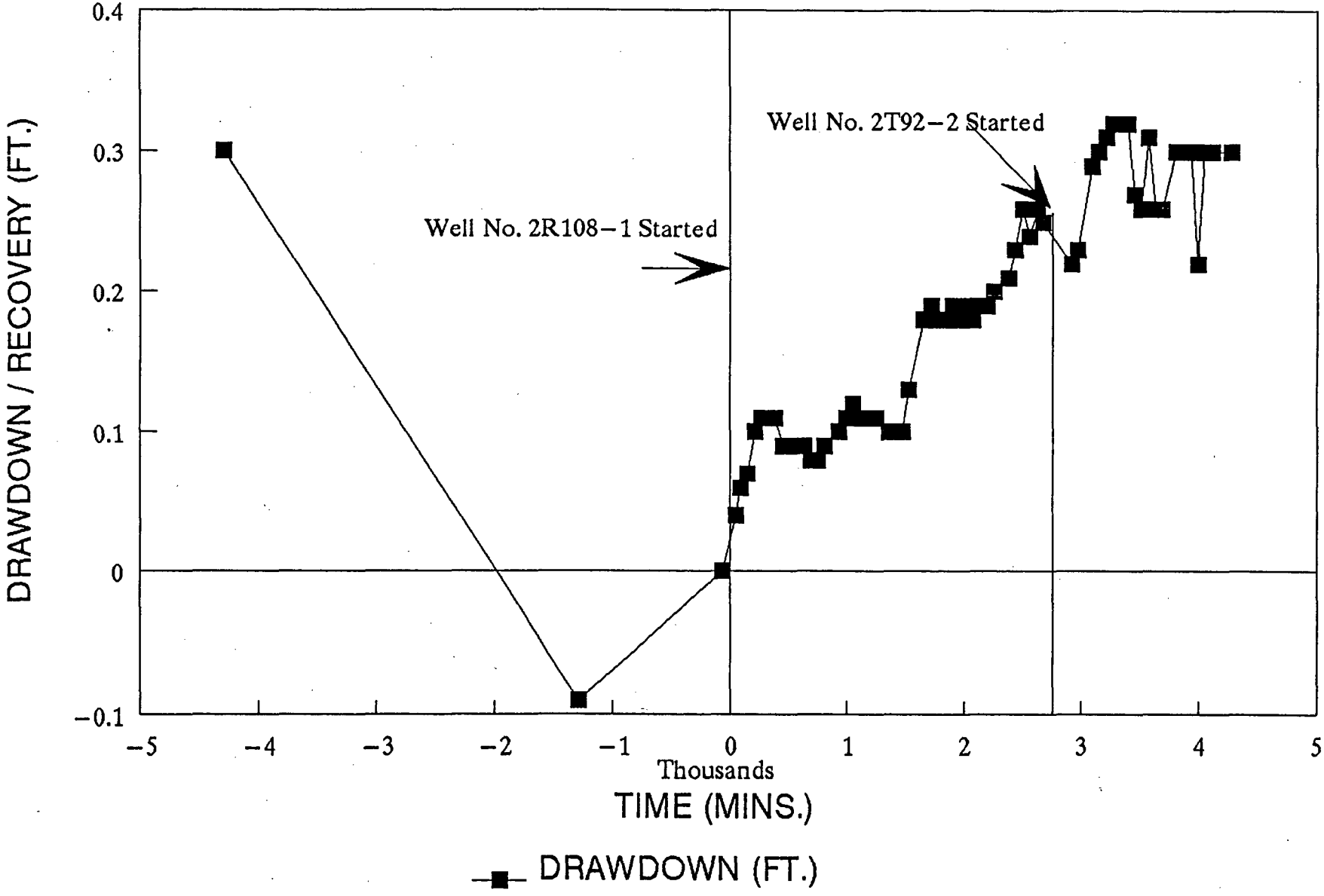
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW100S

