GENWAL Resources, Inc.

Crandall Canyon Mine

2000 Annual Report

Permit C/015/032

File in:
☐ Confidential
☒ Shelf
☐ Expandable
Refer to Record No 0003 Date 3/30/01
In C/015/0032, 2001, Incoming
For additional information

GENERAL INFORMATION

1. Permit Number	ACT/015/032
2. Mine Name	Crandall Canyon Mine
3. Permittee Name	GENWAL Resources, Inc.
4. Operator Name (if other than Permittee)	Same
5. Permit Expiration Date	May 13, 2003
6. Permit Number	ACT/015/032
7. Company Representative, Title	Gary E. Gray, Agent/Engineer
8. Phone Number	435-687-9813
9. Fax Number	435-687-9784
10. E-mail Address	ggray@andalex.com
11. Mailing Address	195 North 100 West
	P.O. Box 1420
	Huntington, UT 84528
12. Resident Agent, Title	Gary E. Gray, Engineer
13. Mailing Address	Same
14. Number of Binders Submitted	2

IDENTIFICATION OF OTHER PERMITS

Identify other permits which are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expires on
1. MSHA Mine ID(s)	42-01715	Underground Coal Mine	N/A
2. MSHA Impoundment(s)	N/A		

3. NPDES/UPDES Permit(s) (water)	UT0024368		08/31/2005
4. PSD (Air) Permit(s)	DAQE798-97		N/A
5.			
6.			

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX A to this Annual Report or currently ON FILE with the Division.

Certified Reports:	Reports Required?		INCLUDED or ON FILE w/DOGM?		Comments
	YES	NO	Included	ON FILE	
1. Excess Spoil Piles		X			
2. Refuse Piles		X			
3. Impoundments		X			
4. Sediment Pond	X		X		Annual
5.					

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX B to this Annual Report or currently ON FILE with the Division.

Technical Data:	Reports Required?		INCLUDED or ON FILE w/DOGM?		Comments
	YES	NO	Included	ON FILE	
1. Climatological Data	X		X		
2. Subsidence Monitoring Data	X		X		
3. Vegetation Monitoring Data		X	X		Top Spoil Pile Inspection by Pat Collins
4. Raptor Survey		X			No Survey Required in 2000, next due in 2001
5. Soils Monitoring Data		X			
6. Water Monitoring Data					

First Quarter Report	X		X		
Second Quarter Report	X		X		
Third Quarter Report	X		X		
Fourth Quarter Report	X		X		
7. Geological/Geophysical Data		X			
8. Engineering Data		X			
9. Other Data					
Abandoned Underground Equipment	X		X		None abandoned
Water Monitoring Data Analysis	X		X		

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Changes in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the Annual Report. Provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other changes as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include any certified financial statements, audits or worksheets which may be required to meet bonding requirements. Specify whether the information is currently ON FILE with the Division or included as APPENDIX C to this Annual Report.

Legal/Financial Data:	Report Required?		INCLUDED or ON FILE w/DOGM?		Comments
	YES	NO	Included	ON FILE	
1. Department of Commerce, Annual Report of Officers	X		X		No Changes from Last Year
2. Other					

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 1998, are to be provided to the Division as APPENDIX D to this Annual Report in accordance with the requirements of R645-301-525.270. These map copies shall be made in accordance with 30 CFR 75.1200, as required by MSHA. Upon request, mine maps shall be kept confidential by the Division.

Map Number(s)	Map Title / Description	Confidential?
	Mine Map	Yes

OTHER INFORMATION

Please provide any comments or further information to be included as part of the Annual Report. Any other attachments are to be provided as APPENDIX E to this Annual Report. If information is submitted as a group rathe then by individual mine. Please identify each of the mines data in the list below.

Additional attachments to this report? X **No** ☐ **Yes**

APPENDIX A

Certified Reports

Excess Spoil Piles
Refuse Piles
Impoundments

as required under R645-301-514

Annual Pond Inspection

SEDIMENT POND INSPECTION AND CERTIFIED REPORT			Page 1 of 3
Permit Number	ACT/015/032	**Report Date**	1/3/01
Mine Name	Crandall Canyon Mine		
Company Name	Genwal Resources Inc.		
Sediment Pond Identification	**Sediment Pond Name**	Genwal Sediment Pond No. 1	
	UPDES Permit Number	UT0024368	

SEDIMENT POND INSPECTION

Inspection Date	12/14/00
Inspected By	John C. Lewis & Gary E. Gray
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Annual

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None Observed

Required for an impoundment which functions as a SEDIMENTATION POND.

2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.

Total sediment storage capacity = 0.4834 acre feet.

60% sediment storage volume elevation = 7894.00 feet.

100% storage volume elevation = 7895.00 feet.

Existing average elevation of sediment = 7892.00 feet.

3. Principal and emergency spillway elevations.

Principal spillway elevation = 7905.81 feet.

Emergency spillway elevation = 7906.81 feet.

4. Field Information. Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on outslopes of embankments, etc.

Water elevation = 7898 feet.

Pond discharge = no discharge.

Samples = no discharge/none taken.

Inlet condition = no observable problems.

Outlet condition = no observable problems.

Embankment show no signs of erosion, instability or hazardous conditions.

5. Field Evaluation. Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

Pond is frozen and covered with snow impounding approximately 1.06 acre feet of water and 0.15 acre feet of sediment. Remaining sediment storage capacity is approximately 0.175 acre feet to cleanout level. No observable conditions were apparent that could affect the stability or function of the structure.

Qualification Statement

1/3/01

UTAH REGISTERED PROFESSIONAL ENGINEER #191488 JOHN CHRISTOPHER LEWIS

I hereby certify that; this sediment pond was constructed under the direction of a Registered Professional Engineer that was experienced in the construction/design of impoundments. I am qualified and authorized to inspect the condition and appearance of impoundments/sediment ponds in accordance with the certified and approved designs for this structure; that the impoundment/sediment pond has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: John C. Lewis **Date:** 1-3-01

CERTIFIED REPORT

SEDIMENT POND EVALUATION (If NO, explain under Comments)	YES	NO
1. Is sediment pond designed and constructed in accordance with the approved plan?	X	
2. Is sediment pond free of instability, structural weakness, or any other hazardous condition?	X	
3. Has the sediment pond met all applicable performance standards and effluent limitations from the previous date of inspection?	X	

COMMENTS AND OTHER INFORMATION

Certification Statement:

UTAH REGISTERED #191488 JOHN CHRISTOPHER LEWIS PROFESSIONAL ENGINEER

I hereby certify that; this sediment pond was constructed under the direction of a Registered Professional Engineer that was experienced in the construction/design of impoundments. I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments/sediment ponds in accordance with the certified and approved designs for this structure; that the impoundment/sediment pond has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: John C. Lewis Mining Engineer
(Full Name and Title)

Signature: John C. Lewis **Date:** 1-3-01

P.E. Number & State: 191488 Utah

Sediment Pond Capacity

In September of 2000, the sediment pond was partially dredged. The dredged material (mostly coal fines) was pumped up to a temporary settling basin set up in the old coal storage area. After dewatering the material was placed into the coal pile and subsequently hauled to the loadouts.

Approximately 200 cubic yards was removed from the pond. The material removed from the pond was located at the three inlets to the pond. Approximately 50 per cent of the material was removed, so the remaining 200 cubic yards translates into 0.125 acre-feet left in the pond. The three year volume is 0.336 acre-feet.

APPENDIX B

Reporting of Technical Data

including monitoring data, reports, maps, and other information
as required under the approved plan
or as required by the Division

in accordance with the requirements of R645-301-130 and R645-301-140.

Precipitation Log

Subsidence Data

Abandoned Equipment

Water Data Analysis

GENWAL Resources, Inc.

Precipitation Log -- 2000

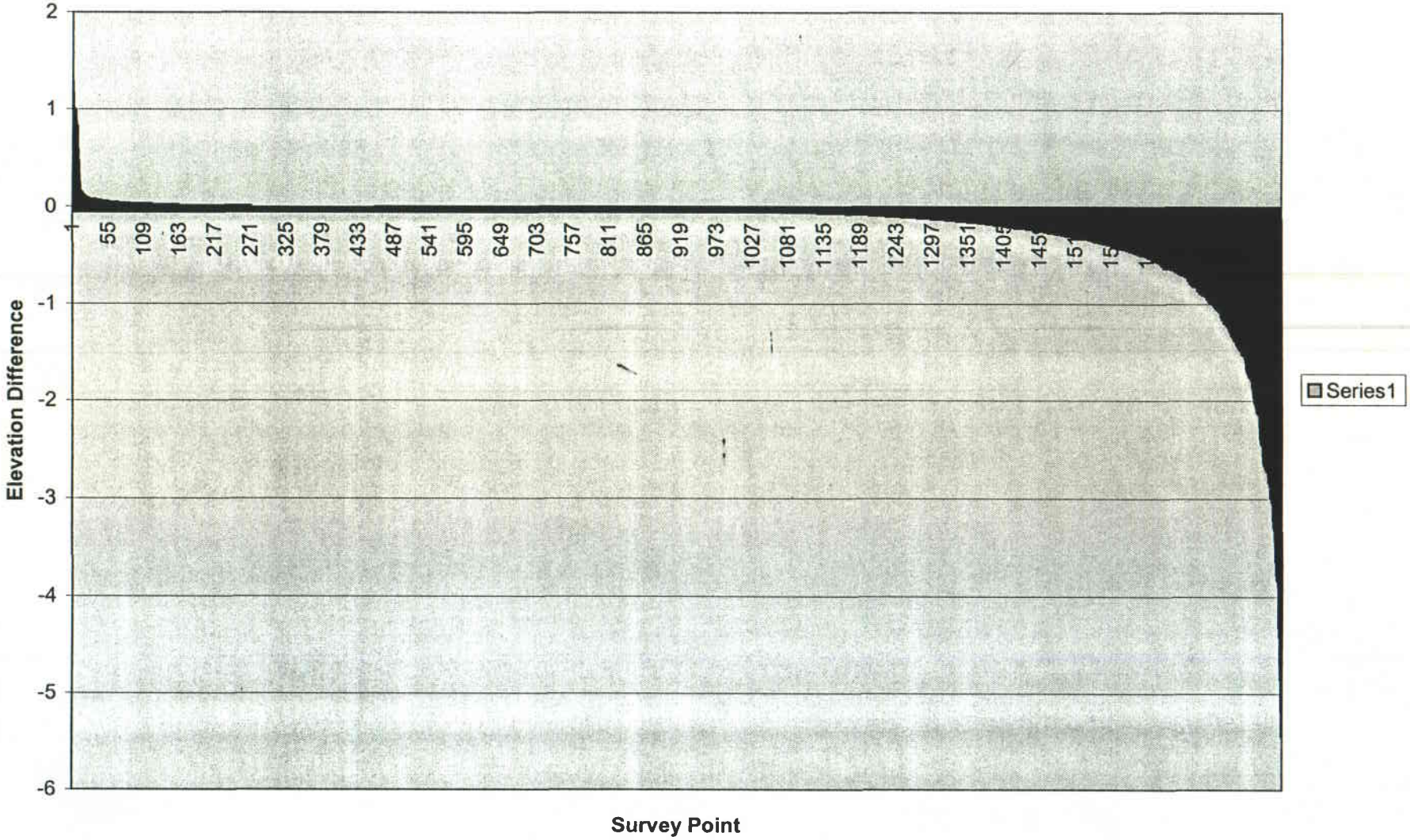
Date	Amount (inches)	Type
1/7	4	snow
1/9	5	snow
1/14	2	snow
1/27	10	snow
2/9	2	snow
2/11	1	snow
2/12	3	snow
2/13	15	snow
2/14	4	snow
2/15	5	snow
2/17	8	snow
2/21	4	snow
2/24	12	snow
3/1	4	snow
3/6	11.5	snow
3/9	4	snow
3/10	4	snow
3/15	3.5	snow
3/18	2	snow
3/22	4.5	snow
3/30	3	snow
4/14	trace	rain
5/8	1.50	rain
5/10	trace	rain
5/11	0.25	rain
5/18	trace	rain
5/24	trace	rain
5/25	trace	rain
6/18	0.40	rain
6/19	0.25	rain
6/22	trace	rain
6/23	trace	rain
6/24	trace	rain
6/28	trace	rain
7/10	0.75	rain
7/15	trace	rain
7/16	trace	rain
7/17	0.10	rain
7/23	0.10	rain
7/25	0.25	rain
7/30	0.20	rain
8/3	trace	rain
8/4	trace	rain
8/16	0.10	rain
8/17	0.30	rain
8/22	0.15	rain
8/23	trace	rain
8/26	0.50	rain
8/27	trace	rain
8/28	trace	rain
8/29	trace	rain
8/30	0.45	rain
8/31	trace	rain
9/1	0.60	rain
9/21	1.20	rain
9/22	0.25	rain
9/23	0.40	rain
10/10	1.35	rain
10/11	0.75	rain/snow
10/12	1	snow
10/21	0.75	rain
10/22	0.50	rain
10/23	0.75	rain
10/24	0.30	rain
10/25	0.10	rain
10/26	trace	rain
10/27	0.15	rain
10/28	0.20	rain
10/29	0.10	rain
10/30	6	snow
10/31	4	snow
11/1	trace	rain/snow
11/5	2	snow
11/6	1	snow
11/7	4	snow
11/8	6	snow
11/9	0.5	snow
11/10	2	snow
12/8	3	snow
12/9	2	snow
12/10	5	snow
12/11	1	snow
12/12	0.5	snow
12/14	2	snow
12/15	10	snow
12/24	8	snow
12/25	4	snow

Subsidence

The subsidence of the surface at Genwal due to longwall mining has been monitored annually by photogrammetric methods for many years. Longwall mining commenced in 1995, and has continuously operated since then. The practice of longwall mining at Genwal is somewhat different than at other mines in Utah. No large areas have been mined out in one block at Genwal. This considerably reduces the amount of surface subsidence over the mined areas. Also Genwal only mines one seam. Keeping these differences in mind, the amount of subsidence at Genwal is less than at other mines.

The subsidence monitoring program covers 1832 points on the surface over the entire permit area. Many of these are over areas which have not had any mining. In fact 1204 points have no movement, and 1715 points have less than 1 foot movement. Only 93 points have movement from 1 foot to 6 foot range. The maximum is 5.4 feet. The average of the 93 points is 2.4 feet.

Subsidence Survey



Olympus Aerial Surveys, Inc. Job No. 200098
Report for October 20, 2000
For
GENWAL RESOURCES, INC.
BLIND CANYON SUBSIDENCE STUDY

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B101	2093382.1	418448.1	7983.25	-0.11	7983.14	B101	
B102	2093095.5	418588.9	7956.35	-0.43	7955.93	B102	
B103	2092766.5	418580.6	7994.95	-0.11	7994.84	B103	
B104	2092531.7	418505.7	8015.98	-0.03	8015.94	B104	
B105	2092198.6	418539.8	8157.40	-0.19	8157.20	B105	
B106	2091912.2	418496.0	8198.87	-0.01	8198.85	B106	
B107	2091607.4	418513.5	8257.90	-0.03	8257.87	B107	
B108	2091317.5	418529.7	8315.85	-0.05	8315.80	B108	
B109	2090984.5	418483.9	8422.08	-0.05	8422.03	B109	
B110	2090791.5	418443.9	8453.44	-0.15	8453.30	B110	
B111	2090383.8	418443.3	8602.80	-0.04	8602.76	B111	
B112	2089804.1	418521.4	8897.00	-0.04	8896.96	B112	
B113	2089473.2	418458.2	8994.44	-0.01	8994.44	B113	
B114	2089198.6	418479.5	9147.44	-0.06	9147.38	B114	
B115	2088888.2	418481.8	9356.58	-0.25	9356.33	B115	
B116	2088232.9	418088.2	9433.26	-0.05	9433.21	B116	
B117	2088567.7	418270.7	9382.22	-0.05	9382.16	B117	
B118	2088858.4	418181.3	9171.16	-0.22	9170.94	B118	
B119	2089219.3	418199.1	8998.27	-0.03	8998.24	B119	
B120	2089457.0	418189.2	8885.12	-0.01	8885.12	B120	
B121	2089759.3	418105.8	8720.06	-0.01	8720.05	B121	
B122	2090085.6	418314.6	8674.16	-0.08	8674.08	B122	
B123	2090423.8	418179.1	8483.27	+0.00	8483.27	B123	
B124	2090716.6	418219.2	8394.77	-0.08	8394.70	B124	
B125	2091032.9	418204.4	8255.70	-0.01	8255.69	B125	
B126	2091332.0	418213.5	8206.69	-0.02	8206.67	B126	
B127	2091598.2	418207.9	8136.23	+0.00	8136.23	B127	
B128	2091914.2	418241.1	8048.18	-0.26	8047.91	B128	
B129	2092181.9	418294.0	8001.45	-0.05	8001.40	B129	
B130	2092825.2	418070.5	8210.65	-0.03	8210.63	B130	
B131	2093050.0	418185.3	8132.37	-0.16	8132.21	B131	
B132	2093087.7	418047.8	8194.23	-0.01	8194.22	B132	
B133	2092902.8	417931.7	8300.49	-0.07	8300.42	B133	
B134	2092491.5	417862.1	8317.53	-0.38	8317.15	B134	
B135	2091471.6	418029.6	8100.57	-0.00	8100.56	B135	
B136	2091105.4	417830.2	8222.66	-0.49	8222.17	B136	
B137	2090962.4	417920.3	8142.23	-0.02	8142.21	B137	
B138	2090748.2	417935.5	8300.16	-0.08	8300.07	B138	
B139	2090386.3	417925.2	8423.59	-0.01	8423.58	B139	
B140	2090099.6	417892.9	8503.82	+0.00	8503.82	B140	
B141	2089810.5	417863.6	8607.99	-0.17	8607.83	B141	
B142	2089547.9	417904.4	8712.89	-0.23	8712.66	B142	
B143	2089196.8	417941.2	8892.34	+0.00	8892.35	B143	
B144	2088900.2	417912.6	8999.78	-0.02	8999.76	B144	
B145	2088246.6	417901.6	9287.38	-0.01	9287.37	B145	

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B146	2088010.4	417940.4	9422.81	-0.01	9422.80	B146	
B147	2087725.1	417945.6	9413.36	-0.50	9412.86	B147	
B148	2087469.0	417897.5	9439.80	-0.02	9439.78	B148	
B149	2087357.3	417676.6	9511.53	-0.53	9510.99	B149	
B150	2087743.2	417601.6	9380.24	-0.44	9379.80	B150	
B151	2088028.3	417549.3	9199.02	-0.10	9198.93	B151	
B152	2088308.4	417623.8	9076.45	-0.31	9076.14	B152	
B153	2088599.0	417599.2	8959.62	+0.01	8959.63	B153	
B154	2088896.4	417652.7	8890.35	+0.01	8890.35	B154	
B155	2089138.9	417688.6	8805.57	-0.05	8805.53	B155	
B156	2089557.2	417637.3	8620.30	-0.56	8619.73	B156	
B157	2089787.1	417572.2	8510.26	-0.00	8510.26	B157	
B158	2090136.4	417643.6	8412.00	-0.07	8411.93	B158	
B159	2090417.6	417614.0	8311.27	-0.01	8311.26	B159	
B160	2090685.2	417641.1	8203.25	+0.01	8203.26	B160	
B161	2090703.4	417453.1	8335.76	-0.06	8335.71	B161	
B162	2091104.2	417437.3	8386.39	-0.03	8386.36	B162	
B163	2091489.7	417492.4	8425.21	-0.12	8425.09	B163	
B164	2091882.2	417489.3	8450.57	-0.04	8450.53	B164	
B165	2092280.0	417544.2	8453.33	-0.07	8453.26	B165	
B166	2092574.7	417693.0	8406.56	-0.41	8406.15	B166	
B167	2092941.8	417654.9	8436.97	-0.01	8436.96	B167	
B168	2092928.6	417398.4	8552.47	-0.18	8552.29	B168	
B169	2091132.3	417261.6	8494.27	-0.74	8493.53	B169	
B170	2090330.5	417319.4	8303.48	+0.00	8303.48	B170	
B171	2090199.8	417232.3	8366.96	-0.05	8366.91	B171	
B172	2089823.6	417201.8	8359.87	-0.00	8359.86	B172	
B173	2089810.3	417290.4	8417.69	-0.02	8417.67	B173	
B174	2089478.3	417189.4	8484.17	-0.12	8484.05	B174	
B175	2089199.9	417300.0	8621.27	-0.38	8620.89	B175	
B176	2088900.0	417299.8	8722.60	-0.06	8722.54	B176	
B177	2088602.7	417313.7	8839.71	-0.50	8839.21	B177	
B178	2088296.9	417303.4	8944.63	-0.06	8944.57	B178	
B179	2087934.9	417384.9	9135.80	-0.07	9135.73	B179	
B180	2087691.1	417302.6	9171.96	-0.02	9171.94	B180	
B181	2087404.1	417383.3	9286.79	-0.02	9286.77	B181	
B182	2087308.1	417065.9	9097.05	+0.03	9097.09	B182	
B183	2087638.4	417034.9	9015.35	-0.10	9015.25	B183	
B184	2088008.0	417067.6	8945.08	-0.00	8945.07	B184	
B185	2088207.3	416933.6	8807.22	-0.04	8807.18	B185	
B186	2088615.9	417003.4	8684.29	-0.02	8684.27	B186	
B187	2088872.3	417010.6	8606.91	-0.05	8606.86	B187	
B188	2089143.9	417024.0	8538.29	-0.21	8538.09	B188	
B189	2089421.2	416915.9	8373.51	+0.00	8373.51	B189	
B190	2089976.6	416936.7	8443.33	-0.04	8443.29	B190	
B191	2090228.1	416935.5	8457.80	-0.35	8457.45	B191	
B192	2090587.9	417045.4	8517.40	-0.03	8517.37	B192	
B193	2090912.8	416949.8	8612.46	-0.05	8612.41	B193	
B194	2091171.1	417075.8	8573.44	-0.11	8573.33	B194	
B195	2091551.8	416904.8	8769.40	-0.17	8769.24	B195	
B196	2092020.2	416972.7	8771.50	-0.01	8771.49	B196	

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B197	2092240.9	417061.8	8735.31	-0.00	8735.30	B197	
B198	2092945.1	416998.2	8789.57	-0.13	8789.43	B198	
B199	2093341.8	416605.5	9088.66	-0.01	9088.65	B199	
B200	2093127.5	416714.9	8996.53	-0.29	8996.24	B200	
B201	2092256.3	416773.9	8914.09	+0.00	8914.09	B201	
B202	2091878.5	416689.1	8924.53	-0.02	8924.51	B202	
B203	2091734.8	416664.9	8921.35	-0.02	8921.33	B203	
B204	2091316.4	416631.9	8853.43	-0.06	8853.37	B204	
B205	2091063.8	416726.9	8755.50	+0.00	8755.50	B205	
B206	2090839.4	416676.3	8746.70	-0.05	8746.65	B206	
B207	2090332.9	416656.7	8565.62	-0.02	8565.61	B207	
B208	2090191.6	416684.4	8584.90	-0.03	8584.87	B208	
B209	2089897.4	416740.7	8525.50	-0.04	8525.46	B209	
B210	2089500.7	416726.6	8477.84	-0.70	8477.13	B210	
B211	2089145.2	416765.9	8422.03	-0.53	8421.51	B211	
B212	2088861.4	416635.6	8457.37	-1.34	8456.03	B212	
B213	2088625.2	416749.7	8585.19	-0.11	8585.08	B213	
B214	2088387.6	416768.4	8665.73	-0.28	8665.45	B214	
B215	2087959.0	416659.7	8742.99	-0.16	8742.83	B215	
B216	2087757.7	416748.9	8825.78	+0.00	8825.78	B216	
B217	2087404.5	416696.0	8880.54	-0.03	8880.50	B217	
B218	2087378.6	416365.8	8732.62	-0.07	8732.54	B218	
B219	2087686.3	416392.8	8683.62	+0.00	8683.62	B219	
B220	2088006.7	416427.0	8631.32	-0.09	8631.23	B220	
B221	2088245.6	416460.4	8587.77	-0.04	8587.73	B221	
B222	2088544.2	416545.9	8527.47	-0.01	8527.46	B222	
B223	2088878.3	416306.9	8582.82	-0.05	8582.77	B223	
B224	2089217.5	416404.0	8599.69	-2.02	8597.67	B224	
B225	2089522.9	416364.9	8599.52	-2.72	8596.80	B225	
B226	2089874.9	416267.4	8785.88	-0.08	8785.80	B226	
B227	2090099.6	416400.0	8730.39	-0.15	8730.24	B227	
B228	2090433.1	416333.9	8741.87	-0.01	8741.86	B228	
B229	2091100.0	416344.1	9026.24	-0.03	9026.21	B229	
B230	2091391.5	416398.6	9021.94	-0.00	9021.94	B230	
B231	2091669.4	416370.9	9145.82	+0.01	9145.83	B231	
B232	2091922.0	416399.9	9136.72	-0.09	9136.63	B232	
B233	2092271.8	416284.4	9286.07	+0.02	9286.09	B233	
B234	2092419.5	416354.3	9252.28	+0.01	9252.29	B234	
B235	2092775.5	416425.1	9196.87	-0.03	9196.84	B235	
B236	2093114.9	416410.4	8980.95	-0.01	8980.93	B236	
B237	2093324.9	416346.7	8861.25	+0.00	8861.25	B237	
B238	2093197.1	416139.6	8771.30	-0.04	8771.26	B238	
B239	2092750.4	416077.5	8917.13	-0.01	8917.12	B239	
B240	2092510.1	416162.7	9131.55	-0.03	9131.52	B240	
B241	2092096.1	416029.8	9268.81	+0.01	9268.83	B241	
B242	2091843.1	416085.6	9301.82	-0.25	9301.57	B242	
B243	2091627.1	416122.1	9270.43	-0.06	9270.37	B243	
B244	2091165.2	416113.0	9230.97	-0.07	9230.91	B244	
B245	2090952.3	416009.8	9188.94	-0.01	9188.93	B245	
B246	2090621.2	415985.4	8998.04	-0.03	8998.01	B246	
B247	2090018.0	416067.3	8952.03	-0.04	8951.99	B247	