SURFACE ELEVATION:	4659.4 ft.
EXTENSION:	0.46 ft.
COLLAR HEIGHT:	0.7 ft.
MEASURING POINT ELEVATION:	4660.5 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2202	2132	105.31	4555.24	0.19
05-Feb-93	2301	2191	105.31	4555.24	0.19
06-Feb-93	1	2251	105.30	4555.25	0.20
06-Feb-93	201	2371	105.29	4555.26	0.21
06-Feb-93	301	2431	105.27	4555.28	0.23
06-Feb-93	401	2491	105.24	4555.31	0.26
06-Feb-93	501	2551	105.26	4555.29	0.24
06-Feb-93	610	2620	105.24	4555.31	0.26
06-Feb-93	701	2671	105.25	4555.30	0.25
06-Feb-93	1102	2912	105.28	4555.27	0.22
06-Feb-93	1202	2972	105.27	4555.28	0.23
06-Feb-93	1404	3094	105.21	4555.34	0.29
06-Feb-93	1503	3153	105.20	4555.35	0.30
06-Feb-93	1602	3212	105.19	4555.36	0.31
06-Feb-93	1701	3271	105.18	4555.37	0.32
06-Feb-93	1803	3333	105.18	4555.37	0.32
06-Feb-93	1907	3397	105.18	4555.37	0.32
06-Feb-93	2003	3453	105.23	4555.32	0.27
06-Feb-93	2102	3512	105.24	4555.31	0.26
06-Feb-93	2204	3574	105.19	4555.36	0.31
06-Feb-93	2305	3635	105.24	4555.31	0.26
07-Feb-93	2	3692	105.24	4555.31	0.26
07-Feb-93	205	3815	105.20	4555.35	0.30
07-Feb-93	304	3874	105.20	4555.35	0.30
07-Feb-93	403	3933	105.20	4555.35	0.30
07-Feb-93	503	3993	105.28	4555.27	0.22
07-Feb-93	602	4052	105.20	4555.35	0.30
07-Feb-93	704	4114	105.20	4555.35	0.30
07-Feb-93	955	4285	105.20	4555.35	0.30

Total Minerals Corporation

Mine Unit 2 – Well No. MW100S



APPENDIX 7

TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW112S

SURFACE ELEVATION:	4650.0 ft.
EXTENSION:	1.60 ft.
COLLAR HEIGHT:	1.0 ft.
MEASURING POINT ELEVATION:	4652.566 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
01-Feb-93	1129	-4261	101.36	4551.21	-0.39
03-Feb-93	1054	-1416	100.99	4551.58	-0.02
04-Feb-93	819	-131	100.97	4551.60	0.00
04-Feb-93	1119	49	100.96	4551.61	0.01
04-Feb-93	1222	112	100.96	4551.61	0.01
04-Feb-93	1330	180	100.87	4551.70	0.10
04-Feb-93	1430	240	100.89	4551.68	0.08
04-Feb-93	1525	295	100.89	4551.68	0.08
04-Feb-93	1727	417	100.88	4551.69	0.09
04-Feb-93	1828	478	100.88	4551.69	0.09
04-Feb-93	1934	544	100.88	4551.69	0.09
04-Feb-93	2026	596	100.88	4551.69	0.09
04-Feb-93	2125	655	100.87	4551.70	0.10
04-Feb-93	2224	714	100.87	4551.70	0.10
04-Feb-93	2325	775	100.87	4551.70	0.10
05-Feb-93	24	834	100.87	4551.70	0.10
05-Feb-93	226	956	100.86	4551.71	0.11
05-Feb-93	325	1015	100.86	4551.71	0.11
05-Feb-93	426	1076	100.86	4551.71	0.11
05-Feb-93	525	1135	100.85	4551.72	0.12
05-Feb-93	626	1196	100.85	4551.72	0.12
05-Feb-93	714	1244	100.85	4551.72	0.12
05-Feb-93	850	1340	100.80	4551.77	0.17
05-Feb-93	932	1382	100.80	4551.77	0.17
05-Feb-93	1026	1436	100.80	4551.77	0.17
05-Feb-93	1133	1503	100.80	4551.77	0.17
05-Feb-93	1227	1557	100.80	4551.77	0.17
05-Feb-93	1430	1680	100.79	4551.78	0.18
05-Feb-93	1527	1737	100.78	4551.79	0.19
05-Feb-93	1624	1794	100.78	4551.79	0.19
05-Feb-93	1722	1852	100.78	4551.79	0.19
05-Feb-93	1828	1918	100.77	4551.80	0.20
05-Feb-93	1924	1974	100.77	4551.80	0.20
05-Feb-93	2024	2034	100.77	4551.80	0.20