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B248	2089793.1	416103.4	8822.21	-0.02	8822.20	B248	
B249	2089615.8	416047.2	8769.86	-0.05	8769.81	B249	
B250	2089190.6	416112.4	8766.81	-0.24	8766.57	B250	
B251	2088953.2	416108.4	8717.89	-0.15	8717.74	B251	
B252	2088337.1	416119.0	8665.89	-0.07	8665.82	B252	
B253	2088302.9	415778.4	8797.27	-0.06	8797.21	B253	
B254	2088514.9	415736.2	8893.29	-0.16	8893.12	B254	
B255	2088972.0	415861.9	8840.28	-2.69	8837.59	B255	
B256	2089210.9	415767.3	8989.11	-0.03	8989.08	B256	
B257	2089683.2	415780.1	8916.29	-0.05	8916.25	B257	
B258	2089846.7	415775.6	9023.22	-0.11	9023.11	B258	
B259	2090095.2	415842.1	9166.30	-0.04	9166.27	B259	
B260	2090484.9	415720.8	9176.61	-1.77	9174.84	B260	
B261	2090612.7	415784.4	9174.92	-0.08	9174.84	B261	
B262	2090949.8	415785.3	9283.19	-0.02	9283.17	B262	
B263	2091327.2	415823.4	9335.03	+0.02	9335.05	B263	
B264	2091544.3	415845.8	9311.01	+0.08	9311.09	B264	
B265	2091761.5	415838.2	9276.30	-0.01	9276.29	B265	
B266	2092031.9	415662.2	9164.07	-0.06	9164.01	B266	
B267	2092201.0	415748.2	9085.01	+0.00	9085.01	B267	
B268	2092481.5	415768.8	8925.35	-0.68	8924.66	B268	
B269	2092820.5	415782.4	8760.47	+0.00	8760.48	B269	
B270	2093106.4	415808.1	8644.55	-0.09	8644.46	B270	
B271	2093386.6	415792.8	8507.62	-0.02	8507.60	B271	
B272	2093195.5	415576.0	8524.98	+0.01	8524.99	B272	
B273	2092748.7	415499.7	8736.15	-0.05	8736.10	B273	
B274	2092310.0	415453.6	8937.97	+0.01	8937.98	B274	
B275	2091540.0	415490.2	9295.84	-0.03	9295.81	B275	
B276	2091299.4	415500.1	9363.62	-0.00	9363.61	B276	
B277	2091125.4	415555.8	9371.39	+0.01	9371.39	B277	
B278	2090633.7	415548.8	9296.60	-0.05	9296.55	B278	
B279	2090410.1	415466.3	9295.29	-0.06	9295.23	B279	
B280	2090073.1	415521.6	9304.68	+0.01	9304.69	B280	
B281	2089787.5	415513.7	9121.98	-0.12	9121.86	B281	
B282	2089632.1	415472.2	9114.87	-0.02	9114.85	B282	
B283	2089187.8	415486.0	9151.29	-0.17	9151.12	B283	
B284	2088939.8	415545.3	8977.23	-2.77	8974.46	B284	indef obj?
B285	2088552.0	415489.3	9061.58	-0.02	9061.56	B285	
B286	2088263.4	415419.5	8990.25	-0.33	8989.92	B286	
B287	2087322.2	415174.0	9321.56	-0.27	9321.29	B287	
B288	2087821.1	415301.6	9268.32	-0.21	9268.11	B288	
B289	2088330.1	415345.6	9049.56	-0.00	9049.56	B289	
B290	2088634.9	415295.3	9230.27	-1.18	9229.09	B290	
B291	2088789.0	415209.7	9225.16	-3.21	9221.96	B291	
B292	2089154.8	415173.1	9263.70	-0.64	9263.06	B292	
B293	2089357.7	415196.9	9344.59	-0.10	9344.49	B293	
B294	2089917.2	415220.6	9297.29	-0.05	9297.25	B294	
B295	2090055.2	415235.5	9362.34			B295	*
B296	2090343.0	415234.4	9416.60	-0.00	9416.60	B296	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B297	2090924.1	415162.0	9473.17	-0.00	9473.17	B297	
B298	2091092.4	415183.6	9444.74	-0.10	9444.63	B298	
B299	2091381.4	415305.7	9344.74	-0.00	9344.74	B299	
B300	2091990.9	415344.7	9130.74	-1.23	9129.51	B300	
B301	2092175.4	415354.8	9000.92	+0.00	9000.92	B301	
B302	2092433.1	415130.9	8942.44			B302	*
B303	2092863.0	415070.9	8791.51	-0.01	8791.49	B303	
B304	2093001.2	415204.5	8685.20	-0.02	8685.18	B304	
B305	2093347.9	415389.0	8504.86	+0.01	8504.87	B305	
B306	2093059.2	414981.2	8753.82	-0.02	8753.80	B306	
B307	2092830.4	414855.1	8946.36	+0.01	8946.36	B307	
B308	2092495.2	414875.4	9028.87	-0.03	9028.84	B308	
B309	2092238.8	415006.4	9127.15	-0.09	9127.06	B309	
B310	2091802.1	414740.6	9339.83	-0.04	9339.79	B310	
B311	2091142.6	414821.6	9522.20	-0.15	9522.05	B311	
B312	2090934.2	414982.0	9547.00	+0.00	9547.01	B312	
B313	2090355.8	414977.5	9564.32	-0.16	9564.16	B313	
B314	2090117.3	414944.1	9467.18	-0.01	9467.18	B314	
B315	2089860.4	414825.7	9483.85	-0.00	9483.85	B315	
B316	2089454.3	414945.0	9437.35	-0.09	9437.26	B316	
B317	2089073.1	414870.8	9390.34	-0.26	9390.08	B317	
B318	2088911.4	414881.3	9377.67	-0.02	9377.65	B318	
B319	2088545.6	414869.0	9386.75	-0.19	9386.56	B319	
B320	2088321.6	414875.8	9317.37	-0.21	9317.16	B320	
B321	2087610.6	414899.8	9478.93	-0.01	9478.93	B321	
B322	2087435.7	414922.8	9461.16	+0.00	9461.16	B322	
B323	2087403.4	414605.9	9549.65	-0.72	9548.93	B323	
B324	2087608.8	414611.2	9608.80	-0.02	9608.78	B324	
B325	2088310.7	414514.8	9472.31	+0.01	9472.32	B325	
B326	2088600.1	414600.0	9500.69	-0.33	9500.37	B326	
B327	2088881.1	414518.8	9578.96	-0.03	9578.93	B327	
B328	2089206.7	414599.9	9538.77	+0.05	9538.82	B328	
B329	2089501.9	414640.8	9574.11	-0.01	9574.10	B329	
B330	2089754.6	414607.5	9590.43	-0.01	9590.43	B330	
B331	2089995.7	414631.1	9574.13	-0.16	9573.97	B331	
B332	2090455.0	414651.5	9713.60	-0.02	9713.58	B332	
B333	2090877.6	414657.9	9621.83	-0.02	9621.81	B333	
B334	2090974.2	414532.8	9614.12	-0.02	9614.11	B334	
B335	2091274.8	414550.1	9538.76	-0.00	9538.75	B335	
B336	2091743.5	414504.7	9428.86	+0.02	9428.88	B336	
B337	2092293.6	414680.9	9235.61	+0.00	9235.61	B337	
B338	2092545.8	414520.2	9229.26	+0.00	9229.26	B338	
B339	2092778.7	414663.4	9113.69	-0.02	9113.66	B339	
B340	2093031.5	414467.5	9105.86	-0.29	9105.57	B340	
B341	2092799.3	414401.9	9219.31	-0.14	9219.17	B341	
B342	2092538.9	414307.5	9309.98	+0.47	9310.45	B342	
B343	2092147.9	414232.8	9422.61	-0.82	9421.79	B343	
B344	2091964.9	414388.0	9410.05	+0.00	9410.05	B344	
B345	2091813.4	414224.0	9511.76	-0.42	9511.33	B345	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B346	2091639.7	414356.1	9516.73	-0.01	9516.72	B346	
B347	2091302.5	414316.9	9565.00	+0.00	9565.00	B347	
B348	2091085.7	414260.8	9646.34	-0.05	9646.29	B348	
B349	2090890.1	414340.7	9687.61	-0.15	9687.46	B349	
B350	2090530.2	414382.3	9748.65	-0.04	9748.61	B350	
B351	2090020.0	414418.1	9708.12	+0.01	9708.13	B351	
B352	2089692.4	414377.0	9731.32	-0.01	9731.31	B352	
B353	2089512.0	414384.4	9681.34	-0.08	9681.27	B353	
B354	2089194.0	414378.8	9607.87	-0.03	9607.85	B354	
B355	2088965.8	414355.7	9605.59	-0.05	9605.54	B355	
B356	2088529.8	414231.8	9604.76	-0.00	9604.76	B356	
B357	2088081.5	414278.1	9594.96	+0.01	9594.98	B357	
B358	2087618.4	414365.5	9657.41	-0.07	9657.33	B358	
B359	2087416.6	414266.5	9669.01	-0.01	9669.00	B359	
B360	2087382.9	414064.6	9737.10	+0.01	9737.11	B360	
B361	2087610.6	414074.8	9743.72	-0.07	9743.65	B361	
B362	2088104.7	414137.5	9624.76	-0.02	9624.74	B362	
B363	2088559.7	414062.6	9572.19	-0.06	9572.13	B363	
B364	2088876.7	414093.1	9556.98	+0.01	9556.99	B364	
B365	2089103.7	413967.0	9459.33	-0.01	9459.32	B365	
B366	2089544.5	413896.9	9470.58	-0.00	9470.57	B366	
B367	2089850.6	414084.7	9573.68	-0.05	9573.63	B367	
B368	2090121.9	413927.4	9487.53	-0.38	9487.15	B368	
B369	2090449.9	414016.3	9547.39	+0.00	9547.39	B369	
B370	2090815.0	414005.6	9556.81	+0.00	9556.81	B370	
B371	2090938.3	414049.5	9571.89	-0.02	9571.87	B371	
B372	2091300.0	414000.1	9563.96	+0.01	9563.97	B372	
B373	2091588.7	413989.1	9605.24	-0.01	9605.23	B373	
B374	2091910.4	414022.3	9535.82	-1.05	9534.77	B374	
B375	2092187.5	414057.5	9458.02	+0.05	9458.06	B375	
B376	2092485.4	414014.2	9342.29	-0.34	9341.95	B376	
B377	2092902.4	414179.8	9102.32	-0.04	9102.28	B377	
B378	2093089.4	414173.9	8947.26	-0.00	8947.25	B378	
B379	2093105.3	413874.1	9071.11	-0.01	9071.10	B379	
B380	2092754.5	413721.8	9255.10	-0.01	9255.09	B380	
B381	2092472.3	413614.0	9396.11	-0.02	9396.09	B381	
B382	2092174.7	413731.5	9506.40	-0.10	9506.30	B382	
B383	2091941.6	413704.4	9601.40	-0.66	9600.74	B383	
B384	2091525.9	413680.6	9500.51	-0.00	9500.51	B384	
B385	2091219.5	413734.5	9444.62	-0.56	9444.05	B385	
B386	2091000.8	413710.8	9405.05	+0.01	9405.07	B386	
B387	2090836.7	413738.6	9443.08	-0.25	9442.83	B387	
B388	2090396.2	413701.9	9377.87	-0.19	9377.68	B388	
B389	2090105.8	413694.3	9368.54	-0.36	9368.17	B389	
B390	2089708.4	413643.8	9369.99	-0.70	9369.29	B390	
B391	2089264.1	413726.1	9316.19	-0.06	9316.13	B391	
B392	2088781.6	413734.6	9382.86	-0.01	9382.85	B392	
B393	2088569.5	413693.1	9375.79	-0.07	9375.71	B393	
B394	2088254.7	413695.5	9456.16	-0.05	9456.11	B394	
B395	2087908.8	413826.8	9616.01	+0.00	9616.01	B395	
B396	2087677.2	413722.1	9587.61	-0.12	9587.50	B396	

POINT	EASTING	NORTHING	1994 ELEVATION	2000.00 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
B397	2087363.0	413763.8	9615.76	-0.03	9615.73	B397	
B398	2087572.4	413342.5	9355.69	-0.02	9355.68	B398	
B399	2087706.8	413408.3	9400.16	-0.05	9400.11	B399	
B400	2088000.0	413403.7	9446.29	-0.11	9446.17	B400	
B401	2088169.4	413161.4	9348.95	-0.01	9348.94	B401	
B402	2088500.9	413305.1	9214.51	-0.01	9214.51	B402	
B403	2088766.2	413252.0	9149.58	-0.11	9149.47	B403	
B404	2089155.8	413356.8	9143.30	+0.03	9143.33	B404	
B405	2089454.2	413354.1	9175.81	-0.01	9175.80	B405	
B406	2089792.4	413427.3	9257.53	-0.08	9257.45	B406	
B407	2090120.0	413423.2	9208.89	-0.09	9208.80	B407	
B408	2090528.2	413414.9	9311.13	-0.12	9311.01	B408	
B409	2090697.9	413383.6	9294.44	-0.42	9294.02	B409	
B410	2090895.4	413500.2	9303.63	-1.16	9302.47	B410	
B411	2091393.2	413373.6	9319.54	-0.02	9319.52	B411	
B412	2091733.5	413493.0	9490.41	-0.00	9490.40	B412	
B413	2091966.6	413215.3	9481.80	-0.17	9481.63	B413	
B414	2091598.8	413143.5	9311.55	-0.64	9310.92	B414	
B415	2091314.8	413176.1	9225.90	-0.56	9225.34	B415	
B416	2090859.7	413068.5	9111.17	-0.65	9110.52	B416	
B417	2090893.4	412815.0	8928.48	-0.01	8928.47	B417	

Olympus Aerial Surveys, Inc. Job No. 200098
Report for October 20, 2000
For
GENWAL RESOURCES, INC.
CRANDALL CANYON SUBSIDENCE STUDY

POINT	EASTING	NORTHING	1988 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
412	2096797.3	414699.1	7806.48	+0.14	7806.62	412	
414	2096802.2	414406.5	7927.86	+0.02	7927.88	414	
416	2096499.1	414683.0	7974.20	+0.04	7974.24	416	
418	2096471.4	414418.3	8088.93	-0.06	8088.87	418	
422	2096199.6	414741.6	8184.04	-0.03	8184.01	422	
424	2096260.6	414416.4	8187.45	+0.07	8187.52	424	
426	2095917.3	414730.2	8231.05	+0.06	8231.11	426	
428	2095894.1	414385.1	8425.09	-0.02	8425.07	428	
432	2095586.8	414700.5	8240.83	-0.04	8240.79	432	
434	2095570.7	414390.8	8408.52	-0.06	8408.46	434	
436	2095340.2	414704.0	8253.01	+0.00	8253.01	436	
438	2095280.3	414360.2	8457.98	-0.05	8457.93	438	
442	2094968.7	414765.3	8286.36	+0.05	8286.41	442	
444	2094996.3	414383.7	8520.06	+0.10	8520.16	444	
446	2094712.7	414664.7	8343.75	+0.05	8343.80	446	
448	2094718.9	414441.7	8469.50	-0.01	8469.49	448	
452	2094388.9	414707.4	8250.68	-0.01	8250.67	452	
454	2094358.0	414356.9	8449.86	+0.08	8449.94	454	
456	2094090.4	414678.2	8258.80	+0.01	8258.81	456	
458	2094056.6	414360.5	8461.71	+0.09	8461.80	458	
462	2093884.2	414697.0	8400.66	-0.00	8400.66	462	
463	2093795.0	414396.6	8463.69	-0.06	8463.64	463	
464	2093694.7	414322.6	8534.59	-0.95	8533.64	464	
466	2093463.1	414696.3	8722.42	-0.80	8721.62	466	
468	2093304.9	414336.3	8787.44	-0.02	8787.43	468	
472	2093140.7	414781.1	8831.60	-0.01	8831.59	472	
474	2093034.5	414470.1	9105.89	-0.32	9105.57	474	
476	2092917.1	414625.8	9021.10			476	*
478	2092813.9	414414.3	9207.85	-0.23	9207.62	478	
481	2092661.0	414720.7	9132.12	-0.01	9132.11	481	
482	2092585.1	414677.2	9129.56	+0.03	9129.59	482	
484	2092592.6	414400.5	9291.54	-0.31	9291.23	484	
486	2092307.4	414674.3	9229.42	-0.13	9229.29	486	
488	2092269.9	414430.0	9334.21	-0.19	9334.02	488	
489	2092543.6	414298.6	9434.23	+0.00	9434.23	489	
492	2092018.8	414708.1	9302.29	-0.03	9302.26	492	
494	2091990.9	414397.4	9396.54	-0.13	9396.41	494	
508	2093789.2	413786.0	8830.15	-0.02	8830.13	508	
510	2093742.9	413374.8	9136.26	+0.03	9136.29	510	
512	2093654.6	412892.6	9232.90	-0.05	9232.85	512	
514	2093666.9	412518.4	9160.72	-0.16	9160.56	514	
516	2093769.9	412273.0	9068.68	+0.04	9068.72	516	
518	2093707.8	411967.4	8771.21	-0.03	8771.18	518	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1988 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
520	2093772.7	411612.8	8570.71	-0.25	8570.46	520	
522	2093802.9	411399.5	8429.06	-0.02	8429.04	522	
524	2093760.3	411120.5	8228.52	-0.50	8228.02	524	
528	2093635.9	410746.9	7999.87	-0.34	7999.53	528	
530	2093708.8	410473.9	7853.05	+14.93	7867.98	530	concrete wall
531	2093477.2	414261.9	8653.63	-0.00	8653.63	531	
532	2093523.5	413937.4	8804.60	-0.21	8804.39	532	
534	2093549.1	413567.7	9095.23	-0.89	9094.34	534	
536	2093475.7	413421.9	9193.31	-0.01	9193.30	536	
538	2093384.9	413222.4	9265.13	-0.02	9265.11	538	
540	2093411.0	412894.7	9191.86	-0.10	9191.76	540	
542	2093332.6	412611.4	9018.59	-0.06	9018.53	542	
544	2093424.2	412277.9	8844.83	-0.70	8844.13	544	
548	2093355.6	412059.3	8702.26	-0.01	8702.25	548	
550	2093457.9	411686.1	8524.99	-0.48	8524.51	550	
552	2093478.4	411334.1	8313.50	-0.90	8312.60	552	
554	2093327.9	411099.1	8153.22	-0.01	8153.21	554	
556	2093375.9	410810.0	7963.43	-0.06	7963.37	556	
558	2093397.1	410494.2	7881.91	-8.82	7873.09	558	cut & fill area
560	2092969.5	414136.6	9050.62	-0.09	9050.53	560	
561	2093189.7	414009.9	8935.57	-0.38	8935.19	561	
562	2093092.7	413671.0	9177.17			562	*
565	2093246.7	413417.2	9184.66	+0.01	9184.67	565	
566	2093099.7	413207.4	9278.20	-0.22	9277.98	566	
568	2093165.1	412921.9	9184.56	-0.24	9184.32	568	
570	2093071.0	412603.3	8970.26	+0.04	8970.30	570	
572	2093133.0	412301.0	8801.22	-0.01	8801.21	572	
574	2093047.7	412004.0	8617.05	-0.22	8616.84	574	
576	2093060.7	411690.5	8439.31	-0.00	8439.31	576	
578	2093076.4	411444.6	8319.79	-0.14	8319.66	578	
582	2093090.6	411190.5	8234.20	+0.01	8234.21	582	
584	2093027.1	410840.8	8210.41	+0.01	8210.42	584	
586	2093092.0	410494.2	7946.74	-0.28	7946.46	586	
587	2092795.0	414246.1	9193.44	-0.17	9193.27	587	
588	2092890.1	413793.4	9156.23	-0.00	9156.23	588	
590	2092885.2	413507.4	9294.06	+0.01	9294.07	590	
592	2092804.8	413175.3	9302.93	-0.06	9302.87	592	
596	2092772.4	412913.5	9205.98	-0.41	9205.57	596	
598	2092836.1	412596.7	9051.39	-0.01	9051.38	598	
600	2092815.6	412297.5	8830.55	-1.78	8828.77	600	
602	2092804.0	411980.6	8658.26	-0.00	8658.26	602	
604	2092774.0	411692.3	8554.40	-0.00	8554.40	604	
608	2092780.4	411416.2	8440.10	-0.04	8440.06	608	
610	2092722.3	411076.8	8335.56	-0.02	8335.54	610	
612	2092774.5	410801.6	8176.13	-0.03	8176.10	612	
614	2092863.4	410574.3	8044.84	-0.29	8044.55	614	
615	2092572.0	413958.6	9290.58			615	*
616	2092691.6	413402.5	9395.58	-0.01	9395.57	616	
618	2092507.1	413204.0	9400.68	-0.62	9400.06	618	

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POINT	EASTING	NORTHING	1988 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
620	2092508.1	412818.8	9277.59	-0.01	9277.58	620	
622	2092488.3	412605.7	9155.95	-0.02	9155.93	622	
624	2092510.7	412341.4	8962.69	-0.31	8962.38	624	
626	2092586.0	412047.3	8769.68	-0.09	8769.59	626	
628	2092513.1	411734.7	8681.35	-0.18	8681.17	628	
632	2092497.0	411414.7	8569.04	-0.03	8569.01	632	
634	2092416.5	411004.2	8374.99	-0.06	8374.93	634	
636	2092492.6	410747.2	8178.97	-0.38	8178.59	636	
638	2092504.1	410523.1	8024.67	-0.03	8024.64	638	
639	2092412.0	413807.4	9355.02	-0.01	9355.01	639	
640	2092361.1	413428.0	9488.06	-0.01	9488.05	640	
641	2092259.6	413776.1	9467.45	-0.04	9467.41	641	
642	2092241.8	413152.0	9452.50	-0.01	9452.49	642	
644	2092252.2	412787.4	9279.43	-0.28	9279.15	644	
646	2092114.8	412545.6	9219.12	-0.08	9219.04	646	
650	2092221.1	412304.0	9106.82	-0.48	9106.34	650	
654	2092180.0	412041.8	9058.44	-0.05	9058.39	654	
656	2092250.7	411775.9	8897.96	+0.01	8897.97	656	
658	2092296.3	411511.1	8695.34	-0.07	8695.27	658	
662	2092272.0	411140.0	8466.94	-0.06	8466.88	662	
664	2092261.8	410858.2	8271.01	-0.29	8270.72	664	
666	2092199.0	410496.9	8024.94	-0.17	8024.77	666	
667	2092074.5	413864.3	9522.43	-0.81	9521.62	667	
668	2091900.5	413226.0	9476.30	-0.02	9476.28	668	
669	2092029.3	413532.2	9582.25	-0.50	9581.75	669	
670	2092041.7	412889.5	9345.86	-0.09	9345.77	670	
672	2091877.2	412700.9	9280.65	-0.08	9280.57	672	
674	2091931.6	412289.9	9057.44	-0.05	9057.39	674	
676	2091985.7	411988.5	8907.53	-0.33	8907.20	676	
678	2091947.6	411646.5	8670.05	-0.00	8670.05	678	
682	2091958.0	411393.5	8520.45	-0.01	8520.45	682	
684	2091898.7	411129.2	8359.21	+0.01	8359.22	684	
686	2091952.7	410782.6	8182.14	-0.00	8182.14	686	
688	2091876.5	410532.3	8046.70	-0.04	8046.66	688	
690	2091781.1	412690.4	9267.30	-0.17	9267.13	690	
691	2092211.0	414139.9	9311.76			691	*
692	2092013.9	414095.4	9506.80	-0.37	9506.43	692	
694	2091845.6	413808.6	9598.19	-1.09	9597.10	694	
696	2091797.7	413509.5	9509.29	+0.01	9509.30	696	
702	2097234.1	413933.7	7912.72	-0.16	7912.56	702	
704	2097247.5	413785.6	7935.09	+0.01	7935.10	704	
706	2097177.7	413458.2	8101.23	-0.01	8101.22	706	
708	2097308.7	413299.5	8022.43	-0.10	8022.33	708	
710	2097283.2	412306.5	7973.95	-0.25	7973.70	710	
714	2097185.0	412976.9	8219.81	-1.07	8218.74	714	
716	2097226.3	412588.2	8183.10	-0.33	8182.77	716	
718	2097174.0	411774.9	7701.54	+0.07	7701.61	718	
720	2097046.2	414051.9	7809.44	-0.01	7809.43	720	
722	2097033.9	413773.2	8034.75	-2.14	8032.61	722	

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POINT	EASTING	NORTHING	1988 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
842	2095429.6	411979.7	8261.30	+0.00	8261.30	842	
844	2095476.7	411761.0	8115.65	-0.52	8115.13	844	
846	2095505.4	411393.5	7905.34	+0.07	7905.41	846	
848	2095460.8	411129.6	7833.72	-0.21	7833.51	848	
850	2095342.5	414113.2	8575.08	-0.11	8574.97	850	
852	2095273.9	413738.3	8842.65	+0.04	8842.69	852	
853	2095298.5	413414.7	9092.02	-0.21	9091.81	853	
854	2095206.9	413197.9	9031.15	-0.22	9030.94	854	
856	2095206.8	412954.1	8849.14	+0.00	8849.14	856	
858	2095196.0	412588.7	8605.59	-0.65	8604.94	858	
860	2095209.0	412303.3	8422.26	+0.02	8422.28	860	
862	2095186.6	411995.5	8285.97	-0.04	8285.93	862	
864	2095184.6	411661.4	8110.08	-0.21	8109.87	864	
866	2095205.3	411434.6	7980.65	-0.19	7980.46	866	
868	2095213.8	411143.8	7819.18	-0.00	7819.18	868	
870	2094935.0	414137.2	8661.20	-0.01	8661.19	870	
871	2094890.5	413893.6	8843.95	-0.06	8843.89	871	
872	2094879.8	413596.2	9086.67	+0.07	9086.74	872	
873	2095027.3	413396.6	9182.01	-0.07	9181.94	873	
874	2094917.4	413174.9	9078.73	-0.01	9078.72	874	
876	2094889.2	412919.4	8904.88	-0.02	8904.86	876	
878	2094909.4	412556.9	8688.52	+0.00	8688.53	878	
880	2094881.5	412346.7	8556.07	-0.02	8556.05	880	
882	2094891.0	412032.5	8344.64	-0.03	8344.61	882	
884	2094890.1	411723.1	8173.90	-1.23	8172.67	884	
886	2094898.8	411386.8	8059.79	-0.31	8059.48	886	
888	2094921.1	411118.0	7901.97	-2.69	7899.28	888	
890	2094671.9	414096.2	8637.39	+0.05	8637.44	890	
891	2094751.0	413834.1	8833.54	-0.01	8833.53	891	
892	2094686.7	413517.3	9063.75	-0.17	9063.58	892	
894	2094604.7	413214.3	9221.23	-0.06	9221.17	894	
896	2094612.3	412895.9	8937.98	-0.39	8937.59	896	
898	2094629.9	412573.8	8713.35	-0.17	8713.18	898	
900	2094582.2	412308.6	8549.75	-0.01	8549.74	900	
902	2094620.5	412053.7	8394.56	+0.06	8394.62	902	
904	2094593.4	411741.8	8346.10	-0.08	8346.02	904	
906	2094585.8	411312.1	8137.77	-0.06	8137.71	906	
908	2094624.9	410997.9	7948.18	+0.02	7948.20	908	
910	2094351.6	414090.3	8616.51	-0.07	8616.45	910	
912	2094346.4	413772.3	8842.75	-0.06	8842.69	912	
913	2094472.9	413512.8	9034.31	-0.04	9034.27	913	
914	2094307.5	413232.3	9217.39	-0.34	9217.05	914	
916	2094314.5	412898.1	8986.16	-0.91	8985.26	916	
918	2094343.3	412559.6	8770.76	-0.15	8770.61	918	
920	2094293.6	412340.1	8657.14	+0.00	8657.14	920	
922	2094299.5	411931.8	8553.32	-1.45	8551.87	922	
924	2094274.6	411763.3	8530.32	-0.01	8530.31	924	
926	2094300.5	411491.0	8353.82	+0.01	8353.83	926	
928	2094258.6	411061.1	8111.75	-0.08	8111.67	928	
932	2094311.9	410731.9	7889.54	-1.38	7888.17	932	cut and fill area
934	2094302.1	410466.4	7770.72	+33.35	7804.07	934	cut and fill area

POINT	EASTING	NORTHING	1988 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
940	2094002.0	414086.3	8624.44	-0.04	8624.40	940	
941	2094077.5	413788.9	8836.11	-0.12	8835.99	941	
942	2094014.7	413557.5	9031.61	+0.02	9031.63	942	
944	2093963.0	413177.6	9241.04	-0.02	9241.02	944	
948	2094054.9	412905.9	9126.60	-0.01	9126.59	948	
950	2093982.4	412597.5	8933.32	-0.29	8933.03	950	
952	2094000.9	412277.7	8823.11	-0.18	8822.92	952	
954	2094062.5	411978.1	8730.27	+0.00	8730.27	954	
956	2094000.1	411680.8	8601.99	-0.23	8601.76	956	
958	2093994.0	411392.7	8353.09	-0.16	8352.93	958	
960	2093965.4	411101.5	8156.56	+0.04	8156.60	960	
962	2094066.7	410831.8	7973.66	-0.05	7973.61	962	
964	2093967.5	410529.4	7820.54	+10.05	7830.59	964	cut and fill area
970	2093871.0	414024.6	8661.54	-0.05	8661.50	970	

Olympus Aerial Surveys, Inc.
Job No. 200098
Report for October 20, 2000
For
GENWAL RESOURCES, INC.
EAST MOUNTAIN SEC. 1 SUBSIDENCE STUDY

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E101	2081759.2	418606.4	10399.31	-0.02	10399.29	E101	
E102	2082094.9	418530.6	10332.73	+0.03	10332.76	E102	
E103	2082352.1	418574.7	10288.66	-0.08	10288.58	E103	
E104	2082638.7	418535.0	10167.52	+0.08	10167.60	E104	
E105	2082942.0	418490.5	10002.58	-0.32	10002.26	E105	
E106	2083360.1	418690.7	9974.95	+0.08	9975.03	E106	
E107	2083656.8	418533.1	9871.14	-0.01	9871.13	E107	
E108	2083863.0	418443.8	9791.20	-0.03	9791.17	E108	
E109	2084118.6	418571.1	9807.80	+0.10	9807.90	E109	
E110	2084478.3	418608.6	9784.18	+0.00	9784.18	E110	
E111	2084794.9	418548.3	9719.74	-0.02	9719.72	E111	
E112	2085058.4	418510.9	9631.56	-0.02	9631.54	E112	
E113	2085265.2	418511.4	9530.02	-0.00	9530.02	E113	
E114	2085678.4	418705.6	9409.39	-0.01	9409.38	E114	
E115	2085941.1	418750.9	9334.82	-0.04	9334.78	E115	
E116	2086241.0	418464.7	9099.87	-0.02	9099.85	E116	
E117	2086689.9	418634.4	8984.21	-0.01	8984.20	E117	
E118	2087003.5	418723.9	8898.61	-0.44	8898.17	E118	
E119	2087170.0	418429.6	9053.84	-0.01	9053.83	E119	
E120	2081769.6	418239.7	10298.08	-0.05	10298.03	E120	
E121	2082061.8	418270.2	10257.38	-0.02	10257.36	E121	
E122	2082388.5	418220.0	10186.37	+0.06	10186.44	E122	
E123	2082638.9	418202.6	10098.14	-0.10	10098.04	E123	
E124	2082969.3	418178.1	9972.33	-0.06	9972.27	E124	
E125	2083318.5	418308.6	9889.99	-0.02	9889.97	E125	
E126	2083539.2	418207.4	9797.79	+0.01	9797.80	E126	
E127	2083934.0	418202.2	9688.34	-0.02	9688.32	E127	
E128	2084218.1	418211.4	9650.80	-0.03	9650.77	E128	
E129	2084579.2	418227.8	9608.24	-0.01	9608.23	E129	
E130	2084780.4	418190.9	9566.04	-0.03	9566.01	E130	
E131	2085011.4	418142.2	9454.81	+0.01	9454.82	E131	
E132	2085391.6	418176.9	9301.66	-0.49	9301.17	E132	
E133	2085655.1	418266.2	9231.45	+0.03	9231.48	E133	
E138	2087172.6	418189.7	9182.46	+0.01	9182.47	E138	
E139	2081803.1	417955.0	10241.09	-0.13	10240.96	E139	
E140	2082089.2	417932.9	10185.09	-0.77	10184.32	E140	
E141	2082346.9	417930.7	10135.93	+0.03	10135.96	E141	
E142	2082669.9	417904.1	10037.51	+0.01	10037.52	E142	
E143	2082934.2	417859.7	9963.04	-0.04	9963.00	E143	
E144	2083236.8	417947.0	9856.93	+0.02	9856.95	E144	
E145	2083690.0	417847.4	9800.32	+0.02	9800.34	E145	
E146	2083869.6	417942.7	9725.88	-0.01	9725.87	E146	
E147	2084162.4	417920.2	9693.05	+0.01	9693.06	E147	
E148	2084466.9	417946.8	9622.04	-0.21	9621.83	E148	

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E149	2084740.3	417943.3	9553.62	-0.01	9553.61	E149	
E150	2085175.3	417898.6	9522.14	-0.13	9522.01	E150	
E151	2085478.0	417929.9	9467.18	-0.08	9467.10	E151	
E152	2085672.5	417921.3	9460.44	-0.06	9460.39	E152	
E153	2086100.6	417907.4	9421.38	-0.00	9421.38	E153	
E154	2086292.0	417901.2	9414.38	-0.00	9414.38	E154	
E155	2086569.0	417884.6	9407.90	-0.04	9407.86	E155	
E158	2081714.1	417662.0	10235.08	-0.24	10234.85	E158	
E159	2082103.6	417654.0	10164.81	-0.32	10164.49	E159	
E160	2082366.6	417640.6	10128.48	-1.67	10126.81	E160	
E161	2082585.6	417675.8	10081.76	+0.07	10081.83	E161	
E162	2082948.4	417608.5	10044.53	-0.16	10044.38	E162	
E163	2083290.1	417677.0	9942.35	-0.03	9942.32	E163	
E164	2083562.7	417572.0	9930.25	-0.05	9930.20	E164	
E165	2083883.0	417648.5	9833.74	-0.33	9833.41	E165	
E166	2084168.2	417660.8	9786.99	+0.00	9786.99	E166	
E167	2084425.5	417620.6	9750.10	-0.35	9749.75	E167	
E168	2084787.4	417625.5	9693.40	-0.46	9692.94	E168	
E169	2085205.6	417593.3	9673.91	-0.06	9673.85	E169	
E170	2085429.3	417568.9	9663.40	-0.03	9663.37	E170	
E171	2085650.9	417530.0	9669.48	-0.19	9669.29	E171	
E172	2085886.3	417643.5	9617.90	-0.22	9617.68	E172	
E173	2086269.5	417499.6	9622.93	+0.00	9622.93	E173	
E174	2086615.2	417527.7	9593.64	-0.01	9593.63	E174	
E175	2086859.4	417577.2	9553.66	+0.01	9553.67	E175	
E176	2087233.9	417676.9	9516.24	-0.03	9516.21	E176	
E177	2081742.7	417294.7	10325.16	-0.14	10325.03	E177	
E178	2082102.8	417359.4	10244.07	-0.04	10244.03	E178	
E179	2082353.8	417313.5	10224.10	-0.82	10223.28	E179	
E180	2082673.3	417318.1	10183.15	-0.58	10182.57	E180	
E181	2082949.1	417328.8	10144.79	-0.03	10144.76	E181	
E182	2083264.0	417363.5	10072.97	-0.01	10072.96	E182	
E183	2083568.8	417237.3	10084.30	-0.14	10084.16	E183	
E184	2083884.1	417272.9	9992.91	-0.44	9992.47	E184	
E185	2084200.2	417210.1	9925.01	-0.34	9924.67	E185	
E186	2084473.8	417268.1	9880.70	+0.05	9880.75	E186	
E187	2084770.6	417271.5	9860.53	-0.03	9860.51	E187	
E188	2085094.1	417283.0	9808.92	-0.57	9808.35	E188	
E189	2085306.0	417318.1	9773.16	-0.43	9772.73	E189	
E190	2085677.0	417313.1	9721.08	-0.70	9720.38	E190	
E191	2085979.4	417339.9	9666.53	+0.00	9666.53	E191	
E192	2086174.2	417253.9	9597.62	-0.01	9597.61	E192	
E195	2087169.4	417268.9	9256.42	-0.25	9256.17	E195	
E196	2081825.6	417066.9	10377.00	-0.00	10377.00	E196	
E197	2082064.4	417077.5	10333.59	+0.01	10333.60	E197	
E198	2082358.8	417012.2	10308.23	-0.12	10308.11	E198	
E199	2082653.0	416937.6	10285.26	+0.01	10285.27	E199	
E200	2082958.8	416954.2	10247.95	-0.08	10247.87	E200	
E201	2083374.3	417030.3	10196.34	-0.06	10196.28	E201	
E202	2083671.2	417124.9	10108.34	-0.45	10107.89	E202	
E203	2083911.4	417046.4	9963.50	-0.15	9963.35	E203	

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E204	2084159.1	416927.4	9873.61	-3.64	9869.97	E204	sliding rock
E205	2084419.2	416861.0	9759.30	-0.99	9758.31	E205	
E206	2084624.4	416964.1	9754.33	-2.12	9752.21	E206	
E208	2085402.3	417058.6	9671.54	-0.36	9671.18	E208	
E209	2085688.9	416988.0	9621.98	+0.00	9621.98	E209	
E210	2085971.3	417159.2	9642.06	+0.07	9642.13	E210	
E211	2086427.3	417004.1	9359.63	-0.02	9359.61	E211	
E213	2086805.4	417080.7	9299.44	-0.05	9299.39	E213	
E214	2087220.1	416946.2	9059.16	-0.19	9058.97	E214	
E215	2081779.4	416716.5	10464.49	-0.21	10464.28	E215	
E216	2082061.7	416715.5	10350.54	-0.22	10350.33	E216	
E217	2082354.2	416730.4	10258.60	+0.05	10258.65	E217	
E218	2082673.8	416689.5	10137.01	-0.28	10136.73	E218	
E219	2083013.3	416730.2	10119.88	+0.02	10119.90	E219	
E220	2083295.8	416728.9	10095.86	-0.03	10095.83	E220	
E221	2083536.9	416691.0	9942.64	-0.25	9942.39	E221	
E222	2083863.8	416733.2	9897.93	-0.02	9897.91	E222	
E223	2083963.0	416695.3	9876.08	-0.49	9875.59	E223	
E224	2084388.7	416665.8	9705.37	-0.14	9705.23	E224	
E225	2084764.0	416714.1	9614.37	-0.31	9614.06	E225	
E226	2085214.1	416640.7	9470.34	-0.22	9470.12	E226	
E227	2085414.5	416732.1	9511.17	-0.04	9511.13	E227	
E228	2085707.9	416671.3	9427.24	-0.01	9427.23	E228	
E229	2086048.7	416702.7	9451.70	-0.27	9451.43	E229	
E230	2086290.4	416703.6	9380.34	-0.07	9380.28	E230	
E231	2086496.8	416710.7	9224.87	+0.01	9224.88	E231	
E232	2086799.6	416659.5	9024.90	-0.02	9024.88	E232	
E233	2087113.3	416684.9	8975.75	-0.04	8975.71	E233	
E235	2082094.1	416402.6	10230.09	+0.02	10230.11	E235	
E236	2082373.4	416438.9	10115.66	-0.45	10115.21	E236	
E237	2082677.5	416410.3	9994.77	-0.07	9994.70	E237	
E238	2082941.5	416382.6	9946.60	-0.20	9946.40	E238	
E239	2083271.3	416393.1	9921.35	-0.14	9921.22	E239	
E240	2083570.7	416441.0	9888.66	-0.12	9888.54	E240	
E241	2083820.5	416326.0	9777.18	+0.00	9777.19	E241	
E242	2084120.2	416377.2	9695.89	-0.07	9695.82	E242	
E243	2084512.2	416453.5	9585.61	-0.13	9585.49	E243	
E245	2085034.1	416459.3	9432.51	+0.00	9432.52	E245	
E246	2085303.3	416329.5	9222.29	-0.63	9221.66	E246	
E247	2085788.7	416412.7	9223.64	+0.00	9223.64	E247	
E248	2086014.3	416390.6	9201.85	+0.01	9201.86	E248	
E249	2086213.8	416479.9	9229.00	-0.02	9228.98	E249	
E250	2086650.5	416442.1	9024.40	-0.01	9024.39	E250	
E252	2087262.2	416384.0	8773.24	-0.09	8773.15	E252	
E253	2081906.7	416123.4	10286.87	-1.43	10285.45	E253	
E254	2082036.4	416113.1	10203.84	-0.83	10203.01	E254	
E255	2082336.3	416129.6	10061.23	-0.03	10061.20	E255	
E256	2082673.8	416007.1	9949.26	-0.05	9949.21	E256	
E257	2082922.6	416064.0	9848.35	-0.01	9848.34	E257	
E258	2083280.2	416204.1	9844.23	-0.08	9844.15	E258	
E259	2083496.8	416190.7	9792.83	-0.05	9792.78	E259	

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E260	2083801.6	415986.4	9673.25	-0.43	9672.82	E260	
E261	2084074.9	416021.3	9660.86	-1.04	9659.82	E261	slide area
E262	2084406.0	416169.5	9537.33	-2.63	9534.71	E262	slide area
E263	2084735.3	416140.1	9421.22	-1.71	9419.51	E263	slide area
E264	2085022.0	416212.2	9282.14	-0.95	9281.19	E264	
E265	2085231.0	416023.7	9282.43	-0.12	9282.31	E265	
E266	2085620.6	416145.6	9077.78	-1.47	9076.31	E266	
E267	2086015.2	416097.0	9042.99	-0.06	9042.93	E267	
E268	2086202.8	416070.3	9000.96	+0.01	9000.97	E268	
E269	2086581.7	416156.2	8940.90	-0.04	8940.86	E269	
E270	2086927.7	416137.2	8804.51	-1.14	8803.38	E270	
E271	2087155.3	416152.0	8714.12	-0.65	8713.47	E271	
E272	2081858.0	415834.2	10312.48	+0.02	10312.50	E272	
E273	2082116.1	415833.9	10158.16	-0.00	10158.16	E273	
E274	2082388.7	415874.2	10035.82	-0.14	10035.68	E274	
E275	2082674.5	415757.9	9940.23	-0.01	9940.22	E275	
E276	2082969.0	415838.8	9835.75	-0.72	9835.04	E276	
E277	2083300.5	415821.0	9719.59	-0.51	9719.08	E277	
E278	2083511.8	415855.5	9680.92	-1.16	9679.76	E278	slide area
E279	2083898.8	415744.1	9636.90	-1.79	9635.11	E279	slide area
E280	2084273.8	415743.8	9581.01	-1.06	9579.95	E280	slide area
E281	2084464.0	415797.9	9479.64	-2.44	9477.20	E281	slide area
E282	2084788.8	415755.4	9475.92	-2.85	9473.07	E282	slide area
E283	2085063.2	415727.5	9318.92	-0.36	9318.56	E283	
E284	2085322.0	415821.0	9188.04	-0.13	9187.91	E284	
E285	2085686.6	415853.8	9053.56	-0.13	9053.44	E285	
E286	2086009.9	415901.3	8955.49	-0.05	8955.44	E286	
E287	2086310.1	415900.2	8890.27	-0.01	8890.26	E287	
E288	2086412.6	415721.0	8910.59	-0.04	8910.55	E288	
E289	2086891.3	415873.5	8830.93	-0.14	8830.79	E289	
E290	2087091.6	415773.3	8886.93	-0.04	8886.89	E290	
E291	2081921.7	415584.5	10322.18	-0.14	10322.04	E291	
E292	2082143.6	415467.7	10242.48	-0.02	10242.46	E292	
E293	2082372.4	415519.1	10118.34	-0.53	10117.81	E293	
E294	2082681.0	415521.9	10014.51	-0.09	10014.42	E294	
E295	2082960.6	415512.0	9948.96	-0.86	9948.10	E295	
E296	2083269.3	415461.4	9855.46	-1.38	9854.08	E296	slide area
E297	2083541.5	415567.0	9718.29	-5.18	9713.11	E297	slide area
E298	2083865.3	415475.1	9685.65	-2.99	9682.66	E298	slide area
E299	2084133.3	415555.5	9618.37	-2.09	9616.28	E299	slide area
E300	2084561.9	415553.9	9502.50	-0.08	9502.42	E300	
E301	2084887.8	415466.4	9384.39	-0.04	9384.35	E301	
E302	2085118.0	415589.9	9266.65	-1.24	9265.41	E302	
E303	2085427.3	415525.3	9242.63	-0.01	9242.62	E303	
E304	2085665.2	415422.4	9269.16	-0.05	9269.11	E304	
E306	2086212.0	415526.1	9028.91	-0.25	9028.66	E306	
E307	2086701.7	415508.9	9003.10	-0.01	9003.09	E307	
E308	2086967.2	415484.6	8993.94	-0.03	8993.91	E308	
E310	2081962.2	415161.2	10480.43	-0.09	10480.34	E310	
E311	2082101.8	415190.2	10404.46	-0.08	10404.38	E311	
E312	2082360.5	415226.8	10275.24	-0.02	10275.22	E312	

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E313	2082673.6	415215.0	10162.12	-2.05	10160.07	E313	
E314	2082960.0	415198.7	10070.78	-0.04	10070.74	E314	
E315	2083344.8	415159.4	9962.92	-3.83	9959.09	E315	slide area
E316	2083592.8	415260.6	9827.88	-2.13	9825.75	E316	slide area
E317	2083842.5	415162.2	9801.90	-3.84	9798.06	E317	slide area
E318	2084153.7	415242.4	9688.11	-1.75	9686.36	E318	slide area
E319	2084431.0	415285.6	9629.59	-2.57	9627.02	E319	slide area
E320	2084785.9	415150.8	9526.69	-0.09	9526.60	E320	
E321	2085071.4	415256.9	9509.96	-2.39	9507.57	E321	
E322	2085501.2	415144.7	9509.01	-0.46	9508.55	E322	
E323	2085654.4	415193.3	9417.00	-0.01	9416.99	E323	
E324	2085932.2	415204.8	9252.95	-0.06	9252.89	E324	
E326	2086521.7	415212.8	9176.91	+0.01	9176.92	E326	
E327	2087008.0	415097.8	9255.60	-0.01	9255.59	E327	
E328	2087095.5	415173.9	9258.41	-0.01	9258.40	E328	
E329	2082018.1	414992.4	10462.35	+0.06	10462.41	E329	
E330	2082151.1	414947.0	10395.50	-0.02	10395.48	E330	
E331	2082373.0	414922.7	10307.36	-0.02	10307.34	E331	
E332	2082679.1	414972.7	10217.41	-0.04	10217.37	E332	
E333	2082994.1	414916.7	10141.88	-0.42	10141.46	E333	
E334	2083281.2	414817.4	10087.31	+0.00	10087.31	E334	
E335	2083615.5	414759.4	10045.55	-0.07	10045.48	E335	
E336	2083805.8	414840.1	10000.21	-0.14	10000.07	E336	
E337	2084058.6	414886.9	9891.47	-4.85	9886.62	E337	slide area
E338	2084419.7	414964.2	9774.29	-0.94	9773.35	E338	
E339	2084791.4	414830.8	9679.90	-0.14	9679.76	E339	
E340	2085028.0	414941.1	9626.55	-0.09	9626.46	E340	
E341	2085394.2	414876.2	9629.38	-0.05	9629.33	E341	
E342	2085759.5	414816.8	9478.34	-0.13	9478.21	E342	
E343	2086089.3	414703.3	9528.06	-0.65	9527.41	E343	
E344	2086179.6	414952.3	9422.45	-0.01	9422.44	E344	
E345	2086524.9	414897.2	9361.22	-0.00	9361.22	E345	
E346	2086762.1	414909.1	9405.13	+0.00	9405.13	E346	
E347	2087264.4	414966.4	9394.81	-0.01	9394.80	E347	
E348	2081979.5	414657.6	10382.74	+0.00	10382.74	E348	
E349	2082170.9	414645.5	10344.59	-0.02	10344.57	E349	
E350	2082419.2	414681.5	10273.87	-0.10	10273.77	E350	
E351	2082652.1	414596.0	10172.74	-0.01	10172.73	E351	
E352	2082970.0	414600.4	10084.25	+0.04	10084.29	E352	
E353	2083305.5	414602.1	10004.52	-0.02	10004.50	E353	
E354	2083534.0	414560.5	9969.42	+1.17	9970.59	E354	
E355	2083908.0	414671.7	10041.73	+0.00	10041.73	E355	
E356	2084147.7	414608.8	10044.35	-0.23	10044.12	E356	
E357	2084440.9	414487.0	9956.92	-0.01	9956.91	E357	
E358	2084818.3	414550.4	9817.47	-0.02	9817.45	E358	
E359	2085107.0	414734.7	9743.45	-0.23	9743.22	E359	
E360	2085321.5	414633.1	9734.13	-0.49	9733.64	E360	
E361	2085650.6	414550.6	9626.69	-0.06	9626.63	E361	
E363	2086356.7	414687.5	9468.30	-0.02	9468.28	E363	
E364	2086553.0	414663.7	9473.77	-0.15	9473.62	E364	
E365	2086770.0	414533.8	9543.01	-0.05	9542.96	E365	