APPENDIX 7

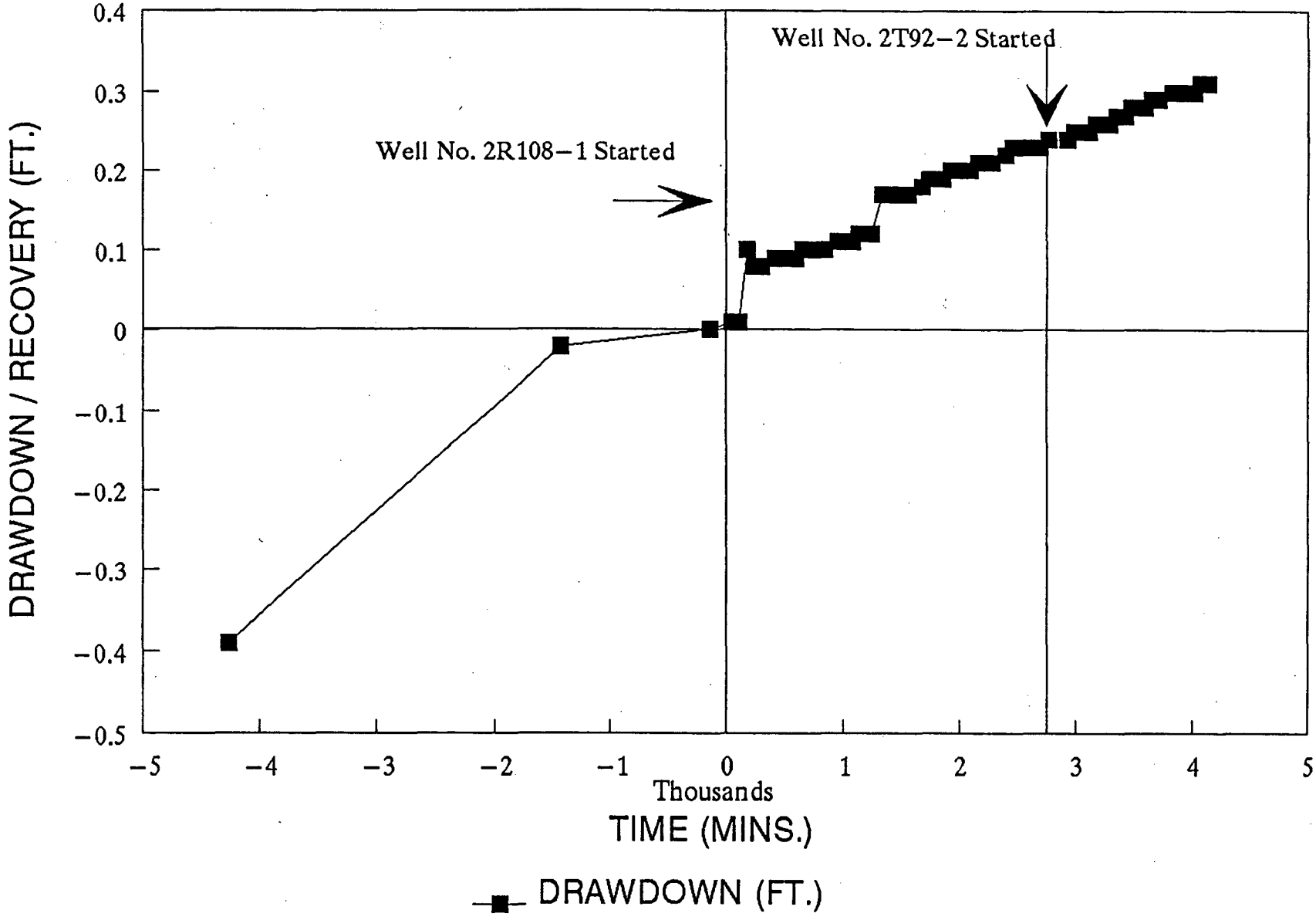
TABLE 5
OBSERVATION WELL WATER LEVELS
FOR WELL NUMBER
MW112S

SURFACE ELEVATION:	4650.0 ft.
EXTENSION:	1.60 ft.
COLLAR HEIGHT:	1.0 ft.
MEASURING POINT ELEVATION:	4652.566 ft. Above M.S.L.

DATE	TIME	MINS	W.L. BELOW SURFACE (FT.)	W.L. ABOVE M.S.L. (FT.)	CHANGE
05-Feb-93	2124	2094	100.77	4551.80	0.20
05-Feb-93	2226	2156	100.76	4551.81	0.21
05-Feb-93	2325	2215	100.76	4551.81	0.21
06-Feb-93	25	2275	100.76	4551.81	0.21
06-Feb-93	225	2395	100.75	4551.82	0.22
06-Feb-93	325	2455	100.74	4551.83	0.23
06-Feb-93	426	2516	100.74	4551.83	0.23
06-Feb-93	525	2575	100.74	4551.83	0.23
06-Feb-93	631	2641	100.74	4551.83	0.23
06-Feb-93	722	2692	100.74	4551.83	0.23
06-Feb-93	833	2763	100.73	4551.84	0.24
06-Feb-93	1120	2930	100.73	4551.84	0.24