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E417	2085421.1	413749.3	9575.40	+0.03	9575.43	E417	
E418	2085674.9	413789.9	9489.62	+0.01	9489.63	E418	
E419	2085930.3	413792.3	9468.16	-0.05	9468.11	E419	
E420	2086277.6	413763.6	9450.97	-0.03	9450.94	E420	
E421	2086518.2	413780.5	9475.98	-1.07	9474.91	E421	
E422	2086815.4	413682.4	9478.80	-0.10	9478.70	E422	
E423	2087143.2	413765.3	9609.10	-0.72	9608.38	E423	
E424	2081846.9	413504.6	9854.29	-0.13	9854.16	E424	
E425	2082181.3	413499.3	9969.25	+0.06	9969.31	E425	
E426	2082480.7	413472.5	10034.96	-0.05	10034.91	E426	
E427	2082686.6	413396.8	9970.67	+0.00	9970.67	E427	
E428	2082918.0	413387.4	9916.84	-0.01	9916.83	E428	
E429	2083209.5	413488.9	9759.87	-0.19	9759.68	E429	
E430	2083619.6	413390.9	9565.16	-0.12	9565.04	E430	
E431	2083804.5	413413.1	9486.75	-0.27	9486.48	E431	
E432	2084162.8	413428.2	9460.97	-0.00	9460.97	E432	
E433	2084520.0	413394.2	9468.99	-0.06	9468.93	E433	
E434	2084721.2	413454.1	9547.20	-0.05	9547.16	E434	
E435	2085121.1	413428.6	9571.59	-0.04	9571.55	E435	
E436	2085430.3	413443.5	9475.80	-0.00	9475.80	E436	
E437	2085738.3	413455.4	9308.90	-0.01	9308.89	E437	
E438	2085897.5	413367.5	9237.50	-0.97	9236.53	E438	
E439	2086203.7	413390.1	9238.31	+0.00	9238.31	E439	
E440	2086580.4	413409.0	9281.34	-0.09	9281.25	E440	
E441	2086857.0	413334.7	9376.79	-0.05	9376.75	E441	
E442	2087159.3	413366.5	9408.67	-0.32	9408.35	E442	
E443	2081781.3	413089.3	9637.32	+0.01	9637.33	E443	
E444	2082190.4	413192.1	9793.36	-0.03	9793.33	E444	
E445	2082396.8	413158.8	9814.36	-0.03	9814.33	E445	
E446	2082688.9	413177.9	9826.35	-0.01	9826.35	E446	
E447	2082930.6	413230.7	9833.51	-0.01	9833.50	E447	
E448	2083150.6	413135.1	9749.23	-0.80	9748.43	E448	
E449	2083498.3	413161.9	9622.84	-0.22	9622.62	E449	
E450	2083841.2	413121.2	9457.67	-2.67	9455.00	E450	
E451	2084138.2	413120.1	9269.22	-0.07	9269.15	E451	
E452	2084411.4	413114.2	9302.94	-0.02	9302.92	E452	
E453	2084796.3	412988.6	9372.23	-0.00	9372.23	E453	
E454	2085069.9	413092.7	9408.83	-0.02	9408.81	E454	
E455	2085428.4	413060.2	9346.05	-0.02	9346.03	E455	
E456	2085722.9	413194.6	9265.96	-0.01	9265.95	E456	
E457	2085996.6	413116.6	9041.60	+0.01	9041.61	E457	
E458	2086279.3	413259.8	9218.13	-0.11	9218.02	E458	
E459	2086525.3	413231.5	9204.93	-0.92	9204.01	E459	
E460	2086740.7	413134.1	9290.80	-0.31	9290.49	E460	
E461	2087157.0	413100.0	9280.29	-0.27	9280.02	E461	
E470	2081789.4	419396.8	10235.51	-0.01	10235.50	E470	
E471	2082114.6	419390.5	10203.43	-0.38	10203.06	E471	
E472	2082396.5	419380.7	10152.51	-0.46	10152.05	E472	
E473	2082622.4	419371.6	10087.05	-0.12	10086.93	E473	
E474	2082967.4	419462.3	9928.08	-0.08	9928.00	E474	
E475	2083288.0	419412.1	9764.39	-0.10	9764.29	E475	

POINT	EASTING	NORTHING	1992 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
E476	2083656.3	419382.6	9697.29	-0.41	9696.88	E476	
E477	2083916.2	419388.7	9729.10	-0.07	9729.03	E477	
E478	2084129.6	419399.1	9770.51	-0.25	9770.26	E478	
E479	2084482.0	419341.8	9870.79	-0.05	9870.74	E479	
E480	2084466.1	419112.0	9936.33	-0.03	9936.30	E480	
E481	2084201.2	419118.4	9876.29	-0.06	9876.23	E481	
E482	2083910.2	419101.7	9835.05	+0.03	9835.08	E482	
E483	2083702.0	419150.7	9802.91	-0.02	9802.89	E483	
E484	2083261.6	419116.7	9834.07	+0.00	9834.07	E484	
E485	2082968.2	419150.9	9969.31	-0.03	9969.28	E485	
E486	2082670.0	419074.7	10138.85	+0.07	10138.92	E486	
E487	2082419.0	419069.0	10265.74	-0.47	10265.27	E487	
E488	2082173.8	419081.6	10312.51	-0.02	10312.49	E488	
E489	2081809.6	419107.7	10323.48	+0.01	10323.49	E489	
E490	2081800.8	418818.5	10372.67	+0.06	10372.73	E490	
E491	2082071.3	418767.5	10371.42	+0.04	10371.46	E491	
E492	2082425.5	418831.8	10302.48	-0.01	10302.47	E492	
E493	2082683.4	418795.8	10174.96	-0.12	10174.84	E493	
E494	2083015.5	418785.0	10030.96	-0.07	10030.89	E494	
E495	2083270.7	418805.6	9982.90	+0.13	9983.03	E495	
E496	2083569.2	418771.6	9960.71	+0.01	9960.72	E496	
E497	2083842.3	418847.2	9919.08	+0.01	9919.09	E497	
E498	2084168.6	418894.6	9909.21	-0.00	9909.21	E498	
E499	2084497.9	418819.2	9843.30	+0.04	9843.34	E499	

Olympus Aerial Surveys, Inc.
Job No. 200098
Report for October 20, 2000
For
GENWAL RESOURCES, INC.
EAST MOUNTAIN SEC. 2 SUBSIDENCE STUDY

POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T501	2077795.5	418494.0	9847.07	-0.18	9846.89	T501	
T502	2077469.0	418536.3	9665.47			T502	*
T503	2077205.3	418464.6	9553.52	+0.02	9553.54	T503	
T504	2076900.3	418500.0	9453.28	-0.03	9453.25	T504	
T505	2076600.1	418503.4	9373.34	-0.07	9373.27	T505	
T506	2076549.5	418241.7	9367.52	-0.05	9367.47	T506	
T507	2076906.9	418191.5	9457.59	-0.03	9457.56	T507	
T508	2077223.1	418164.3	9565.97	-2.45	9563.52	T508	
T509	2077513.6	418233.3	9733.85	-0.05	9733.81	T509	
T510	2077796.9	418156.5	9880.56	-0.48	9880.09	T510	
T511	2078038.8	418255.8	9942.42	-1.35	9941.07	T511	
T512	2078374.1	418257.3	10167.02	-0.01	10167.02	T512	
T513	2078752.8	418244.5	10346.62	+0.01	10346.62	T513	
T514	2079028.1	418180.4	10447.17	-0.02	10447.16	T514	
T515	2079302.5	418057.9	10545.94	-3.77	10542.17	T515	
T516	2079579.3	418160.1	10578.77	-0.28	10578.49	T516	
T517	2079882.4	418194.4	10557.69	-0.08	10557.60	T517	
T518	2080199.8	418191.7	10518.39	-0.11	10518.27	T518	
T519	2080500.2	418200.0	10457.52	-0.01	10457.50	T519	
T520	2080798.2	418195.1	10420.46	+0.03	10420.48	T520	
T521	2081087.0	418210.9	10411.78	-0.01	10411.78	T521	
T522	2081400.0	418200.0	10365.00	+0.08	10365.08	T522	
T523	2081403.1	417914.1	10316.17	-0.02	10316.14	T523	
T524	2081099.9	417900.0	10384.64	+0.09	10384.74	T524	
T525	2080800.1	417900.0	10445.99	-0.01	10445.98	T525	
T526	2080499.8	417900.0	10503.35	-0.03	10503.32	T526	
T527	2080200.2	417900.1	10548.53	-0.67	10547.86	T527	
T528	2079899.8	417899.8	10583.83			T528	*
T529	2079600.2	417900.2	10597.70	-0.22	10597.48	T529	
T530	2079305.9	417921.9	10538.30	-0.05	10538.26	T530	
T531	2079009.6	417909.8	10431.88	-0.02	10431.86	T531	
T532	2078710.6	417921.0	10312.88	-0.02	10312.86	T532	
T533	2078412.0	417908.6	10179.98	+0.01	10179.99	T533	
T534	2078098.0	417902.7	10025.27	+0.04	10025.31	T534	
T535	2077835.8	417897.9	9907.26	-0.05	9907.21	T535	
T536	2077516.5	417864.5	9731.72	-1.00	9730.73	T536	
T537	2077161.2	417942.3	9550.98	-0.03	9550.95	T537	
T538	2076874.3	417872.0	9450.38			T538	*
T539	2076552.6	417909.9	9375.25	+0.01	9375.25	T539	
T540	2076597.9	417612.1	9383.58	-0.68	9382.90	T540	
T541	2076901.4	417567.2	9461.08			T541	*
T542	2077191.9	417612.9	9584.64	-0.06	9584.58	T542	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T543	2077500.4	417565.1	9693.02	-0.02	9693.00	T543	
T544	2077814.2	417574.0	9813.82	+0.01	9813.83	T544	
T545	2078124.4	417598.4	9978.50	+0.03	9978.53	T545	
T546	2078402.8	417614.3	10152.23	-0.03	10152.20	T546	
T547	2078971.9	417608.2	10412.85	-0.03	10412.82	T547	
T548	2079285.2	417567.8	10521.26	-0.55	10520.72	T548	
T549	2079600.5	417600.3	10610.62	-1.53	10609.09	T549	
T550	2079885.8	417601.6	10598.79	-0.47	10598.32	T550	
T551	2080200.2	417600.2	10565.16	-0.61	10564.55	T551	
T552	2080499.9	417600.0	10517.14	-0.06	10517.08	T552	
T553	2080799.7	417600.1	10454.24	-0.03	10454.21	T553	
T554	2081100.0	417599.9	10388.69	+0.01	10388.69	T554	
T555	2081385.9	417630.3	10305.58	-0.04	10305.55	T555	
T556	2081403.6	417324.0	10376.96	-0.01	10376.95	T556	
T557	2081083.9	417313.8	10437.63	+0.05	10437.67	T557	
T558	2080799.8	417299.9	10494.12	-0.08	10494.04	T558	
T559	2080500.0	417300.0	10544.79	-0.23	10544.56	T559	
T560	2080200.1	417299.9	10588.13	-0.37	10587.77	T560	
T561	2079900.1	417300.0	10620.64	-1.22	10619.42	T561	
T562	2079611.7	417292.3	10623.49	-0.51	10622.98	T562	
T563	2079274.9	417278.7	10533.88	-0.10	10533.77	T563	
T564	2079000.1	417300.0	10437.85	+0.07	10437.92	T564	
T565	2078699.7	417300.0	10326.75	-3.43	10323.32	T565	
T566	2078349.4	417359.1	10127.51	-0.57	10126.94	T566	
T567	2077947.3	417396.1	9897.51	-0.76	9896.75	T567	
T568	2077119.3	417269.2	9593.98	-0.13	9593.85	T568	
T569	2076900.4	417300.0	9467.42			T569	*
T570	2076587.9	417314.6	9381.65	-0.00	9381.65	T570	
T571	2076589.9	417021.0	9368.99	-0.11	9368.88	T571	
T572	2076902.2	417003.8	9470.20			T572	*
T573	2077274.0	416950.6	9689.80	-0.15	9689.64	T573	
T574	2077453.1	417008.1	9783.07	-0.00	9783.06	T574	
T575	2077831.5	416983.7	9968.77	+0.00	9968.77	T575	
T576	2078106.4	416982.0	10069.35	-0.09	10069.27	T576	
T577	2078453.4	416956.5	10215.23	-0.04	10215.19	T577	
T578	2078672.2	417013.2	10312.58	-0.03	10312.55	T578	
T579	2079063.0	417007.6	10454.64	-2.14	10452.50	T579	
T580	2079321.0	417008.1	10567.22	-0.54	10566.68	T580	
T581	2079620.2	416987.6	10639.92	-0.39	10639.54	T581	
T582	2079852.9	416976.0	10657.09	-2.45	10654.64	T582	
T583	2080200.5	416999.9	10627.61	-1.73	10625.89	T583	
T584	2080490.1	417008.6	10584.06	-0.90	10583.17	T584	
T585	2080800.7	416999.4	10542.63	-0.04	10542.58	T585	
T586	2081063.4	417025.7	10498.34	-0.03	10498.31	T586	
T587	2081411.9	417024.3	10449.45	+0.01	10449.46	T587	
T588	2081399.8	416699.9	10526.88	-0.36	10526.52	T588	
T589	2081100.5	416699.9	10559.16	-1.08	10558.09	T589	
T590	2080798.9	416706.0	10590.02	-1.13	10588.88	T590	
T591	2080496.4	416706.2	10629.09	-1.29	10627.80	T591	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T592	2080199.9	416699.9	10665.49	-1.70	10663.79	T592	
T593	2079899.3	416722.9	10665.05	-2.83	10662.22	T593	
T594	2079599.2	416698.4	10587.42	-0.21	10587.21	T594	
T595	2079301.2	416699.7	10467.16	-0.02	10467.14	T595	
T596	2079004.2	416724.2	10355.87	+0.03	10355.90	T596	
T597	2078680.8	416703.6	10203.79	-0.16	10203.63	T597	
T598	2078404.8	416714.3	10068.64	+0.02	10068.66	T598	
T599	2078099.7	416697.5	9939.36	-0.02	9939.35	T599	
T600	2077799.7	416690.9	9847.80	+0.02	9847.83	T600	
T601	2077498.3	416714.3	9773.60	+0.01	9773.61	T601	
T602	2077228.1	416730.0	9665.10	-0.10	9665.01	T602	
T603	2076883.0	416650.4	9467.51			T603	*
T604	2076615.7	416693.5	9367.03	+0.03	9367.07	T604	
T605	2076600.5	416399.3	9372.61	-0.66	9371.94	T605	
T606	2076910.8	416444.8	9476.97	-0.05	9476.92	T606	
T607	2077184.9	416420.3	9553.38	+0.01	9553.38	T607	
T608	2077520.9	416415.8	9646.30	+0.02	9646.32	T608	
T609	2077830.6	416400.5	9739.52	+0.00	9739.52	T609	
T610	2078117.3	416418.0	9849.08	-0.04	9849.04	T610	
T611	2078392.4	416415.6	9973.25	-0.03	9973.22	T611	
T612	2078701.0	416398.8	10116.21	+0.00	10116.21	T612	
T613	2079017.3	416465.8	10275.65	+0.00	10275.65	T613	
T614	2079304.6	416397.2	10429.56	-0.01	10429.56	T614	
T615	2079598.4	416401.5	10571.12	+0.01	10571.13	T615	
T616	2079958.0	416411.8	10685.68	+0.00	10685.69	T616	
T617	2080230.1	416437.7	10694.92	-0.82	10694.10	T617	
T618	2080479.9	416439.3	10671.69	-0.20	10671.49	T618	
T619	2080829.9	416405.0	10639.26	-0.15	10639.11	T619	
T620	2081102.7	416414.2	10605.48	-0.20	10605.29	T620	
T621	2081390.2	416410.8	10571.98	-0.18	10571.80	T621	
T622	2081680.6	416124.5	10434.62	+0.01	10434.63	T622	
T623	2081411.1	416195.1	10597.98	-0.02	10597.96	T623	
T624	2081092.8	416097.0	10657.60	-0.04	10657.56	T624	
T625	2080761.4	416104.9	10690.36	+0.08	10690.44	T625	
T626	2080488.4	416105.8	10713.33	-0.16	10713.17	T626	
T627	2080085.9	416133.6	10742.86	-0.87	10742.00	T627	
T628	2079934.5	416118.6	10702.47	-0.56	10701.91	T628	
T629	2079610.6	416098.1	10570.02	-0.23	10569.79	T629	
T630	2079328.0	416109.5	10439.97	-0.14	10439.83	T630	
T631	2079015.1	416099.7	10303.88	-0.02	10303.86	T631	
T632	2078774.3	416036.1	10210.07	-3.29	10206.78	T632	
T633	2078541.3	416117.5	10060.31	-0.23	10060.08	T633	
T634	2077217.6	416003.2	9669.75			T634	*
T635	2076944.0	416102.0	9552.13	+0.00	9552.13	T635	
T636	2076548.4	416117.1	9330.36	+0.03	9330.39	T636	
T637	2076599.9	415799.9	9341.43	-0.30	9341.13	T637	
T638	2076921.7	415831.6	9529.86	-0.03	9529.82	T638	
T639	2077192.5	415810.1	9671.00			T639	*
T640	2077482.8	415744.8	9831.84	-0.19	9831.65	T640	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T641	2077756.1	415804.1	9879.12			T641 *	
T642	2078039.1	415757.8	10001.63			T642 *	
T643	2078372.7	415746.1	10119.54	-0.31	10119.23	T643	
T644	2078740.6	415797.5	10260.97	-0.04	10260.93	T644	
T645	2079016.0	415823.5	10343.23	-0.06	10343.17	T645	
T646	2079338.2	415810.6	10436.76	-0.30	10436.46	T646	
T647	2079629.6	415787.4	10535.66	-0.04	10535.62	T647	
T648	2079925.6	415838.7	10659.28	+0.00	10659.28	T648	
T649	2080233.1	415804.4	10737.78	-0.01	10737.77	T649	
T650	2080499.8	415803.6	10724.85	-0.33	10724.52	T650	
T651	2080773.5	415817.9	10712.01	-0.01	10712.00	T651	
T652	2081100.2	415774.7	10679.88	-0.13	10679.75	T652	
T653	2081375.5	415802.4	10637.73	-0.03	10637.70	T653	
T654	2081713.2	415868.1	10395.66	-0.00	10395.65	T654	
T655	2081641.7	415378.5	10569.26	-0.01	10569.25	T655	
T656	2081411.0	415503.0	10636.26	-0.00	10636.26	T656	
T657	2081092.5	415501.8	10696.57	-0.03	10696.54	T657	
T658	2080799.9	415499.9	10712.52	-1.75	10710.76	T658	
T659	2080503.4	415501.5	10709.54	+0.01	10709.55	T659	
T660	2080194.7	415487.9	10653.12	+0.03	10653.15	T660	
T661	2079911.9	415496.0	10600.47	-0.30	10600.17	T661	
T662	2079602.6	415517.4	10471.20	+0.04	10471.24	T662	
T663	2079306.6	415499.0	10326.11	+0.06	10326.17	T663	
T664	2078980.4	415509.6	10203.48	-0.33	10203.16	T664	
T665	2078713.7	415496.6	10130.91	+0.01	10130.93	T665	
T666	2078407.0	415529.6	10027.61	-0.07	10027.54	T666	
T667	2078096.8	415534.9	9957.40	+0.11	9957.51	T667	
T668	2077826.2	415581.5	9933.93	-0.07	9933.87	T668	
T669	2077530.8	415469.8	9840.18	-0.03	9840.15	T669	
T670	2077148.7	415566.5	9646.94	-0.01	9646.93	T670	
T671	2076923.5	415497.3	9528.10	+0.00	9528.10	T671	
T672	2076582.5	415490.4	9325.89	+0.06	9325.95	T672	
T673	2076600.5	415200.1	9311.31	+0.00	9311.32	T673	
T674	2076914.5	415213.9	9525.02	+0.02	9525.03	T674	
T675	2077202.2	415203.1	9655.84	-0.02	9655.82	T675	
T676	2077720.6	415235.0	9779.10	-41.82	9737.28	T676	indef obj?
T677	2078088.8	415225.2	9817.29	-0.01	9817.28	T677	
T678	2078415.6	415189.3	9881.18	-0.30	9880.88	T678	
T679	2078721.4	415211.7	9990.40	-0.01	9990.39	T679	
T680	2078972.4	415240.1	10100.90	-0.43	10100.46	T680	
T681	2079337.0	415192.3	10274.83	-0.01	10274.83	T681	
T682	2079607.4	415205.5	10397.56	-0.11	10397.45	T682	
T683	2079911.1	415225.1	10525.99	-0.04	10525.95	T683	
T684	2080159.1	415184.9	10587.14	+0.25	10587.39	T684	
T685	2080507.4	415206.7	10683.06	-0.01	10683.05	T685	
T686	2080757.8	415214.4	10702.47	-0.99	10701.48	T686	
T687	2081128.5	415198.2	10644.78	-0.00	10644.78	T687	
T688	2081388.6	415215.7	10605.07	-0.00	10605.07	T688	
T689	2081698.0	415210.7	10553.46	-0.02	10553.44	T689	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T690	2081684.2	414896.5	10478.32	+0.01	10478.34	T690	
T691	2081427.8	414903.0	10484.45	+0.02	10484.47	T691	
T692	2081111.9	414924.4	10553.21	+0.02	10553.23	T692	
T693	2080792.1	414897.0	10615.30	-0.43	10614.87	T693	
T694	2080519.8	414913.6	10683.67	-0.00	10683.67	T694	
T695	2080222.5	414890.9	10576.69	-0.04	10576.65	T695	
T696	2079901.7	414876.9	10461.61	+0.00	10461.62	T696	
T697	2079618.7	414901.1	10335.35	+0.02	10335.36	T697	
T698	2079327.2	414935.8	10234.90	-0.50	10234.40	T698	
T699	2079035.7	414926.5	10101.05	-0.41	10100.64	T699	
T700	2078774.0	415008.3	9939.22			T700	*
T701	2078391.1	414906.6	9739.62	-0.05	9739.57	T701	
T702	2078109.3	414901.0	9679.21	+0.04	9679.25	T702	
T703	2077820.5	414895.9	9600.93	+0.01	9600.93	T703	
T704	2077500.2	414900.1	9537.46	-0.04	9537.42	T704	
T705	2077199.9	414900.0	9501.62	+0.03	9501.65	T705	
T706	2076956.4	414946.9	9497.68	-0.01	9497.68	T706	
T707	2076585.0	414893.1	9270.54	-0.42	9270.11	T707	
T708	2076583.6	414591.7	9280.53	+0.02	9280.55	T708	
T709	2076880.1	414679.2	9308.89			T709	*
T710	2079048.9	414682.2	10006.22	-0.08	10006.14	T710	
T711	2079340.2	414567.0	10187.66			T711	*
T712	2079581.7	414576.5	10298.56	-0.01	10298.56	T712	
T713	2079880.1	414579.1	10442.84	-0.68	10442.16	T713	
T714	2080210.6	414658.8	10574.65	-1.28	10573.37	T714	
T715	2080429.7	414621.8	10621.94	-0.64	10621.30	T715	
T716	2080822.1	414601.7	10478.91	-0.02	10478.89	T716	
T717	2081091.0	414636.4	10436.00	+0.04	10436.04	T717	
T718	2081425.1	414594.0	10333.79	+0.00	10333.80	T718	
T719	2081663.7	414593.0	10330.11	-0.01	10330.09	T719	
T720	2081691.2	414296.3	10183.69	-0.02	10183.67	T720	
T721	2081477.2	414259.2	10159.73	-0.04	10159.69	T721	
T722	2081113.8	414297.3	10278.67	-0.00	10278.67	T722	
T723	2080797.1	414273.6	10364.60	-0.00	10364.60	T723	
T724	2080531.1	414329.2	10477.64	-0.02	10477.61	T724	
T725	2080245.4	414311.6	10589.56	+0.12	10589.68	T725	
T726	2079908.4	414321.6	10456.91	+0.01	10456.91	T726	
T727	2079608.4	414306.0	10332.42	-0.12	10332.30	T727	
T728	2079381.3	414340.1	10232.81	-0.27	10232.54	T728	
T729	2079016.2	414412.9	10078.28	-13.94	10064.35	T729	indef obj?
T730	2077369.4	414273.5	9646.94	-0.05	9646.88	T730	
T731	2077246.7	414248.6	9609.36	-0.06	9609.30	T731	
T732	2076919.2	414268.3	9422.90			T732	*
T733	2076601.7	414300.2	9252.49	-0.07	9252.42	T733	
T734	2076568.9	413980.3	9228.29	-0.30	9227.99	T734	
T735	2076857.4	414022.6	9407.98			T735	*
T736	2077237.8	414027.4	9622.81	-0.04	9622.76	T736	
T737	2077551.7	413960.1	9803.36	-0.02	9803.34	T737	
T738	2077785.7	413928.2	9876.51	+0.02	9876.52	T738	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T739	2078978.4	414098.9	10168.35	-0.06	10168.29	T739	
T740	2079409.5	414031.2	10340.86	-0.15	10340.71	T740	
T741	2079600.3	414070.6	10388.56	-0.04	10388.52	T741	
T742	2079874.1	414026.3	10497.27	-0.06	10497.21	T742	
T743	2080110.1	414035.7	10561.88	-0.03	10561.85	T743	
T744	2080483.9	414001.2	10390.97	-0.01	10390.97	T744	
T745	2080792.4	414038.8	10285.92	-0.01	10285.91	T745	
T746	2081155.2	414029.0	10140.48	+0.00	10140.48	T746	
T747	2081405.7	413984.8	10048.98	-0.01	10048.97	T747	
T748	2081580.6	413702.2	9863.27	-0.63	9862.64	T748	
T749	2081037.0	413792.2	10091.66	-0.01	10091.66	T749	
T750	2080760.4	413695.2	10199.92	-0.02	10199.90	T750	
T751	2080489.6	413726.0	10342.31	-0.13	10342.19	T751	
T752	2080194.3	413695.4	10480.79	+0.03	10480.82	T752	
T753	2079924.9	413748.6	10559.49	+0.16	10559.65	T753	
T754	2079538.2	413711.7	10471.02			T754	*
T755	2079182.3	413775.4	10341.70	-0.39	10341.32	T755	
T756	2078581.8	413607.8	10229.40	-0.01	10229.39	T756	
T757	2078396.9	413675.3	10161.42	+0.09	10161.52	T757	
T758	2078114.6	413756.6	10042.44	-0.44	10042.00	T758	
T759	2077804.6	413722.5	9857.17	-0.02	9857.15	T759	
T760	2077523.2	413727.4	9759.55	-0.12	9759.43	T760	
T761	2077201.6	413733.5	9595.25	-0.07	9595.19	T761	
T762	2076912.7	413742.2	9420.30	-0.23	9420.08	T762	
T763	2076592.6	413687.9	9228.73	+0.03	9228.76	T763	
T764	2076572.3	413408.4	9212.59	-0.00	9212.59	T764	
T765	2076900.7	413441.2	9380.36	-0.04	9380.32	T765	
T766	2077216.6	413390.0	9548.12	-7.32	9540.80	T766	
T767	2077492.0	413377.9	9681.80	-0.03	9681.77	T767	
T768	2077853.9	413450.2	9842.30	-0.01	9842.29	T768	
T769	2078099.5	413408.3	9976.38	-0.09	9976.28	T769	
T770	2078396.2	413426.3	10121.99	+0.01	10122.00	T770	
T771	2078681.0	413390.6	10253.23	-0.04	10253.19	T771	
T772	2078935.4	413388.9	10349.95	+0.01	10349.96	T772	
T773	2079302.4	413479.2	10475.93	-0.03	10475.90	T773	
T774	2079607.3	413456.8	10525.33	+0.15	10525.48	T774	
T775	2079916.5	413448.2	10508.49	+0.03	10508.52	T775	
T776	2080206.9	413421.6	10434.60	+0.01	10434.61	T776	
T777	2080507.7	413409.0	10270.86	-0.03	10270.83	T777	
T778	2080791.0	413423.1	10126.94	-0.01	10126.93	T778	
T779	2081059.2	413431.8	9970.48	-0.02	9970.46	T779	
T780	2081400.0	413400.0	9804.15	-0.00	9804.15	T780	
T781	2081703.4	413411.9	9780.91	-0.02	9780.89	T781	
T782	2081606.2	413128.4	9693.61	-0.05	9693.56	T782	
T783	2081306.2	413199.9	9811.84	-0.10	9811.73	T783	
T784	2081071.8	413106.1	9915.44	-0.02	9915.42	T784	
T785	2080790.2	413098.7	10075.10	-0.01	10075.09	T785	
T786	2080541.6	413046.3	10227.30	-0.01	10227.30	T786	
T787	2080202.5	413157.5	10399.57	+0.01	10399.58	T787	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
T788	2079924.7	413188.3	10449.81	+0.03	10449.84	T788	
T789	2079588.5	413238.3	10480.16	-0.29	10479.87	T789	
T790	2079241.9	413248.4	10401.38	-0.03	10401.35	T790	
T791	2078931.4	413143.9	10265.18	+0.00	10265.19	T791	
T792	2078685.9	413145.1	10176.83	-0.03	10176.79	T792	
T793	2078437.0	413169.7	10114.87	-0.03	10114.85	T793	
T794	2078072.4	413123.6	9879.17	-0.02	9879.15	T794	
T795	2077858.4	413080.4	9826.05	+0.03	9826.08	T795	
T796	2077426.8	413069.5	9679.62	-0.03	9679.59	T796	
T797	2077189.5	413145.3	9567.09	+0.02	9567.11	T797	
T798	2076855.3	413085.2	9372.95	-0.01	9372.94	T798	
T799	2076617.0	413107.6	9211.70	-0.60	9211.10	T799	

Olympus Aerial Surveys, Inc.
Job No. 200098
Report for October 20, 2000
For
GENWAL RESOURCES, INC.
EAST MOUNTAIN SEC.11 SUBSIDENCE STUDY

POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
L500	2076910.9	412734.9	9395.74	-0.03	9395.72	L500	
L501	2077266.7	412796.6	9586.87	-0.06	9586.81	L501	
L502	2077439.6	412852.2	9655.48	-0.07	9655.41	L502	
L503	2077827.1	412810.8	9754.00	+0.08	9754.08	L503	
L504	2078144.5	412783.5	9804.67	-0.27	9804.39	L504	
L505	2078377.7	412812.1	9910.71	-0.04	9910.67	L505	
L506	2078746.7	412847.0	10093.83	-0.22	10093.61	L506	
L507	2079011.0	412786.1	10191.41	+0.01	10191.42	L507	
L508	2079252.5	412840.5	10298.74			L508	*
L509	2079617.7	412811.7	10419.28	+0.00	10419.28	L509	
L510	2079862.9	412816.4	10399.27	+0.00	10399.27	L510	
L511	2080227.6	412836.3	10341.20	-0.10	10341.10	L511	
L512	2080518.6	412817.2	10242.67	+0.03	10242.70	L512	
L513	2080788.6	412842.8	10080.14	-0.03	10080.11	L513	
L514	2081107.7	412764.1	9876.43	-0.23	9876.20	L514	
L515	2081296.2	412792.9	9787.07	-0.03	9787.04	L515	
L516	2081724.7	412843.6	9612.69	-0.02	9612.66	L516	
L517	2082001.9	412813.0	9556.86	-0.17	9556.69	L517	
L518	2082341.4	412765.1	9655.59	-0.02	9655.56	L518	
L519	2082529.2	412768.9	9683.86	-0.02	9683.85	L519	
L520	2082939.2	412873.7	9676.85	+0.01	9676.86	L520	
L521	2083203.8	412839.0	9635.26	-0.02	9635.24	L521	
L522	2083450.6	412805.0	9608.97	+0.02	9608.99	L522	
L523	2083712.2	412754.3	9507.26	+0.01	9507.26	L523	
L524	2084114.6	412789.5	9286.26	-0.04	9286.23	L524	
L525	2084094.6	412552.3	9278.46	-0.02	9278.43	L525	
L526	2083773.5	412511.2	9409.68	-0.01	9409.67	L526	
L527	2083440.7	412537.6	9493.74	-0.02	9493.72	L527	
L528	2083151.2	412500.4	9458.23	+0.01	9458.24	L528	
L529	2082835.0	412506.7	9514.33	-0.16	9514.17	L529	
L530	2082563.4	412484.8	9536.21	-0.01	9536.20	L530	
L531	2082286.4	412548.4	9527.85	-0.01	9527.85	L531	
L532	2081901.6	412587.3	9529.65	-0.05	9529.59	L532	
L533	2081310.4	412629.5	9777.21	+0.03	9777.24	L533	
L534	2080937.7	412511.1	10019.39	+0.01	10019.41	L534	
L535	2080778.2	412474.5	10112.34	-0.02	10112.31	L535	
L536	2080500.3	412537.1	10221.62	-0.04	10221.58	L536	
L537	2080200.0	412500.0	10284.02	-0.01	10284.01	L537	
L538	2079895.5	412492.8	10343.71	-0.05	10343.66	L538	
L539	2079587.1	412525.8	10376.44	-0.09	10376.36	L539	
L540	2079277.9	412511.7	10278.70	-0.11	10278.59	L540	
L541	2079051.8	412416.2	10189.32	+0.02	10189.34	L541	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
L542	2078661.7	412557.6	9988.52			L542	*
L543	2078312.2	412529.5	9772.55			L543	*
L544	2078014.8	412549.8	9675.74	+0.01	9675.74	L544	
L545	2077836.9	412474.0	9600.97	+1.28	9602.25	L545	
L546	2077585.0	412489.6	9548.39	-0.03	9548.36	L546	
L547	2077193.8	412526.6	9454.47	-0.07	9454.40	L547	
L548	2076888.2	412474.0	9346.51	-0.06	9346.45	L548	
L549	2076891.1	412134.3	9324.14			L549	*
L550	2077197.3	412352.3	9357.06	+0.03	9357.09	L550	
L551	2078438.6	412191.3	9881.62	-0.11	9881.51	L551	
L552	2078809.6	412139.2	10096.97	-2.72	10094.24	L552	
L553	2079035.0	412173.4	10177.25	-0.18	10177.07	L553	
L554	2079314.4	412188.8	10280.65	-0.25	10280.40	L554	
L555	2079537.5	412231.6	10342.64	-0.52	10342.12	L555	
L556	2079889.8	412220.9	10302.01			L556	*
L557	2080231.1	412235.7	10230.76	-0.42	10230.35	L557	
L558	2080500.1	412200.0	10165.01	-0.00	10165.01	L558	
L559	2080757.9	412230.7	10092.42	+0.02	10092.44	L559	
L560	2080976.4	412206.1	10005.55	-0.05	10005.50	L560	
L561	2081231.0	412261.4	9815.21	-0.11	9815.10	L561	
L562	2081973.1	412321.6	9490.55	-0.36	9490.19	L562	
L563	2082285.7	412207.4	9368.34	-0.32	9368.01	L563	
L564	2082565.6	412222.7	9373.88	+0.01	9373.89	L564	
L565	2082817.5	412268.4	9395.14	-0.08	9395.06	L565	
L566	2083170.1	412144.3	9288.93	-0.02	9288.90	L566	
L567	2083467.7	412144.9	9277.13	-0.01	9277.11	L567	
L568	2083853.2	412206.4	9276.83	-0.02	9276.81	L568	
L569	2084075.8	412218.1	9259.85	-0.04	9259.82	L569	
L570	2084137.8	411948.6	9004.44	-0.03	9004.40	L570	
L571	2083800.2	411905.6	9017.48	+0.00	9017.48	L571	
L572	2083514.0	411952.4	9093.82			L572	*
L573	2083127.3	411959.6	9098.72	-0.03	9098.70	L573	
L574	2082923.4	412032.5	9180.49			L574	*
L575	2081986.8	411896.2	9483.27	+0.00	9483.27	L575	
L576	2081678.4	411954.1	9644.63	-0.03	9644.61	L576	
L577	2081265.9	411952.2	9742.56	-0.69	9741.87	L577	
L578	2081072.0	411954.7	9877.12	-0.42	9876.70	L578	
L579	2080840.4	411864.1	9982.74	-0.32	9982.42	L579	
L580	2080534.4	411881.1	10088.19	-2.87	10085.32	L580	
L581	2080218.9	411887.7	10191.16	-4.41	10186.75	L581	
L582	2079900.2	411900.0	10267.38	-1.41	10265.96	L582	
L583	2079534.8	411942.6	10329.08	-0.23	10328.85	L583	
L584	2079289.2	412002.6	10281.26	-0.58	10280.67	L584	
L585	2079029.7	411831.5	10227.58	-0.70	10226.88	L585	
L586	2078850.0	411865.4	10149.11	-0.08	10149.04	L586	
L587	2077797.6	411909.1	9730.43	-0.03	9730.40	L587	
L588	2077551.5	411752.9	9723.56	-0.00	9723.56	L588	
L589	2077243.8	411894.0	9552.99			L589	*
L590	2076900.1	411769.6	9357.33	-0.01	9357.32	L590	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
L591	2076916.7	411582.7	9376.92			L591	*
L592	2077216.1	411557.7	9541.73	+0.02	9541.75	L592	
L593	2077545.7	411611.5	9727.06	-0.01	9727.05	L593	
L594	2077812.2	411627.8	9805.20	-0.04	9805.16	L594	
L595	2078103.0	411560.4	9984.98	+0.00	9984.98	L595	
L596	2078350.9	411549.5	10089.65	-0.79	10088.86	L596	
L597	2078762.8	411553.9	10175.07	-0.36	10174.71	L597	
L598	2078982.7	411610.5	10243.09	-5.44	10237.65	L598	
L599	2079313.1	411604.6	10349.03	-1.61	10347.42	L599	
L600	2079599.8	411600.0	10321.42	-0.81	10320.61	L600	
L601	2079900.0	411600.0	10263.15	-1.52	10261.63	L601	
L602	2080173.7	411601.9	10191.83	-0.48	10191.35	L602	
L603	2080528.5	411604.4	10075.21	-1.39	10073.83	L603	
L604	2080765.4	411572.3	9985.87	-0.45	9985.41	L604	
L605	2081018.9	411714.1	9866.87	-0.02	9866.85	L605	
L606	2081297.7	411784.3	9729.07	-1.21	9727.86	L606	
L607	2081965.1	411503.6	9644.66	+0.99	9645.65	L607	
L608	2082534.3	411673.7	9471.89	-0.42	9471.47	L608	
L609	2083931.0	411716.0	8886.07	-0.01	8886.07	L609	
L610	2084142.3	411204.1	9043.39	-0.18	9043.20	L610	
L611	2083512.1	411216.7	9283.99	-0.01	9283.97	L611	
L612	2083368.9	411208.5	9351.78	+0.00	9351.78	L612	
L613	2082613.2	411318.5	9609.23	-0.03	9609.21	L613	
L614	2081684.8	411300.2	9796.41	-0.06	9796.36	L614	
L615	2081068.6	411187.4	9996.20	-0.08	9996.13	L615	
L616	2080831.0	411342.0	10004.16	-0.05	10004.11	L616	
L617	2080569.5	411356.6	10080.23	-0.37	10079.86	L617	
L618	2080171.0	411308.4	10211.10	-0.01	10211.09	L618	
L619	2079907.9	411368.5	10274.80	-0.86	10273.95	L619	
L620	2079600.0	411300.0	10334.86	-0.03	10334.83	L620	
L621	2079299.9	411299.9	10367.99	-0.33	10367.66	L621	
L622	2079067.7	411243.9	10364.93	-1.48	10363.45	L622	
L623	2078799.9	411259.5	10259.20	-0.58	10258.62	L623	
L624	2078418.0	411302.3	10103.54	-0.01	10103.53	L624	
L625	2078099.4	411353.3	9956.33	-0.01	9956.31	L625	
L626	2077843.6	411321.3	9814.29	+0.02	9814.31	L626	
L627	2077474.1	411246.0	9634.60			L627	*
L628	2077164.7	411348.0	9499.37	-0.00	9499.37	L628	
L629	2076928.4	411266.6	9352.01			L629	*
L630	2076955.3	410990.5	9393.53	-0.03	9393.50	L630	
L631	2077241.7	411002.7	9551.44	-0.04	9551.40	L631	
L632	2077491.4	410945.8	9691.72	-1.53	9690.19	L632	
L633	2077799.9	410995.4	9789.82	-0.87	9788.95	L633	
L634	2078106.4	411042.4	9961.94	-0.11	9961.84	L634	
L635	2078413.1	411047.3	10103.57	-0.04	10103.53	L635	
L636	2078718.2	411011.8	10188.14	-0.07	10188.07	L636	
L637	2079022.9	411061.3	10335.10	-0.04	10335.06	L637	
L638	2079229.8	411059.5	10387.19	+0.03	10387.22	L638	
L639	2079592.9	410999.2	10356.46	+0.02	10356.48	L639	

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POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
L640	2079923.8	411080.7	10293.96	-0.23	10293.73	L640	
L641	2080112.8	411008.2	10258.99	-0.27	10258.72	L641	
L642	2080504.8	411068.5	10154.78	-0.65	10154.13	L642	
L643	2080962.4	410988.5	10072.47	-0.64	10071.83	L643	
L644	2081172.9	410928.8	10047.30	-0.50	10046.80	L644	
L645	2082323.1	410998.1	9797.27	-0.09	9797.18	L645	
L646	2082863.7	410969.4	9623.40	-0.05	9623.35	L646	
L647	2083216.1	410979.8	9479.28	-0.04	9479.23	L647	
L648	2083512.4	411049.8	9309.66	-0.00	9309.66	L648	
L649	2083935.5	410684.6	9380.26	-0.02	9380.24	L649	
L650	2083814.7	410762.6	9384.52	-0.37	9384.14	L650	
L651	2083214.8	410694.8	9559.81	-0.06	9559.75	L651	
L652	2082821.0	410634.1	9758.39	-0.03	9758.35	L652	
L653	2082252.4	410612.1	9961.98	-0.56	9961.42	L653	
L654	2081991.1	410707.5	9970.55	-1.02	9969.54	L654	
L655	2081648.9	410790.0	10004.05	-1.20	10002.85	L655	
L656	2081394.7	410696.9	10067.84	-1.86	10065.97	L656	
L657	2081037.8	410611.4	10134.33	-0.03	10134.30	L657	
L658	2080837.1	410664.6	10168.36	-0.14	10168.22	L658	
L659	2080518.8	410697.3	10228.74	-3.00	10225.75	L659	
L660	2080161.2	410703.0	10286.71	-0.75	10285.96	L660	
L661	2079834.0	410715.7	10334.08	-0.83	10333.25	L661	
L662	2079453.6	410798.5	10395.99	-0.39	10395.60	L662	
L663	2079338.8	410644.8	10413.54	-0.69	10412.85	L663	
L664	2079024.5	410747.9	10286.74	-0.04	10286.70	L664	
L665	2078586.1	410724.7	10063.44	-0.08	10063.36	L665	
L666	2078365.9	410791.0	9984.32	+0.03	9984.34	L666	
L667	2078107.8	410692.3	9791.04	+0.03	9791.08	L667	
L668	2077871.5	410707.2	9718.36	-3.90	9714.46	L668	
L669	2077500.0	410700.0	9598.22	+0.00	9598.22	L669	
L670	2077163.6	410752.3	9494.14	-0.07	9494.07	L670	
L671	2076903.0	410669.2	9365.33	-0.05	9365.29	L671	
L672	2076961.6	410452.6	9286.26	-0.13	9286.13	L672	
L673	2077192.7	410439.4	9375.88	+0.00	9375.88	L673	
L674	2077480.8	410443.7	9469.05			L674	*
L675	2077800.9	410413.4	9608.40	-8.06	9600.35	L675	
L676	2078129.5	410416.4	9758.36	-0.07	9758.29	L676	
L677	2078395.1	410393.1	9922.18			L677	*
L678	2078744.1	410421.3	10115.05	+0.02	10115.07	L678	
L679	2078960.3	410373.0	10212.03	-0.05	10211.98	L679	
L680	2079316.4	410382.5	10392.35	-1.00	10391.34	L680	
L681	2079483.2	410408.0	10442.08	-0.24	10441.83	L681	
L682	2079831.8	410435.7	10370.71	-0.02	10370.69	L682	
L683	2080078.2	410438.5	10305.66	-0.00	10305.66	L683	
L684	2080493.2	410399.4	10174.58	-0.02	10174.56	L684	
L685	2080800.8	410402.5	10116.04	+0.04	10116.08	L685	
L686	2081107.5	410414.4	10080.37	-0.17	10080.20	L686	
L687	2081384.7	410441.7	10050.99	-0.03	10050.96	L687	
L688	2081674.7	410504.9	9996.85	-0.16	9996.69	L688	

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L689	2081987.2	410467.9	9958.23	-0.02	9958.21	L689	
L690	2082298.1	410441.3	9946.93	-0.04	9946.89	L690	
L691	2082640.4	410448.4	9831.87	-0.07	9831.80	L691	
L692	2082871.9	410394.3	9743.20	-0.08	9743.13	L692	
L693	2083257.8	410437.9	9605.59	-0.07	9605.52	L693	
L694	2083470.5	410396.4	9581.43	-0.03	9581.40	L694	
L695	2083770.1	410355.3	9555.52	+0.11	9555.63	L695	
L696	2084143.2	410310.7	9519.97	+0.08	9520.06	L696	
L697	2084100.3	410101.6	9418.26	+0.02	9418.28	L697	
L698	2083810.6	410094.2	9472.92	-0.10	9472.81	L698	
L699	2083478.5	410112.0	9474.25	-0.00	9474.25	L699	
L700	2083209.0	410121.5	9548.37	-0.28	9548.08	L700	
L701	2082950.5	410176.3	9602.35	-0.13	9602.22	L701	
L702	2082544.2	410107.0	9698.94	+0.02	9698.96	L702	
L703	2082299.7	410118.7	9773.62	-0.04	9773.58	L703	
L704	2081945.8	410100.4	9768.75	-0.03	9768.72	L704	
L705	2081691.7	410104.2	9827.58	-0.30	9827.29	L705	
L706	2081423.8	410097.8	9882.91	-0.05	9882.86	L706	
L707	2081103.3	410099.9	9963.88	-0.03	9963.85	L707	
L708	2080790.1	410115.7	10026.62	-0.08	10026.54	L708	
L709	2080464.9	410128.0	10095.71	-0.20	10095.52	L709	
L710	2080108.1	410169.7	10181.36	-0.03	10181.33	L710	
L711	2079703.3	410139.9	10318.80	-0.04	10318.76	L711	
L712	2079431.9	410136.1	10437.67	-0.22	10437.44	L712	
L713	2079285.7	410111.6	10380.07	+0.00	10380.07	L713	
L714	2078937.3	410142.4	10203.79	-0.05	10203.74	L714	
L715	2078625.1	410086.5	10084.22	-3.06	10081.16	L715	
L716	2078419.7	410126.4	9985.13	-0.15	9984.98	L716	
L717	2078061.5	410058.7	9809.00	-0.21	9808.78	L717	
L718	2077730.9	410105.8	9663.46	-0.03	9663.43	L718	
L719	2077557.6	410108.6	9602.52	-0.09	9602.43	L719	
L720	2077186.8	410105.1	9488.65	-0.01	9488.64	L720	
L721	2076920.4	410115.8	9364.65	-0.17	9364.47	L721	
L722	2076926.8	409844.0	9352.19	-0.13	9352.06	L722	
L723	2077098.7	409814.7	9433.98	-0.09	9433.89	L723	
L724	2077499.7	409809.2	9637.56	-0.22	9637.34	L724	
L725	2077771.5	409806.6	9712.33			L725	*
L726	2078094.8	409796.8	9899.87	-0.39	9899.48	L726	
L727	2078414.3	409784.6	10046.07	-0.32	10045.75	L727	
L728	2078657.5	409819.5	10150.48	-0.04	10150.44	L728	
L729	2079070.6	409823.6	10323.74	-0.05	10323.69	L729	
L730	2079329.1	409875.4	10418.91	+0.01	10418.92	L730	
L731	2079513.7	409766.6	10287.76	-0.02	10287.74	L731	
L732	2079913.4	409829.9	10148.21	-0.07	10148.14	L732	
L733	2080152.7	409774.0	10058.68	-0.13	10058.55	L733	
L734	2080453.9	409855.0	9993.01	+0.09	9993.09	L734	
L735	2080762.0	409807.7	9907.11	-0.00	9907.11	L735	
L736	2081005.9	409791.2	9846.25	+0.04	9846.29	L736	
L737	2081360.8	409879.5	9809.13	-0.33	9808.81	L737	

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L738	2081699.5	409812.5	9652.02			L738	*
L739	2081936.2	409823.8	9609.15	-0.03	9609.12	L739	
L740	2082249.4	409714.9	9570.89	-0.03	9570.86	L740	
L741	2082528.4	409819.8	9594.99	-0.01	9594.98	L741	
L742	2082928.1	409838.4	9509.67	-0.03	9509.65	L742	
L743	2083134.8	409689.4	9360.71	+0.01	9360.72	L743	
L744	2083256.9	409841.6	9367.57	+0.00	9367.57	L744	
L745	2083473.8	409775.1	9287.65	+0.01	9287.66	L745	
L746	2083797.7	409804.7	9302.29	-0.06	9302.24	L746	
L747	2084087.5	409835.3	9275.59	-0.07	9275.51	L747	
L748	2084115.1	409547.6	9135.75	+0.03	9135.78	L748	
L749	2083843.5	409501.9	9143.92	+0.02	9143.94	L749	
L750	2083491.4	409502.7	9135.93	-0.02	9135.91	L750	
L751	2083194.4	409443.8	9284.40	+0.01	9284.41	L751	
L752	2082909.9	409515.0	9417.85			L752	*
L753	2082547.3	409511.1	9468.54	-0.02	9468.52	L753	
L754	2082308.5	409515.4	9471.38	-0.04	9471.34	L754	
L755	2082011.6	409562.6	9533.34	-0.10	9533.25	L755	
L756	2081616.9	409551.1	9609.53	-0.15	9609.38	L756	
L757	2081315.0	409480.3	9621.52	-0.26	9621.27	L757	
L758	2081079.5	409528.9	9685.52	-0.14	9685.38	L758	
L759	2080842.4	409567.6	9775.87	+0.01	9775.88	L759	
L760	2080525.1	409533.2	9854.80	-0.05	9854.75	L760	
L761	2080234.9	409507.7	9967.07	-0.18	9966.89	L761	
L762	2079876.0	409492.2	10119.39	-0.67	10118.73	L762	
L763	2079608.4	409502.6	10211.89	+1.00	10212.89	L763	
L764	2079336.5	409492.9	10322.54	+0.02	10322.56	L764	
L765	2078983.9	409536.5	10253.05	-0.05	10253.01	L765	
L766	2078715.8	409504.1	10158.31	+0.01	10158.32	L766	
L767	2078397.1	409495.9	10042.42	-0.30	10042.12	L767	
L768	2078139.8	409514.7	9931.41	-0.05	9931.36	L768	
L769	2077737.9	409493.2	9699.66			L769	*
L770	2077515.0	409505.4	9641.08	-0.03	9641.06	L770	
L771	2077240.2	409482.6	9532.02	-0.00	9532.02	L771	
L772	2076887.6	409520.6	9345.86	-0.09	9345.77	L772	
L773	2076908.5	409194.8	9371.99	-1.55	9370.45	L773	
L774	2077199.8	409191.4	9535.19			L774	*
L775	2077500.1	409200.0	9662.53	-0.92	9661.62	L775	
L776	2077815.4	409293.2	9812.49	+0.00	9812.50	L776	
L777	2078112.1	409196.3	9844.16	+0.08	9844.24	L777	
L778	2078396.8	409208.2	9953.43	-0.01	9953.42	L778	
L779	2078702.0	409234.1	10060.33	-0.00	10060.33	L779	
L780	2078992.4	409219.7	10161.39	-0.04	10161.35	L780	
L781	2079386.8	409242.4	10277.96	-0.00	10277.96	L781	
L782	2079553.1	409227.5	10238.80	-0.05	10238.74	L782	
L783	2079896.0	409153.5	10062.63	-1.43	10061.20	L783	
L784	2080224.9	409256.0	9922.96	-0.19	9922.77	L784	
L785	2080443.4	409200.8	9797.11	-0.01	9797.09	L785	
L786	2080838.5	409237.8	9652.94			L786	*