06-Feb-93	1221	2991	100.72	4551.85	0.25
06-Feb-93	1424	3114	100.72	4551.85	0.25
06-Feb-93	1520	3170	100.71	4551.86	0.26
06-Feb-93	1621	3231	100.71	4551.86	0.26
06-Feb-93	1717	3287	100.71	4551.86	0.26
06-Feb-93	1823	3353	100.7	4551.87	0.27
06-Feb-93	1931	3421	100.7	4551.87	0.27
06-Feb-93	2025	3475	100.69	4551.88	0.28
06-Feb-93	2123	3533	100.69	4551.88	0.28
06-Feb-93	2225	3595	100.69	4551.88	0.28
06-Feb-93	2326	3656	100.68	4551.89	0.29
07-Feb-93	23	3713	100.68	4551.89	0.29
07-Feb-93	227	3837	100.67	4551.90	0.30
07-Feb-93	325	3895	100.67	4551.90	0.30
07-Feb-93	424	3954	100.67	4551.90	0.30
07-Feb-93	523	4013	100.67	4551.90	0.30
07-Feb-93	622	4072	100.66	4551.91	0.31
07-Feb-93	725	4135	100.66	4551.91	0.31
07-Feb-93	806	4176	100.65	4551.92	0.32
07-Feb-93	1016	4306	100.65	4551.92	0.32