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L787	2081159.0	409211.6	9579.86	-0.63	9579.23	L787	
L788	2081348.3	409144.9	9536.64	-0.01	9536.63	L788	
L789	2081714.0	409232.1	9457.86	-0.05	9457.80	L789	
L790	2081993.4	409203.3	9354.89	-0.03	9354.86	L790	
L791	2082225.1	409170.6	9313.47	-0.04	9313.43	L791	
L792	2082562.0	409126.2	9279.35	+0.02	9279.37	L792	
L793	2082893.4	409237.2	9267.54	-0.18	9267.36	L793	
L794	2083236.1	409210.6	9165.42	-0.05	9165.37	L794	
L795	2083489.0	409285.1	9102.98	-0.04	9102.94	L795	
L796	2083680.0	409165.9	8992.13	-0.03	8992.10	L796	
L797	2084054.7	409211.1	8914.82	+0.01	8914.84	L797	
L798	2084150.6	408840.6	8956.08	-0.12	8955.96	L798	
L799	2083843.0	409031.3	8939.70	-0.04	8939.65	L799	
L800	2083569.6	409028.1	8974.86	-0.33	8974.53	L800	
L801	2083203.7	408914.4	9018.16	-0.07	9018.09	L801	
L802	2082971.1	408942.8	9087.19	+0.00	9087.19	L802	
L803	2082606.7	408837.2	9229.33	-0.06	9229.27	L803	
L804	2081844.9	408943.0	9381.91	-0.24	9381.67	L804	
L805	2081553.0	408892.1	9455.02	+0.01	9455.03	L805	
L806	2080780.3	408956.9	9645.97	-0.89	9645.08	L806	
L807	2080618.0	408997.4	9699.10	-0.01	9699.09	L807	
L808	2080650.2	408826.4	9699.40	-0.22	9699.18	L808	
L809	2080432.5	408905.9	9778.72	-0.63	9778.09	L809	
L810	2080157.4	408913.3	9894.29	+0.84	9895.14	L810	
L811	2079887.7	408947.6	10032.24	-0.58	10031.66	L811	
L812	2079592.7	408904.9	10159.86	-0.05	10159.81	L812	
L813	2079362.4	408969.9	10249.38	-0.27	10249.11	L813	
L814	2079082.9	408922.0	10153.13	-0.02	10153.11	L814	
L815	2078761.2	408901.1	10024.90	-0.03	10024.87	L815	
L816	2078417.7	408939.2	9871.52	+0.03	9871.55	L816	
L817	2078052.9	408921.9	9711.37	-0.04	9711.34	L817	
L818	2077828.0	408908.4	9644.04	+0.00	9644.05	L818	
L819	2077500.2	408900.0	9559.08	-0.03	9559.05	L819	
L820	2077184.6	409044.1	9523.93	-0.24	9523.68	L820	
L821	2076915.8	408911.5	9384.45	-0.19	9384.26	L821	
L822	2076926.3	408572.5	9252.74	-0.08	9252.67	L822	
L823	2077206.3	408626.0	9342.81	-0.03	9342.78	L823	
L824	2077501.3	408619.4	9418.62	-0.27	9418.36	L824	
L825	2077725.8	408606.5	9507.97			L825	*
L826	2078036.0	408516.1	9630.75	-0.11	9630.64	L826	
L827	2078088.6	408655.7	9664.30	-0.01	9664.29	L827	
L828	2078713.9	408599.0	9982.12	+0.01	9982.13	L828	
L829	2079046.1	408656.0	10112.31	-0.14	10112.18	L829	
L830	2079380.5	408648.9	10241.84	-0.51	10241.32	L830	
L831	2079599.4	408586.8	10185.84	-0.12	10185.72	L831	
L832	2079908.8	408619.8	10057.15	-0.04	10057.11	L832	
L833	2080251.7	408518.6	9951.91	-0.13	9951.79	L833	
L834	2080409.0	408551.7	9883.94	-0.03	9883.91	L834	
L835	2080610.4	408627.3	9770.33	-0.09	9770.24	L835	

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L836	2081417.3	408605.3	9568.32	-0.45	9567.86	L836	
L837	2081985.0	408443.1	9549.38	-0.61	9548.78	L837	
L838	2082201.1	408619.1	9434.35	-0.18	9434.16	L838	
L839	2082538.2	408579.8	9330.93	-0.06	9330.87	L839	
L840	2082870.3	408554.2	9148.74	+0.02	9148.75	L840	
L841	2083202.2	408613.8	9187.66			L841	*
L842	2083784.0	408522.7	9173.14	-0.01	9173.13	L842	
L843	2084110.1	408572.0	9122.00	+0.03	9122.03	L843	
L844	2083769.4	408365.1	9262.63	-0.00	9262.63	L844	
L845	2082399.4	408255.1	9410.81	+0.03	9410.84	L845	
L846	2082255.2	408303.0	9503.41	-0.01	9503.40	L846	
L847	2081720.8	408284.2	9736.11			L847	*
L848	2080585.2	408399.8	9798.23	-0.00	9798.23	L848	
L849	2080485.2	408312.2	9861.35	+0.01	9861.36	L849	
L850	2080192.7	408297.5	10003.22	-0.04	10003.18	L850	
L851	2079924.1	408320.3	10123.32	-0.05	10123.27	L851	
L852	2079615.3	408288.5	10268.86	-0.37	10268.49	L852	
L853	2079318.9	408323.9	10246.39	-0.13	10246.26	L853	
L854	2079046.7	408303.5	10138.15	-0.98	10137.17	L854	
L855	2078714.9	408283.8	9997.30	-0.64	9996.66	L855	
L856	2076959.8	408366.0	9322.94			L856	*
L857	2076980.0	408015.8	9415.73	+0.00	9415.73	L857	
L858	2077211.9	408040.7	9499.55	-0.05	9499.50	L858	
L859	2077585.2	408037.1	9579.82	-0.30	9579.52	L859	
L860	2077774.3	408049.1	9626.63	-0.06	9626.57	L860	
L861	2078086.3	408077.5	9780.53	-0.00	9780.53	L861	
L862	2078404.6	408023.0	9883.71	-0.12	9883.59	L862	
L863	2078750.1	407919.9	9971.74	-0.16	9971.57	L863	
L864	2079039.1	407981.6	10100.91	-0.06	10100.86	L864	
L865	2079351.4	408018.6	10248.52	-1.49	10247.03	L865	
L866	2079586.2	408015.0	10336.88	-0.47	10336.42	L866	
L867	2079889.3	407940.2	10208.22	-0.27	10207.95	L867	
L868	2080194.4	407962.1	10053.97	-0.12	10053.85	L868	
L869	2080769.5	408014.6	9906.12			L869	*
L870	2081099.8	407999.9	9876.21			L870	*
L871	2081400.0	408000.0	9874.10			L871	*
L872	2082084.3	408067.2	9529.41			L872	*
L873	2082346.8	408023.4	9450.87	+0.00	9450.87	L873	
L874	2082577.2	407906.1	9460.78	+0.83	9461.60	L874	
L875	2082902.0	408011.7	9425.48			L875	*
L876	2084160.0	407948.2	9425.21			L876	*
L877	2084116.9	407650.1	9387.68			L877	*
L878	2083786.7	407587.9	9552.83			L878	*
L879	2083605.4	407645.5	9653.57			L879	*
L880	2081610.3	407771.2	9842.55	-0.08	9842.47	L880	
L881	2080360.9	407838.6	10052.11			L881	*
L882	2078703.9	407770.9	9931.00	+0.59	9931.59	L882	
L883	2078386.2	407728.5	9769.30	-0.91	9768.39	L883	
L884	2078069.0	407742.9	9639.35	-0.06	9639.29	L884	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1995 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
L885	2077759.7	407728.7	9540.95	-0.01	9540.94	L885	
L886	2077508.2	407800.5	9499.55			L886	*
L887	2077108.5	407742.4	9343.76	+0.01	9343.78	L887	
L888	2076982.4	407630.6	9249.07	-0.02	9249.05	L888	
L889	2076521.2	407518.8	9090.00	-0.03	9089.97	L889	
L890	2076546.2	407795.9	9206.17	-0.01	9206.16	L890	
L891	2076518.5	408105.1	9210.29	-0.15	9210.15	L891	
L892	2076585.9	408368.8	9213.52			L892	*
L893	2076616.0	408652.2	9232.40	-0.15	9232.25	L893	
L894	2076634.5	408921.8	9235.57	-0.02	9235.55	L894	
L895	2076592.9	409221.7	9176.90			L895	*
L896	2076544.1	409491.9	9127.52			L896	*
L897	2076624.8	409722.5	9174.00			L897	*
L898	2076619.0	410059.3	9159.45			L898	*
L899	2076600.1	410400.0	9157.03			L899	*
L900	2076578.3	410731.4	9152.28	-1.91	9150.38	L900	
L901	2076591.6	410999.1	9163.51	-4.31	9159.21	L901	
L902	2076588.5	411227.1	9147.44	+0.04	9147.48	L902	
L903	2076590.4	411585.6	9174.48	-0.01	9174.47	L903	
L904	2076708.5	412023.0	9213.01			L904	*
L905	2076607.3	412202.8	9189.89	-2.66	9187.24	L905	
L906	2076572.0	412456.3	9173.73	-4.70	9169.03	L906	
L907	2076479.9	412793.1	9151.33	-1.27	9150.06	L907	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

Olympus Aerial Surveys, Inc.
Job No. 200098
Report for October 20, 2000
For
GENWAL RESOURCES, INC.
WEST CRANDALL CANYON SUBSIDENCE STUDY

POINT	EASTING	NORTHING	1993 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
W601	2087399.4	413099.8	9276.22	-0.04	9276.18	W601	
W602	2087703.1	413080.3	9250.29	-0.04	9250.25	W602	
W603	2088000.0	413100.0	9349.17	-0.04	9349.13	W603	
W604	2088289.7	413076.3	9291.11	-0.00	9291.11	W604	
W605	2088563.1	413044.0	9119.29	-0.02	9119.27	W605	
W606	2088894.7	413128.0	9009.73	-0.02	9009.71	W606	
W607	2089228.5	413114.9	8947.55	-0.05	8947.50	W607	
W608	2089477.5	413079.3	9026.97	-0.03	9026.94	W608	
W609	2089819.2	413095.6	9071.06	+0.00	9071.06	W609	
W610	2090192.6	413113.6	9024.37	-0.02	9024.35	W610	
W611	2090339.8	413104.8	9102.92	-0.01	9102.91	W611	
W612	2090536.4	413047.5	9207.65	+0.05	9207.70	W612	
W613	2091341.3	412820.9	9102.51			W613	*
W614	2090700.0	412799.9	8958.08	-0.30	8957.78	W614	
W615	2090413.8	412807.1	8985.97	-0.01	8985.96	W615	
W616	2090034.8	412819.9	8836.56	+0.00	8836.56	W616	
W617	2089794.1	412780.5	8860.09	+0.00	8860.09	W617	
W618	2089467.5	412842.6	8886.48	+0.01	8886.49	W618	
W619	2089173.8	412793.6	8750.81	-0.00	8750.80	W619	
W620	2088936.6	412864.8	8831.07	-0.02	8831.05	W620	
W621	2088569.1	412783.9	9029.96	-0.03	9029.93	W621	
W622	2088363.0	412821.0	9146.17	-0.03	9146.14	W622	
W623	2087932.7	412787.6	9246.30	-0.04	9246.26	W623	
W624	2087733.5	412837.0	9131.38	-0.01	9131.37	W624	
W625	2087381.5	412836.5	9105.30	-0.05	9105.25	W625	
W626	2087205.3	412842.6	9106.62	-0.03	9106.59	W626	
W627	2086749.4	412805.2	9017.37	-0.01	9017.36	W627	
W628	2086477.0	412782.6	8931.13	-0.03	8931.10	W628	
W629	2086203.3	412734.7	8835.62	-0.06	8835.55	W629	
W630	2085979.7	412840.8	8929.58	-0.00	8929.58	W630	
W631	2085547.9	412819.7	9168.97	-0.03	9168.94	W631	
W632	2085269.5	412820.6	9173.58	-0.06	9173.53	W632	
W633	2085047.2	412750.8	9262.80	-0.05	9262.75	W633	
W634	2084729.6	412820.6	9199.74	-0.04	9199.70	W634	
W635	2084425.0	412785.2	9086.74	-0.02	9086.72	W635	
W636	2084413.6	412490.5	9026.01	-0.03	9025.98	W636	
W637	2084742.7	412512.4	8986.84	-0.01	8986.83	W637	
W638	2085049.9	412460.8	8994.53	+0.01	8994.54	W638	
W639	2085345.8	412554.2	8979.32	-0.08	8979.24	W639	
W640	2085608.0	412523.6	8935.23	-0.12	8935.11	W640	
W641	2085879.6	412587.5	8878.81	-2.27	8876.54	W641	
W642	2086080.2	412474.2	8761.35	-1.96	8759.39	W642	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1993 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
W839	2084477.6	409489.9	9012.34	-0.02	9012.32	W839	
W840	2084740.2	409517.6	9016.91	-0.04	9016.87	W840	
W841	2085042.2	409536.3	9002.18	-0.01	9002.17	W841	
W842	2085297.5	409494.2	8953.94	-0.02	8953.92	W842	
W843	2085604.0	409513.6	8970.92	-0.03	8970.89	W843	
W844	2085926.0	409500.6	8835.88	+0.00	8835.88	W844	
W845	2086217.5	409517.9	8698.44	-0.08	8698.36	W845	
W846	2086518.4	409485.7	8527.13	+0.00	8527.13	W846	
W847	2086761.9	409503.3	8543.37			W847	*
W848	2087445.1	409508.9	8622.36	+0.01	8622.36	W848	
W849	2086536.6	409152.1	8624.62	-0.01	8624.61	W849	
W850	2086218.0	409104.6	8577.21	-0.10	8577.11	W850	
W851	2085876.6	409170.8	8713.78	-0.10	8713.68	W851	
W852	2085599.9	409190.3	8787.16	+0.01	8787.17	W852	
W853	2085265.9	409181.6	8779.45	-0.05	8779.40	W853	
W854	2085046.6	409148.5	8775.77	-0.10	8775.67	W854	
W855	2084716.7	409224.4	8840.91	+1.01	8841.91	W855	
W856	2084389.8	409244.9	8880.52	+0.01	8880.52	W856	
W857	2084324.3	408995.3	8864.28	-1.20	8863.08	W857	
W858	2084613.2	408920.5	8842.08	-0.21	8841.87	W858	
W859	2085049.9	408860.4	8766.71	-0.11	8766.60	W859	
W860	2085303.7	408862.6	8726.01			W860	*
W861	2085593.7	408932.5	8664.88	-0.22	8664.66	W861	
W862	2085899.8	408831.3	8621.82	-0.90	8620.93	W862	
W863	2086096.2	408839.2	8656.25	-0.05	8656.20	W863	
W864	2086580.7	409014.3	8620.49	-0.08	8620.41	W864	
W865	2087212.5	408818.8	9061.00			W865	*
W866	2087489.7	408939.9	9026.99			W866	*
W867	2087365.6	408664.8	9159.15			W867	*
W868	2087222.0	408639.2	9066.14			W868	*
W869	2086674.0	408662.7	8729.75			W869	*
W870	2086382.2	408602.2	8773.06			W870	*
W871	2085856.0	408597.5	8705.92			W871	*
W872	2085531.9	408605.9	8721.00	+0.05	8721.05	W872	
W873	2085303.0	408584.3	8814.57	-0.07	8814.50	W873	
W874	2085088.7	408556.1	8904.25	+0.00	8904.25	W874	
W875	2084754.7	408650.8	8925.92			W875	*
W876	2084453.5	408550.4	9051.69	-0.07	9051.62	W876	
W877	2084301.0	408340.2	9209.90			W877	*
W878	2084697.4	408180.6	9211.23	-0.05	9211.18	W878	
W879	2084964.7	408288.8	9069.23	+0.01	9069.23	W879	
W880	2085315.3	408287.9	8801.47	-0.56	8800.92	W880	
W881	2085637.7	408265.8	8763.83			W881	*
W882	2085914.0	408320.4	8808.49			W882	*
W883	2086177.9	408355.5	8871.94			W883	*
W884	2086603.4	408312.3	8878.58			W884	*
W885	2086854.5	408190.7	8880.91			W885	*
W886	2087128.9	408312.6	9008.36			W886	*
W887	2087551.7	408440.3	9249.53	+0.00	9249.53	W887	

* No elevation read due to lack of photo coverage or obscured, unreadable ground.

POINT	EASTING	NORTHING	1993 ELEVATION	2000 DIFFERENCE	2000 ELEVATION	POINT	COMMENTS
W888	2087348.0	407993.7	9146.81			W888	*
W889	2087127.1	407969.0	8999.93			W889	*
W890	2086604.5	407943.0	9101.77	+0.00	9101.77	W890	
W891	2086394.3	408010.7	9152.84			W891	*
W892	2086200.3	408094.6	9018.49			W892	*
W893	2085877.5	408086.9	8868.29			W893	*
W894	2085670.9	407867.4	8857.93			W894	*
W895	2085316.5	407963.4	8799.53	-0.05	8799.49	W895	
W896	2084949.5	408071.7	9075.73	+0.05	9075.78	W896	
W897	2084691.4	408001.5	9148.52	+0.01	9148.54	W897	
W898	2084359.2	407966.8	9334.30	-0.39	9333.91	W898	
W899	2084425.7	407681.6	9231.39	+0.00	9231.39	W899	
W900	2084688.0	407718.2	9149.77	-0.11	9149.66	W900	
W901	2084944.8	407677.5	8954.30	-0.11	8954.19	W901	
W902	2085269.6	407699.3	8794.61			W902	*
W903	2085660.1	407589.8	8952.36			W903	*
W904	2085934.1	407689.5	8989.65			W904	*
W905	2087088.8	407710.4	9140.66	-0.07	9140.60	W905	
W906	2087338.3	407595.3	9155.08			W906	*
W907	2087552.6	407757.2	9254.93			W907	*
W908	2086435.5	407506.6	9291.50	-0.06	9291.44	W908	
W909	2086123.2	407589.8	9129.00			W909	*
W910	2085964.9	407510.8	9107.28			W910	*
W911	2085585.4	407452.1	9003.89			W911	*
W912	2085252.9	407475.0	8850.63			W912	*
W913	2084989.8	407441.9	8912.57	+0.05	8912.63	W913	

* No elevation read due to lack of photo coverage or obscured; unreadable ground.

Vegetation Monitoring

Patrick Collins of Mt. Nebo Scientific performed a qualitative evaluation of the four topsoil piles at the mine on October 27, 2000. His report is attached. A quantitative evaluation will be conducted early in the growing season of 2001.

MT NEBO SCIENTIFIC, INC.
research & consulting

October 31, 2000

Gary Gray
GENWAL COAL COMPANY
195 North 100 West
P.O. Box 1420
Huntington, UT 84528

RE: Topsoil Piles - Sediment Control

Dear Mr. Gray:

You asked me to comment on the plant cover of four (4) topsoil piles located near Crandall Canyon Mine. It was your objective to have the vegetation sampled on these four piles to provide evidence to show adequate erosion control from the established vegetative cover to warrant removal of the sediment control structures (straw bales and silt fences).

We visited these sites on October 27, 2000. Although it was too late in the growing season to sample the vegetation by quantitative methods accurately, qualitative data were recorded. Photographs of each pile were also taken on the same day. In my opinion most, if not all, of the piles have cover that meets or exceeds the cover of the adjacent undisturbed plant communities. The only exception may be Topsoil Pile No. 4. A portion of this pile was seeded more recently and the cover was not as high as the other piles. The following cover estimates were recorded using qualitative methods:

Topsoil Pile No.	Cover Estimate
1	80%
2	75%
3	60%
4	60%
	45% (more recent seeding)

In summary, all the piles (with the possible aforementioned exception) should have greater total cover when compared to the native, undisturbed plant communities in the area. With this in mind, erosion control using the established cover should be adequate to control erosion without the silt fences and straw bales. I will sample these topsoil piles again early in the growing season of 2001 to provide quantitative data that should verify this statement.

Please call is you have questions or comments.

Sincerely,

Patrick D. Collins, Ph.D.
Botanist/Environmental Consultant

330 East 400 South, Ste. 6, P.O. Box 337, Springville, Utah 84663
(801) 489-6937, (fax) 489-6779

Mayo and Associates, LC
Consultants in Hydrogeology

02 April 2001

Mr. Gary Gray
GENWAL Resources, Inc.
P.O. Box 1420
Huntington, Utah 84528

Dear Gary,

At the request of GENWAL Resources, Inc., Mayo and Associates has produced this Annual Hydrologic Monitoring Report for 2000. This report is based on hydrologic monitoring information provided from GENWAL Resources, Inc.

Other than the anticipated and permitted impacts to water quality and quantity in Crandall Creek resulting from the discharge of mine water, no detrimental mining-related impacts to water quality or water quantity at any of GENWAL's hydrologic monitoring points are evident.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Erik C. Petersen, P.G.
Associate

710 East 100 North • Lindon, Utah 84042 • 801-796-0211 • Fax 801-785-2387

GENWAL Resources, Inc
Crandall Canyon Mine
2000 Annual Hydrologic Monitoring Report

31 March 2001

At the request of GENWAL Resources, Inc., Mayo and Associates has produced this Annual Hydrologic Monitoring Report for 2000. This report is based on hydrologic monitoring information provided from GENWAL Resources, Inc.

No significant impacts to water quality or quantity were detected in any of the monitored springs, wells or creeks, with the exception of the anticipated and permitted impacts to water quality and quantity in Crandall Creek resulting from the discharge of mine water.

A plot of the Palmer Hydrologic Drought Index (PHDI) for Utah Region 4 is shown in Figure 1. During the early and middle part of 2000, the region experienced a period of gradual drying. During the months of May through September, the region experienced a mild to moderate drought. Beginning in early October 2000 and persisting for the remainder of the year, the region experienced a period of unseasonably cold and wet climate. Significant snowfalls accumulated in the higher elevations in Joes Valley and East Mountain. As a result of these climatic conditions, the springs and streams on East Mountain and in Joes Valley were inaccessible during the 4th quarter.

Also of significance during 2000, two springs in Crandall Canyon that had reportedly been dry for several years were found to again be discharging water. SP-30, located just above the Crandall Canyon Mine portals, is an area of diffuse groundwater seepage with a total discharge less than 1 gpm. Spring SP-36 was found to be discharging about 1 gpm.

Spring and stream monitoring locations are shown on Figure 2. Locations for in-mine monitoring points are shown in the MRP. Graphs of discharge rates and important water quality parameters for each monitoring site are shown on the following pages. A brief summary of the results of the 2000 hydrologic monitoring for each monitoring site is also included.

Upper Flume, Crandall Creek

The Upper Flume on Crandall Creek is located above the GENWAL Mine surface facilities and above the mine discharge point. Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at the Upper Flume of Crandall Creek are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at the Lower Flume are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured at the Upper Flume of Crandall Creek ranged from a high of 950 gpm, measured in June, to a low of 321 gpm, measured in September. TDS concentrations ranged from a low of 479 mg/l during the June high-flow season, to a high of 590 during December. Total settleable solids and TSS were not detected during 2000. During 2000, pH readings at the Upper Flume ranged from 8.1 to 8.3. Concentrations of total and dissolved iron and total manganese were below detection limits during all monitoring events.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at the Lower Flume occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the Upper Flume during 2000.

Lower Flume, Crandall Creek

The Lower Flume on Crandall Creek is located immediately below the GENWAL Mine surface facilities and the mine discharge point. Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at the Lower Flume of Crandall Creek are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at the Lower Flume are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured during quarterly monitoring activities at the Lower Flume of Crandall Creek ranged from a high of 1,210 gpm, measured in September, to a low of 1135 gpm, measured in June and September. It is likely that the springtime peak discharge occurred prior to the first monitoring event in June. TDS concentrations ranged from a low of 333 mg/l during the June high-flow season, to a high of 413 measured during September. Total settleable solids and TSS measurements from the Lower Flume were all below laboratory detection limits. During 2000, pH readings at the Lower Flume ranged from 8.0 to 8.3. Concentrations of total and dissolved iron and total manganese were below laboratory detection limits in all sampling events. Dissolved oxygen concentrations ranged from 7.2 to 9.5 mg/l. Concentrations of oil and grease are generally below the laboratory detection limit of 2 mg/l. During the December monitoring event, an oil and grease concentration of 4 mg/l was measured.

The addition of mine discharge water to Crandall Creek results in increases in some chemical parameters relative to those measured at the Upper Flume. The TDS of the mine discharge water during 2000 (about 420 mg/l) is about 100 mg/l higher than that of the receiving water. Most of the increase in the TDS in the Lower Flume water is attributable to modest increases in sulfate, sodium, and bicarbonate. The addition of approximately 750 gpm of mine water to the creek results in a significant increase in the baseflow of Crandall Creek below this point.

Examination of analytical results for important chemical parameters (Table 2) in the

context of historic data suggests that no significant changes in water quality at the Lower Flume occurred during 2000 relative to historic analytical results.

Other than the water quality impacts noted above, which are related to mine discharge, no impacts to water quality or discharge rate that could be attributable to mining operations were observed at the Lower Flume during 2000.

Horse Canyon Creek

A single location on Horse Canyon Creek is monitored quarterly for field parameters and solute chemistry. Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at Horse Canyon Creek are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at Horse Canyon Creek are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured at Horse Canyon Creek ranged from a high of 235 gpm, measured in June, to a low of 75 gpm, measured in December. TDS concentrations ranged from a low of 321 mg/l during the June high-flow season, to a high of 422 mg/l in September. Suspended solids were low, ranging from 5 to 9 mg/l, while settleable solids were below laboratory detection limits . During 2000, pH readings at Horse Canyon Creek ranged from 8.2 to 8.4. Dissolved oxygen contents range from 9 to 10.6 mg/l. Concentrations of dissolved iron and total and dissolved manganese were all below the laboratory detection limits. Total iron ranged from <0.1 mg/l to 0.2 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality in Horse Canyon Creek occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at Horse Canyon Creek during 2000.

Blind Canyon Flume

Blind Canyon Creek is monitored quarterly for field parameters and solute chemistry. Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at Blind Canyon Creek are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at Blind Canyon Flume are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured at Blind Canyon Creek ranged from a high of 173 gpm, measured in June, to a low of 10 gpm, measured in December. TDS concentrations ranged from a low of 290 mg/l during the June high-flow season, to a high of 337 mg/l in December. TSS concentrations ranged from 13 to 21 mg/l. Total settleable solids concentrations were below laboratory detection limits on all monitoring events. During 2000, pH readings at Blind Canyon Creek ranged from 8.3 to 8.6. Dissolved oxygen contents range from 9.7 to 10.9 mg/l. Concentrations of dissolved iron and total manganese were low, with concentrations below the laboratory detection limit. Concentrations of total iron measured during 2000 ranged from 0.1 to 0.3 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at Blind Canyon Creek occurred during 2000. It is apparent from the historic data that concentrations of several solute parameters have been highly variable. These parameters include sodium, sulfate, and chloride.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the Blind Canyon Flume during 2000.

Indian Creek

Indian Creek drains a small portion of the permit area immediately west of the Joes Valley Fault system. Indian Creek is monitored quarterly for field parameters and solute chemistry. Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at Indian Creek are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at Indian Creek are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured at Indian Creek ranged from a high of 1,250 gpm, measured in May, to a low of 634 gpm, measured in September. TDS concentrations ranged from a low of 238 mg/l during September, to a high of 281 mg/l in June. Total suspended solids concentrations ranged from 5 to 8 mg/l. During 2000, pH readings at Indian Creek ranged from 8.0 to 8.5. Dissolved oxygen contents range from 8.2 to 9.9 mg/l. Concentrations of dissolved iron and total manganese were below the laboratory detection limit. Concentrations of total iron measured on both sampling events were 0.1 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at Indian Creek occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at Indian Creek during 2000.

SP-30

Spring SP-30 has reportedly been dry since the 1980's. During 2000, SP-30, which is located just above the Crandall Canyon mine portals, was found to be discharging some water. The water from SP-30 emanates as diffuse discharge from the south-facing hillside. The discharge, measured at the area of greatest seepage, ranged from 0.04 to 0.05 gpm. The combined discharge from the seepage area was estimated to be about 0.25 gpm. The pH measured at this spring ranged from 8.0 to 8.2, while the conductivity ranged from 660 to 820 us/cm. The temperature measured at SP-30 ranged from 4.9 to 13.4 °C. The wide range of temperatures is likely the result of the low flow rate from the spring (i.e., the spring water is highly influenced by the temperature of the soil and air at the time of sampling).

SP-36

Spring SP-36 has reportedly been dry or nearly dry since early 1991. During the 3rd quarter monitoring, a spring in the vicinity of the map location for SP-36 was located and found to be discharging at a meager 0.023 gpm. Subsequently, during the 4th quarter monitoring, a spring discharge located a short distance west of the previous site was found to be discharging at 0.875 gpm. This spring is believed to be the same SP-36 that has been monitored historically and it will be monitored regularly in the future. The measured TDS of SP-36 water was 345 mg/l. Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP-36 are shown on the previous page. Concentrations of total and dissolved iron and magnesium were below laboratory detection limits.

SP-58

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP-58 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP-58 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured at SP-58 ranged from a high of 47.8 gpm, measured in June, to a low of 15.4 gpm, measured in September. TDS concentrations ranged from a low of 349 mg/l during September, to a high of 391 mg/l in December. During 2000, pH readings at SP-58 ranged between 7.6 and 7.94. Concentrations of total and dissolved iron and total manganese were below laboratory detection limits.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at SP-58 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at SP-58 during 2000.

SP2-24

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP2-24 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP2-24 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, flow measured at SP2-24 ranged from a high of 2.05 gpm, measured during June, to 0.233 gpm during September. TDS concentrations ranged from 190 to 304 mg/l. During both monitoring events in 2000, the pH was approximately 8.1. The concentrations of dissolved iron and total and dissolved manganeese were below the laboratory detection limit. During the September monitoring event, the total iron concentration was 0.5 mg/l. The elevated total iron concentration is likely the result of sediment in the sample bottle and is not representative of conditions at the spring.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at SP2-24 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at SP2-24 during 2000.

SP2-9

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP2-9 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP2-9 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP2-9 was measured at 5.9 gpm during June, and 0.90 gpm during September. The TDS concentration ranged from 170 to 181 mg/l. The pH ranged from 7.6 to 8.0. Concentration of dissolved iron and total and dissolved manganese were below the laboratory detection limit, while the concentrations of total iron was 0.3 mg/l during June.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at SP2-9 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP2-9 during 2000.

SP-47a

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP-47a are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP-47a are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000 (and in the fall of 1999), no discharge was observed at or near the map location of SP-47a. It is likely that the spring was dry as a result of the drought conditions the region was experiencing during June and September. There has been no mining activity within about 1.5 miles of the spring in the past several years. Thus, it is considered extremely unlikely that the lack of spring flow from SP-47a during 2000 was a result of mining activities.

During the 2001 monitoring activities, the spring area and surrounding region will be traversed to verify the location of SP-47a.

SP1-3

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-3 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-3 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP1-3 ranged from a high of 0.46 gpm during June, to 0.16 gpm during September. The pH ranged from 7.5 to 8.1. The electrical conductivity ranged from 206 to 288 us/cm,

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-3 during 2000.

SP1-19

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-19 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-19 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP1-19 ranged from a high of 18.8 gpm during June, to a low of 1.35 gpm during September. The pH during both monitoring events was 8.3. The electrical conductivity ranged from 417 to 456 us/cm.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-19 during 2000.

SP1-22

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-22 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-22 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP1-22 ranged from a high of 3.53 gpm during June, to a low of 0.55 gpm during September. The site was inaccessible during the 1st and 4th quarter. The pH measured during both monitoring events was 8.2. Electrical conductivity ranged from 304 to 347 us/cm.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-22 during 2000.

SP1-33

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-33 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-33 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP1-33 ranged from a high of 2.9 gpm during June, to 2.5 gpm during September. The TDS concentration ranged from a low of 492 mg/l in June to a high of 504 mg/l during September. During 2000, the pH ranged from 7.7 to 7.9. Concentrations of dissolved iron and total and dissolved manganese were less than the laboratory detection limit of 0.1 mg/l. The total iron concentration measured during June was 1.8 mg/l. It was not possible to obtain a sediment-free water sample from the spring during the June monitoring because abundance of loose sediment in the spring discharge area. Thus, the total iron concentration is a result of sampling difficulties and is not related to conditions in the groundwater system from which the spring discharges. This is evidenced by the lack of any detectable iron in the dissolved form from the spring.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at SP1-33 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-33 during 2000.

SP1-47

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-47 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-47 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP1-47 ranged from a high of 7.3 gpm during September, to 3.7 gpm during June. The pH ranged from 8.1 to 8.2. Electrical conductivity ranged from 384 to 485 us/cm.

Examination of results of field parameter measurements (Table 2) in the context of historic data suggests that no significant changes in water quality at SP1-47 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-47 during 2000.

SP2-1

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP2-1 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP2-1 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP2-1 ranged from a high of 13.6 gpm during June, to a low of 1.4 gpm during September. The TDS concentration measured during June was 311 mg/l. The pH ranged from 7.6 to 7.8. Concentrations of total and dissolved iron and manganese were below the laboratory detection limit of 0.1 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at SP2-1 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP2-1 during 2000.

SP1-9

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-9 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-9 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge at SP1-9 ranged from a high of 3.39 gpm during June, to a low of 0.70 gpm during September. The TDS concentration measured during June was 181 while the TDS measured in September was 193 mg/l. The pH ranged from 7.5 to 7.7. Concentrations of total and dissolved iron and manganese were below the laboratory detection limit of 0.1 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality at SP1-9 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-9 during 2000.

SP1-24

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at SP1-24 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at SP1-24 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, spring SP1-24 was monitored during September only. The spring was dry/not found during the June monitoring event. The discharge during June was 0.61 gpm while the pH was 8.1.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the SP1-24 during 2000.

DH-1

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well DH-1 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at DH-1 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

DH-1 was dry during each of the four quarterly monitoring events during 2000.

DH-2

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well DH-2 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at DH-2 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

DH-2 was inaccessible during each of the four quarterly monitoring events during 2000.

MW-1

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well MW-1 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-1 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, discharge from MW-1 ranged from 0.3 to 0.7 gpm. The TDS ranged from 260 to 298 mg/l. The pH ranged from 7.3 to 8.3. With a single exception, concentrations of total and dissolved iron, and total manganese were below laboratory detection limits. During September, the total iron concentration was 0.4 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality in MW-1 occurred during 2000. Rather, the water quality remained relatively constant.

No impacts to water quality that could be attributable to mining operations were observed at the MW-1 during 2000. The decline in the discharge rate from MW-1 that occurred in 1989 is likely due to the limited extent of the Star Point Sandstone groundwater system in which the well is completed. The Star Point Sandstone groundwater system is likely not in good hydraulic communication with recharge sources.

MW-2

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well MW-2 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-2 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

Throughout 2000, that portion of the mine in which MW-2 is located has been flooded with mine operational water. As a result, the water in the well bore is not representative of conditions in the Star Point Sandstone groundwater system in which the well is completed. As a result, operational hydrologic monitoring of MW-2 was not carried out.

MW-3

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well MW-3 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-3 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

Throughout 2000, the well has been inaccessible.

MW-4

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well MW-4 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-4 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

Throughout 2000, MW-4 has been inaccessible.

MW-5

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well MW-5 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-5 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

Well MW-5 was previously destroyed as a result of mining operations. No monitoring of this well is possible.

MW-6

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at in-mine well MW-6 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-6 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, TDS concentrations at MW-6 ranged from 808 mg/l during December, to 1,223 during June. During 2000, pH ranged from 12.2 to 12.5. Mayo and Associates (1998) determined that this high pH water is the result of alteration of a nearby igneous dike under relatively stagnant flow conditions in the Panther Sandstone member of the Star Point Sandstone. Concentrations of total and dissolved iron and manganese were below or at 0.1 mg/l.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality in MW-6 occurred during 2000.

No impacts to water quality or discharge rate that could be attributable to mining operations were observed at the MW-6 during 2000.

MW-6a

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at MW-6a are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-6a are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, TDS concentrations ranged from 263 mg/l to 303 mg/l, while pH ranged from 7.9 to 8.2. Concentrations of dissolved iron manganese were below laboratory detection limits. Concentrations of total iron ranged from 0.2 mg/l to 3.6 mg/l. During June, the concentration of total manganese was 0.1 mg/l. On the other three occasions, there was no manganese detected in the water from the well. The elevated total iron concentrations are the result of difficulties in keeping muddy surface water from running into the well casing during sampling. The lack of dissolved iron in the water from the well confirms this conclusion. Water levels measured during 2000 ranged from 0.8 to 2 feet below the ground surface. These levels are somewhat higher than those measured during 1999. This suggests that the water surface in the Star Point Sandstone has recovered from the disturbances caused by previous mining in the vicinity of the well.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality in MW-6a occurred during 1000.

No impacts to water quality that could be attributable to mining operations were observed at the MW-6a during 2000.

MW-7

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at MW-7 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-7 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, TDS concentrations at MW-7 ranged from 200 mg/l to 288 mg/l, while the pH ranged from 7.5 to 7.8. Concentrations of dissolved iron and total and dissolved manganese were below laboratory detection limits. The concentration of total iron ranged from 0.2 to 3.1 mg/l.

The discharge from MW-7 remained constant during 2000, ranging from 0.10 to 0.12 gpm.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality in MW-7 occurred during 2000.

MW-8

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), and Mn(T) at MW-8 are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements at MW-8 are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, TDS concentrations ranged from 257 mg/l to 310 mg/l, while pH ranged from 7.1 to 8.0. Concentrations of dissolved iron and total and dissolved manganese were below laboratory detection limits. Concentrations of total iron ranged from 0.6 to 1.3 mg/l. The elevated total iron concentrations are likely the result of the turbid nature of the water extracted from MW-8.

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality in MW-8 occurred during 2000.

No impacts to water quality that could be attributable to mining operations were observed at the MW-1 during 2000. The water level measured in MW-7 ranged from 2.1 to 2.2 feet below ground surface. The water levels measured in 2000 suggest that the water levels have recovered after the small, localized declines in water levels noted in 1999.

Sediment Pond (UPDES 001)

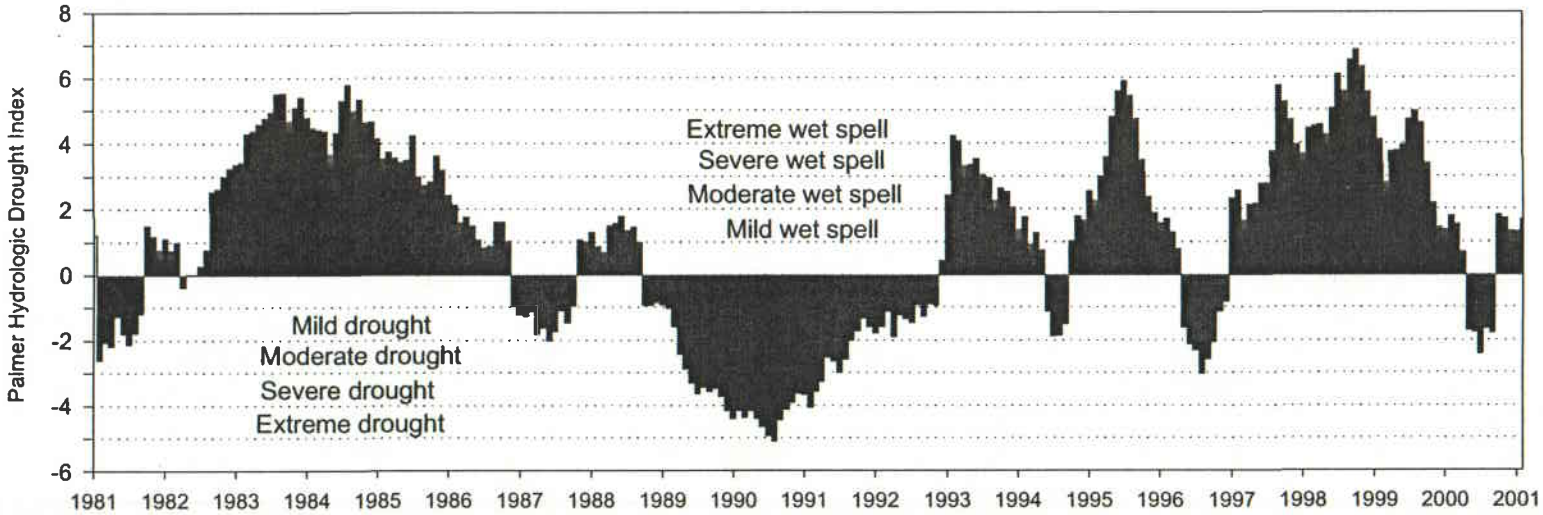
There were no discharges from the sediment pond during 2000.

Mine discharge water (UPDES 002)

Time series plots of discharge, TDS, pH, Fe(T), Fe(d), Mn(T), TSS, and oil and grease in mine discharge water are shown on the previous page. The results of the 2000 hydrologic monitoring, including field measurements and complete water quality laboratory measurements of mine discharge water are shown on Table 1. Historic water chemistry and field parameter measurements are shown in Table 2.

During 2000, monthly mean discharge from the mine ranged from 623 gpm in September, to 772 gpm during June. TDS concentrations ranged from 395 mg/l during March to 457 mg/l during July. During 2000, pH ranged from 6.9 to 8.2 mg/l. Concentrations of dissolved iron were all less than the laboratory detection limit, while total iron was detected above laboratory detection levels only during August (0.2 mg/l)

Examination of analytical results for important chemical parameters (Table 2) in the context of historic data suggests that no significant changes in water quality of mine discharge water occurred during 2000.



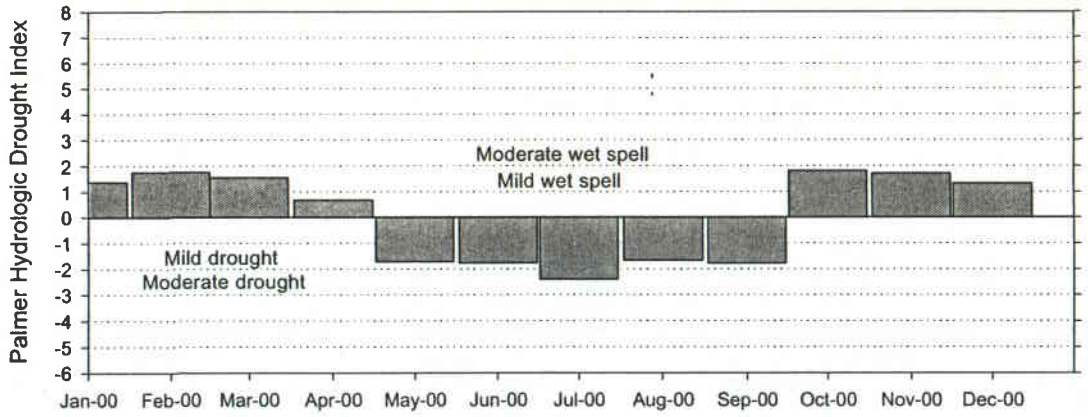
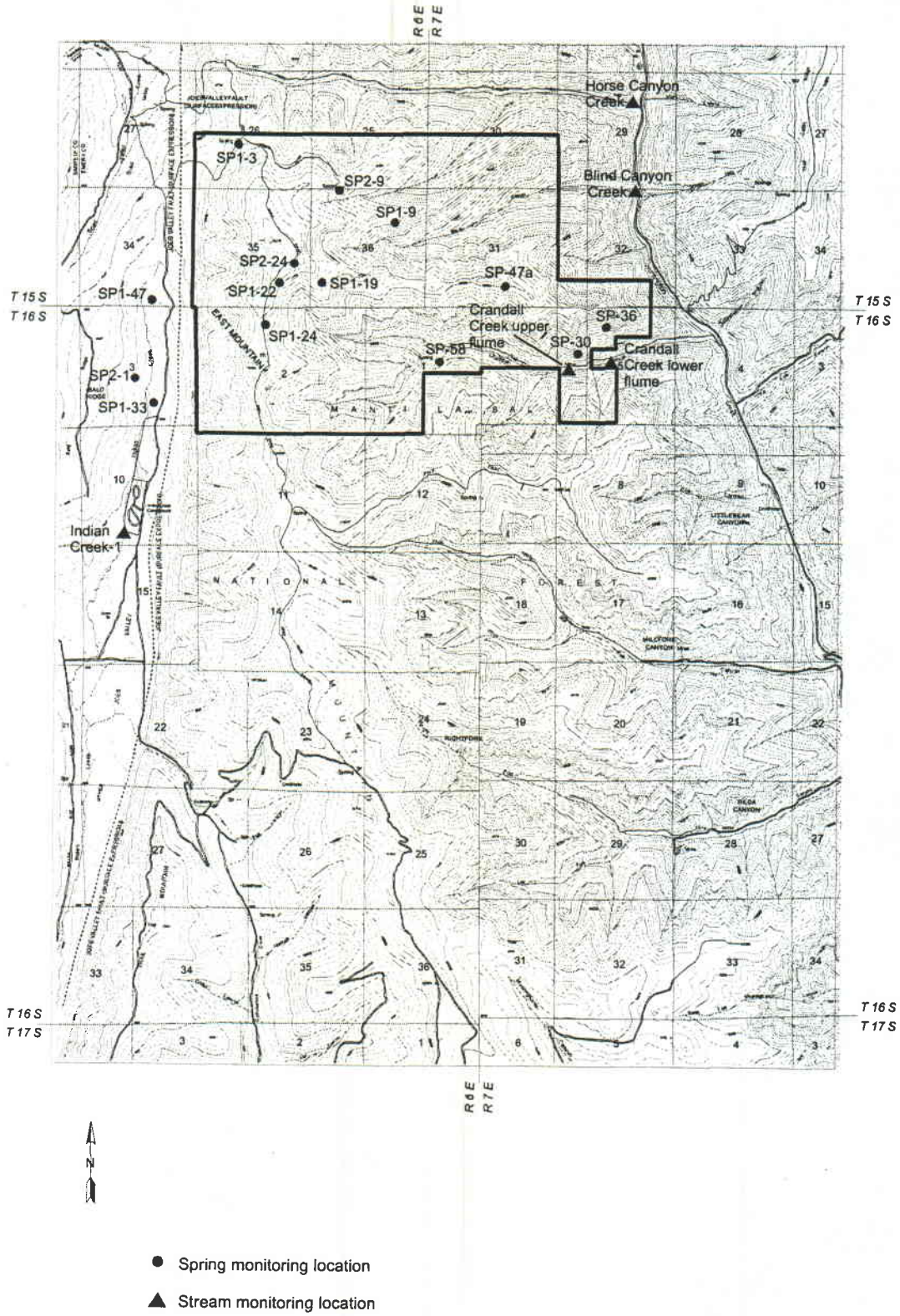


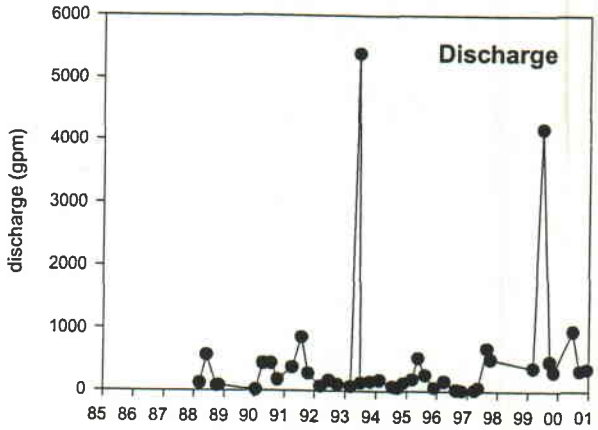
Figure 1 Plot of the Palmer Hydrologic Drought Index for Utah Region 4.