Total Minerals Corporation

Mine Unit 2 – Well No. MW112S



APPENDIX 7

TABLE 6
BAROMETRIC PRESSURE RECORDINGS
MINE UNIT 2 NORTH PUMP TEST

ON SITE READINGS			
DATE	TIME	BAROMETRIC PRESSURE (Inches of Mercury)	CHANGE
04-Feb-93	800	30.48	0.00
04-Feb-93	1200	30.45	-0.03
04-Feb-93	1600	30.40	-0.05
04-Feb-93	2000	30.39	-0.01
05-Feb-93	0	30.40	0.01
05-Feb-93	400	30.38	-0.02
05-Feb-93	800	30.38	0.00
05-Feb-93	1200	30.35	-0.03
05-Feb-93	1600	30.28	-0.07
05-Feb-93	2000	30.29	0.01
06-Feb-93	0	30.27	-0.02
06-Feb-93	400	30.23	-0.04
06-Feb-93	800	30.22	-0.01
06-Feb-93	1200	30.26	0.04
06-Feb-93	1600	30.18	-0.08
06-Feb-93	2000	30.16	-0.02
07-Feb-93	0	30.18	0.02
07-Feb-93	400	30.17	-0.01
07-Feb-93	800	30.16	-0.01
07-Feb-93	1200	30.18	0.02
07-Feb-93	1600	30.14	-0.04
07-Feb-93	2000	30.16	0.02

Barometric presures recorded on site.

APPENDIX 7

TABLE 6
BAROMETRIC PRESSURE RECORDINGS
MINE UNIT 2 NORTH PUMP TEST

READINGS AT GILLETTE AIRPORT			
DATE	TIME	BAROMETRIC PRESSURE (Inches of Mercury)	CHANGE
01-Feb-93	523	30.10	0.00
01-Feb-93	850	30.05	-0.05
01-Feb-93	1150	30.00	-0.05
01-Feb-93	1450	29.95	-0.05
01-Feb-93	1750	29.95	0.00
01-Feb-93	2050	29.93	-0.02
01-Feb-93	2150	29.92	-0.01
02-Feb-93	515	29.90	-0.02
02-Feb-93	850	29.95	0.05
02-Feb-93	1150	29.99	0.04
02-Feb-93	1450	30.02	0.03
02-Feb-93	1750	30.11	0.09
02-Feb-93	2050	30.19	0.08
03-Feb-93	456	30.27	0.08
03-Feb-93	750	30.31	0.04
03-Feb-93	1050	30.35	0.04
03-Feb-93	1350	30.32	-0.03
03-Feb-93	1650	30.32	0.00
03-Feb-93	1950	30.33	0.01
03-Feb-93	2150	30.34	0.01
04-Feb-93	501	30.32	-0.02
04-Feb-93	850	30.28	-0.04
04-Feb-93	1150	30.29	0.01
04-Feb-93	1450	30.25	-0.04
04-Feb-93	1750	30.23	-0.02
04-Feb-93	2050	30.24	0.01
04-Feb-93	2150	30.24	0.00
05-Feb-93	500	30.25	0.01
05-Feb-93	850	30.22	-0.03
05-Feb-93	1150	30.20	-0.02
05-Feb-93	1450	30.16	-0.04
05-Feb-93	1750	30.15	-0.01
05-Feb-93	2050	30.13	-0.02
06-Feb-93	519	30.08	-0.05

APPENDIX 7

TABLE 6
BAROMETRIC PRESSURE RECORDINGS
MINE UNIT 2 NORTH PUMP TEST

READINGS AT GILLETTE AIRPORT			
DATE	TIME	BAROMETRIC PRESSURE (Inches of Mercury)	CHANGE
06-Feb-93	850	30.08	0.00
06-Feb-93	1150	30.09	0.01
06-Feb-93	1450	30.04	-0.05
06-Feb-93	1750	30.04	0.00
06-Feb-93	2050	30.02	-0.02
06-Feb-93	2150	30.03	0.01
07-Feb-93	550	29.99	-0.04
07-Feb-93	850	30.01	0.02
07-Feb-93	1150	30.03	0.02
07-Feb-93	1450	30	-0.03
07-Feb-93	1750	30.02	0.02
07-Feb-93	2050	30.02	0.00
07-Feb-93	2150	30.02	0.00

** Data Collected from Campbell County Airport – Gillette, Wyoming

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39 tagged files using 1,338,189 bytes

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APPENDX2.FM3	46,964	.a..	4-02-93	12:22:24	pm
APPENDX2.PRN	95,379	.a..	4-09-93	2:12:36	pm
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SHALLOW .PRN	6,216	.a..	4-09-93	2:20:14	pm
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TABLE1 .WK3	10,046	.a..	4-02-93	12:39:34	pm
TABLE6 .FM3	3,127	....	4-08-93	10:41:34	am
TABLE6 .PRN	1,912	.a..	4-09-93	2:23:32	pm
TABLE6 .WK3	3,808	....	4-08-93	10:41:34	am
TABLE7 .FM3	1,637	.a..	4-02-93	8:53:38	am
TABLE7 .PRN	2,127	.a..	4-09-93	2:24:16	pm
TABLE7 .WK3	3,773	.a..	4-02-93	8:53:38	am
TBL2APP6.FM3	4,200	.a..	4-02-93	11:42:10	am
TBL2APP6.PRN	35,474	.a..	4-09-93	2:25:22	pm
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TBL3APP6.FM3	4,134	.a..	4-02-93	11:19:50	am
TBL3APP6.PRN	13,236	.a..	4-09-93	2:26:16	pm
TBL3APP6.WK3	82,322	.a..	4-02-93	11:19:50	am
TBL4APP6.FM3	4,101	.a..	4-02-93	11:19:16	am
TBL4APP6.PRN	30,106	.a..	4-09-93	2:31:28	pm
TBL4APP6.WK3	52,124	.a..	4-02-93	11:19:16	am
TBL5APP6.FM3	4,026	.a..	4-02-93	11:18:56	am
TBL5APP6.PRN	22,829	.a..	4-09-93	2:32:16	pm
TBL5APP6.WK3	45,104	.a..	4-02-93	11:18:56	am

Path: B:\MU2NORTH\NPMPTEST
21 tagged files using 704,675 bytes

APP7TBL1.FM3	369	.a..	3-25-93	9:20:20	am
APP7TBL1.WK3	775	.a..	3-25-93	9:20:20	am
APP7TBL2.FM3	1,638	.a..	4-02-93	3:58:02	pm
APP7TBL2.PRN	3,705	.a..	4-09-93	2:34:06	pm
APP7TBL2.WK3	9,057	.a..	4-02-93	3:58:02	pm
APP7TBL3.FM3	1,644	.a..	4-01-93	12:42:50	pm
APP7TBL3.PRN	12,506	.a..	4-09-93	2:34:48	pm
APP7TBL3.WK3	46,723	.a..	4-01-93	12:42:50	pm
APP7TBL4.FM3	2,562	.a..	4-02-93	10:07:30	am
APP7TBL4.PRN	4,711	.a..	4-09-93	2:35:30	pm
APP7TBL4.WK3	17,037	.a..	4-02-93	10:07:30	am
APP7TBL5.FM3	3,935	.a..	4-01-93	10:17:12	am
APP7TBL5.PRN	119,779	.a..	4-09-93	2:37:02	pm
APP7TBL5.WK3	377,444	.a..	4-01-93	10:17:12	am
APP7TBL6.FM3	638	.a..	4-01-93	10:31:58	am
APP7TBL6.PRN	11,881	.a..	4-09-93	2:38:28	pm
APP7TBL6.WK3	11,922	.a..	4-01-93	10:31:58	am
MW112S .FM3	369	.a..	2-18-93	2:38:18	pm
MW112S .WK3	17,426	.a..	2-18-93	2:24:56	pm
MW98S .FM3	2,388	.a..	2-22-93	10:11:46	am
MW98S .WK3	58,166	.a..	2-22-93	9:58:08	am