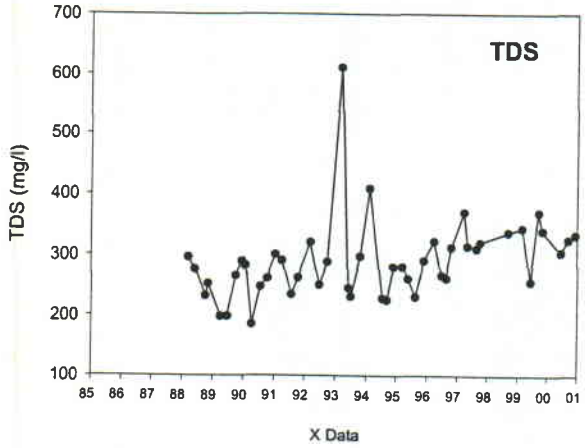


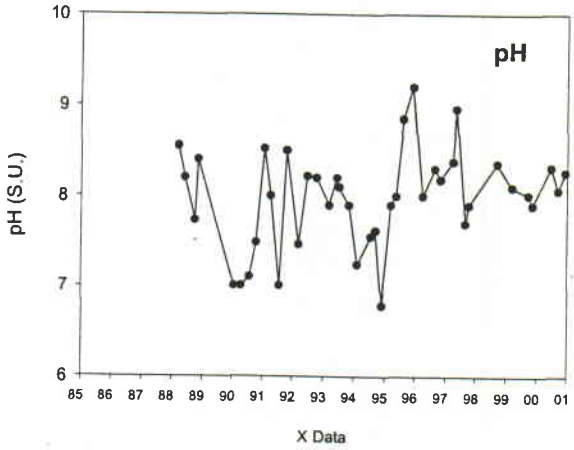
● Spring monitoring location

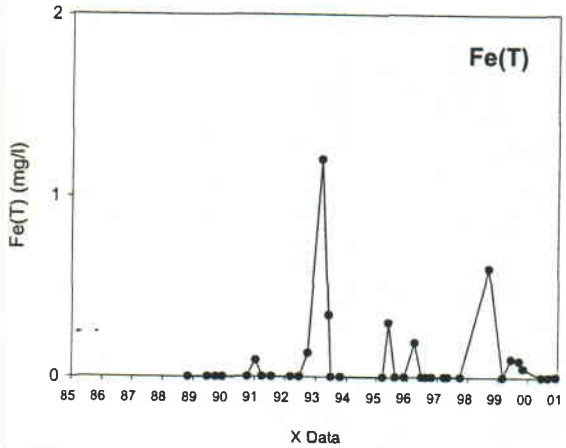
▲ Stream monitoring location

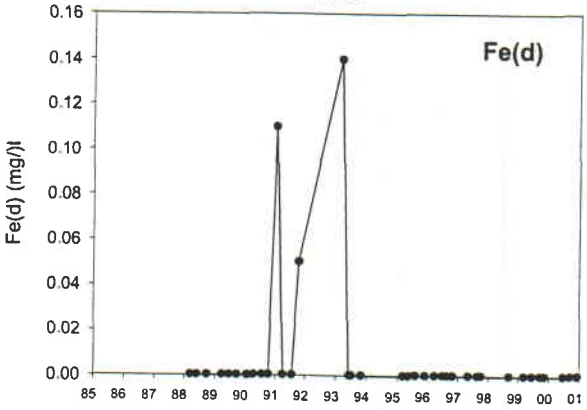
Figure 2 Hydrologic monitoring locations

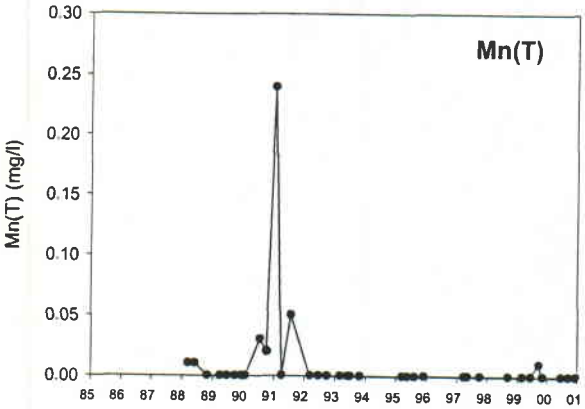




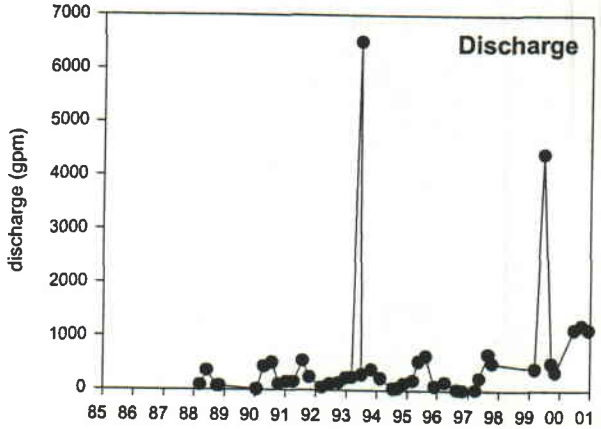


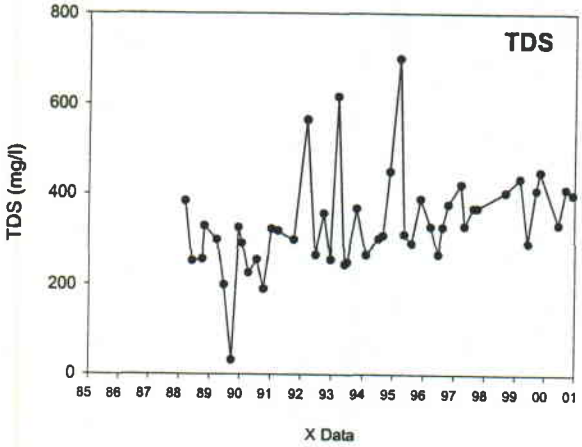


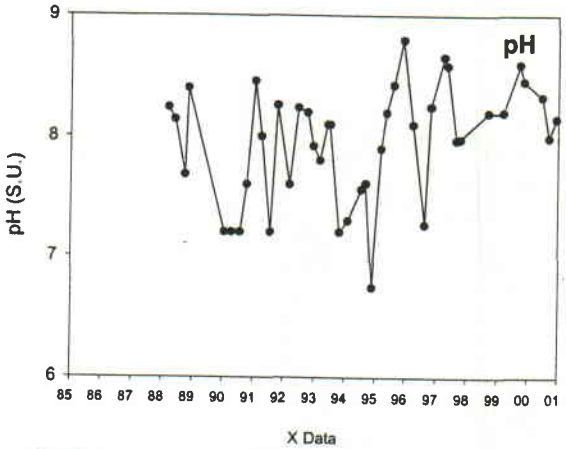


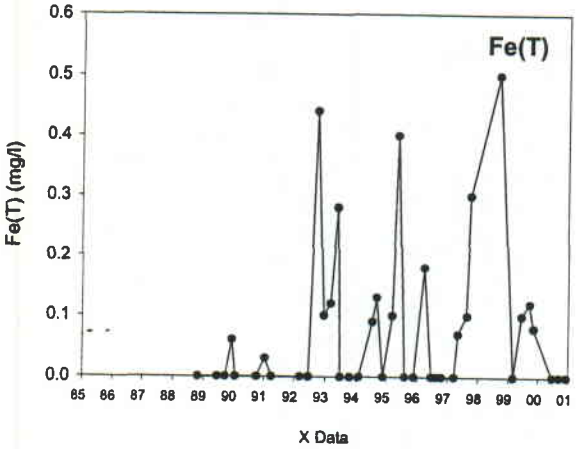


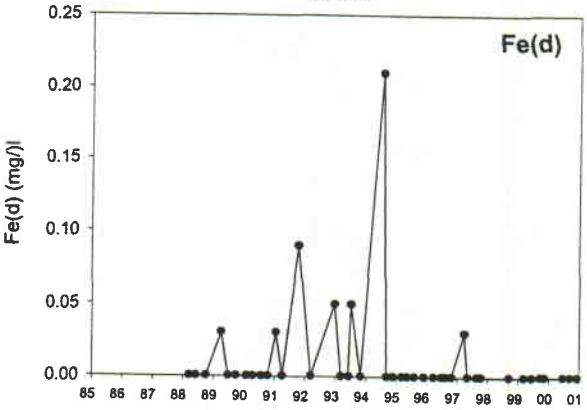
Upper Flume Crandall Creek

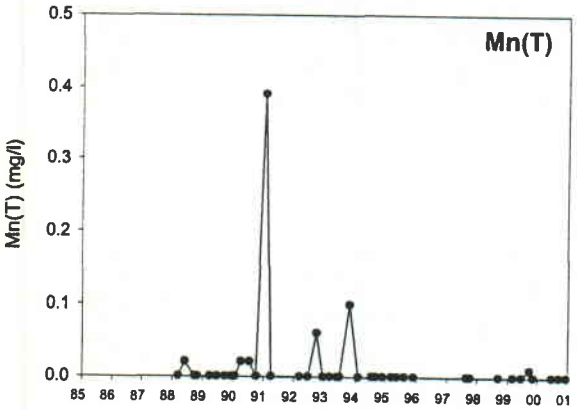




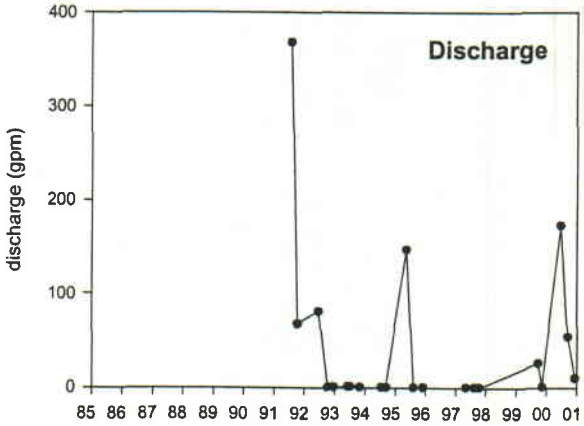


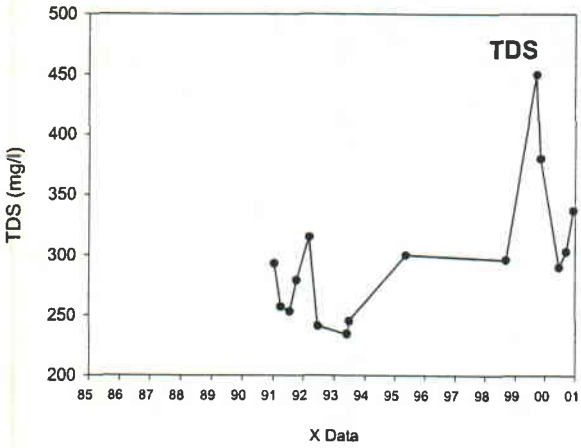


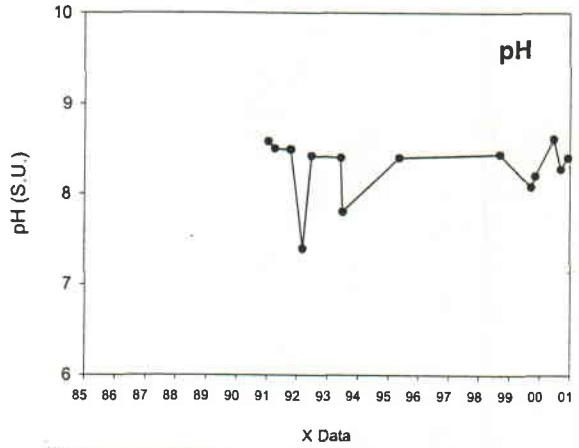


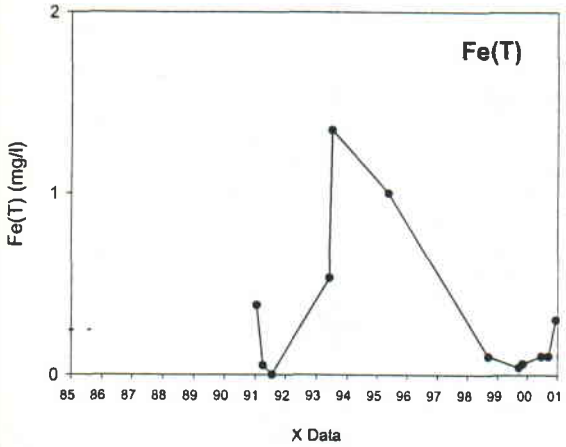


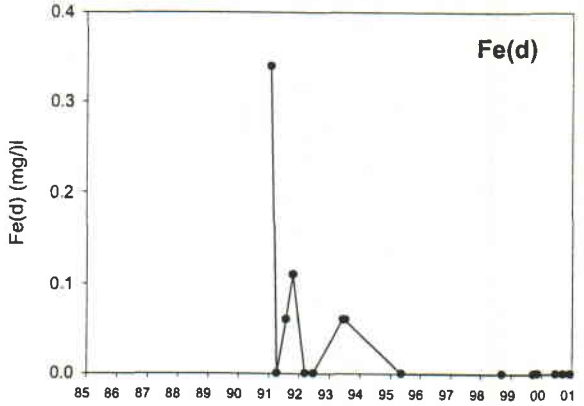
Lower Flume Crandall Creek

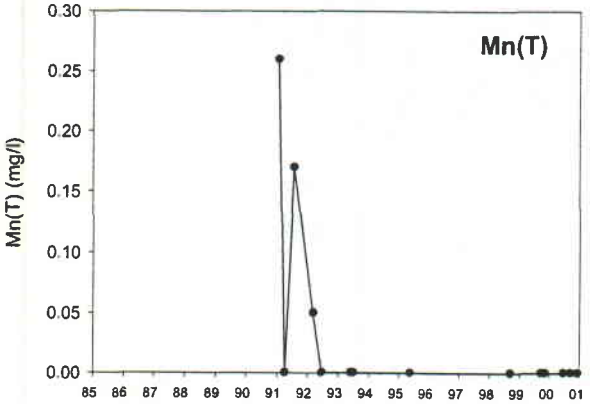




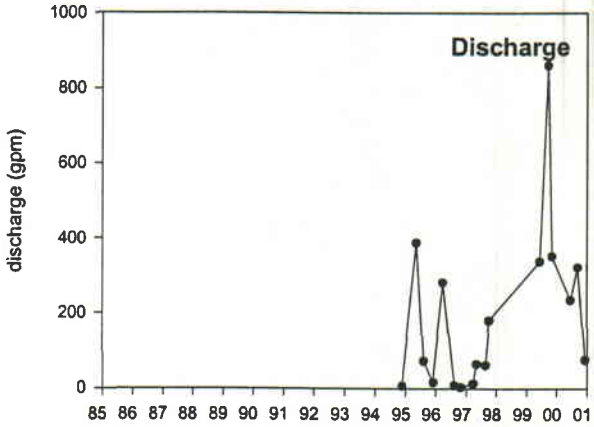


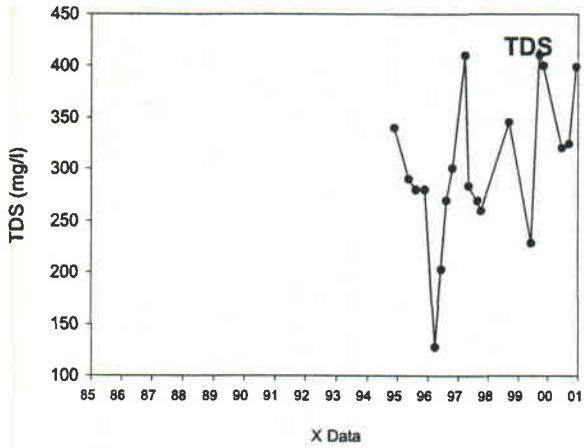


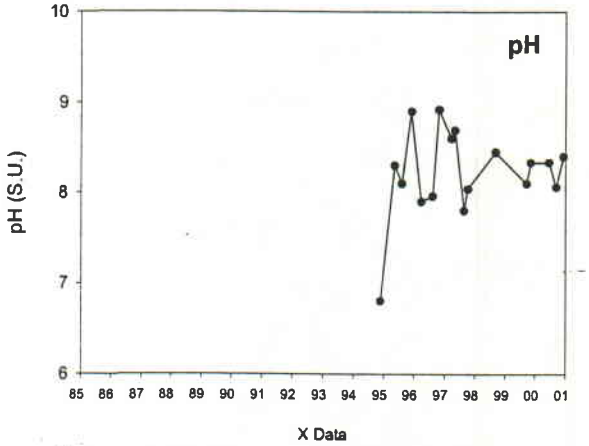


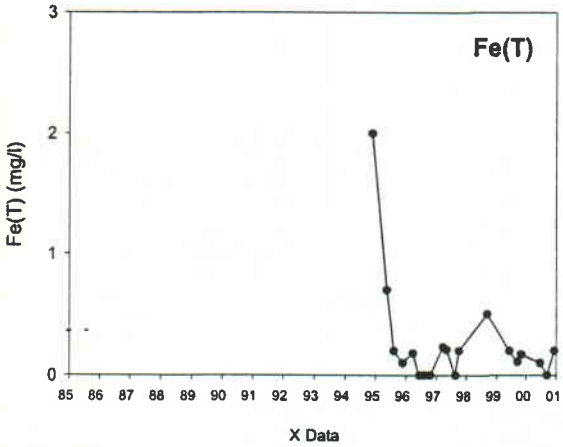


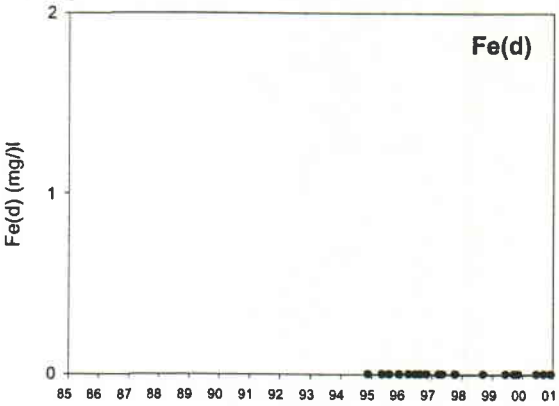
Blind Canyon Flume

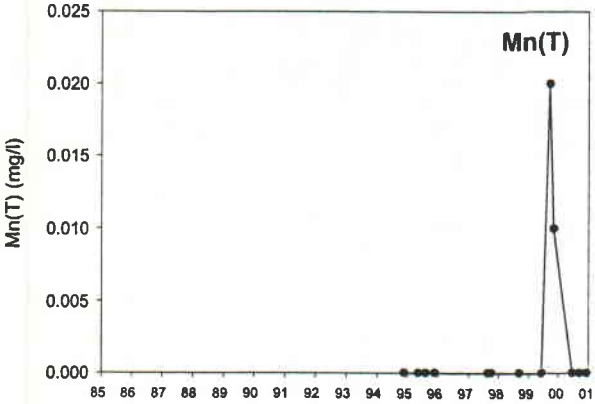




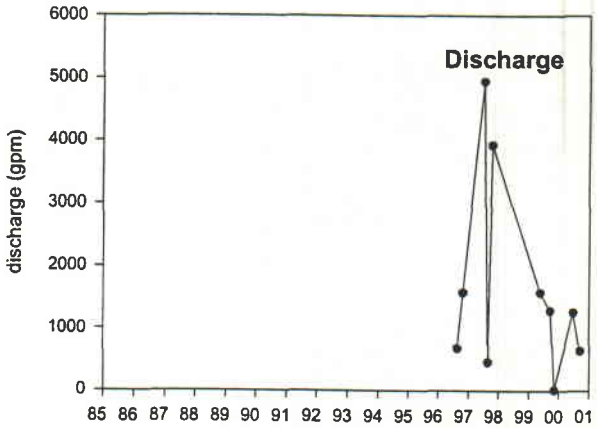


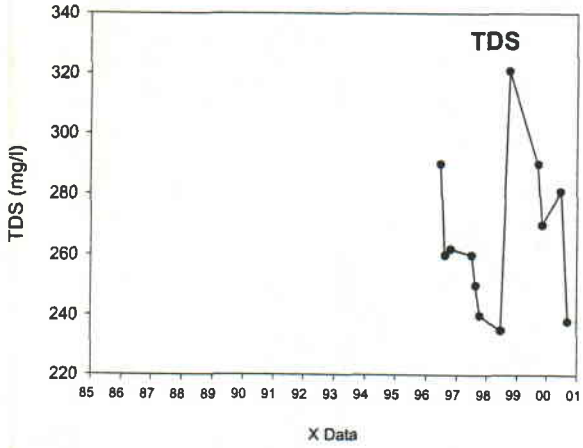


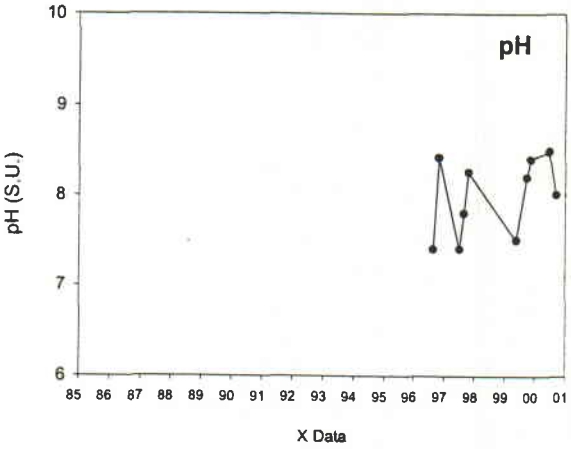


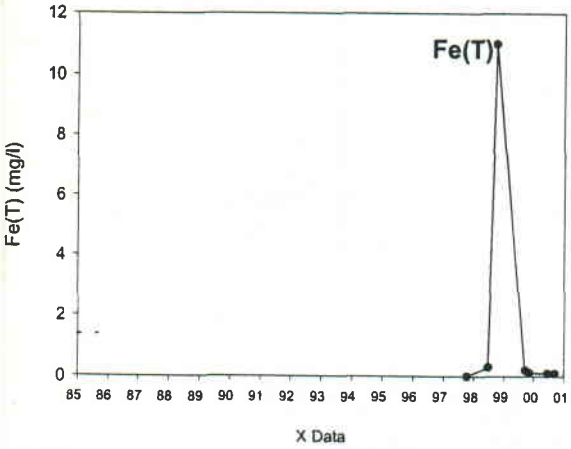


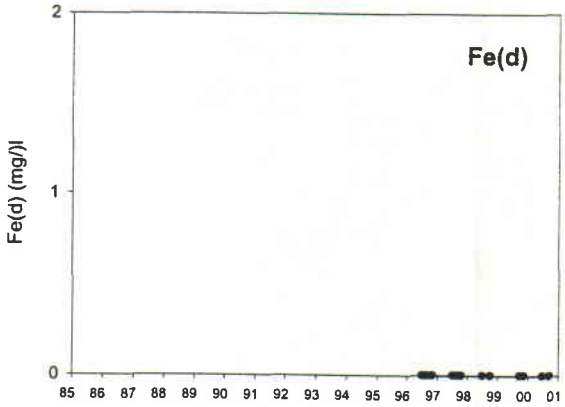
Horse Canyon Creek

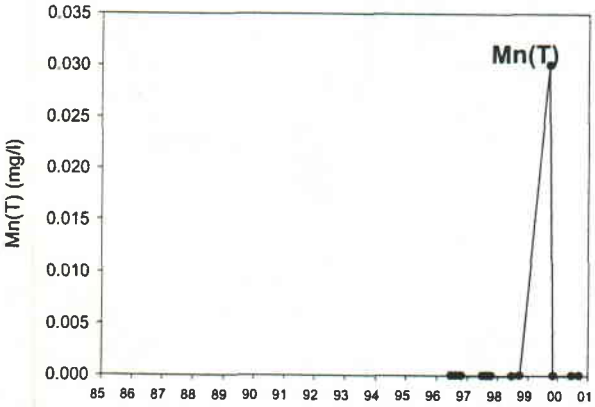




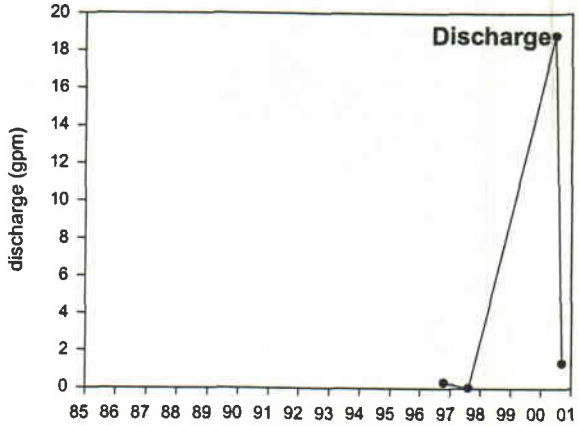


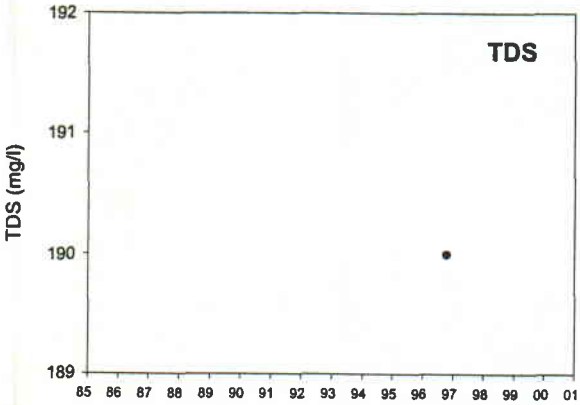


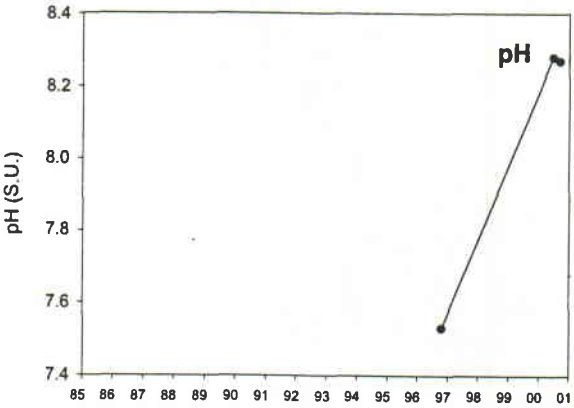


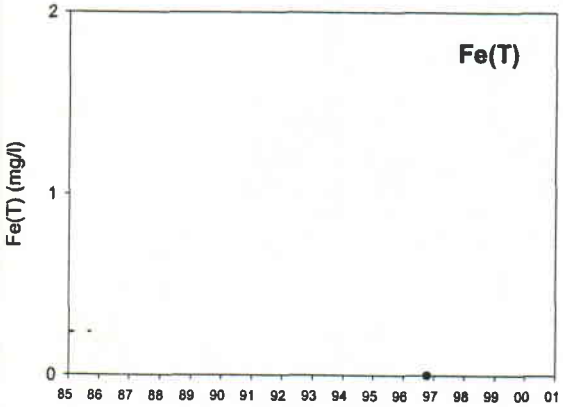


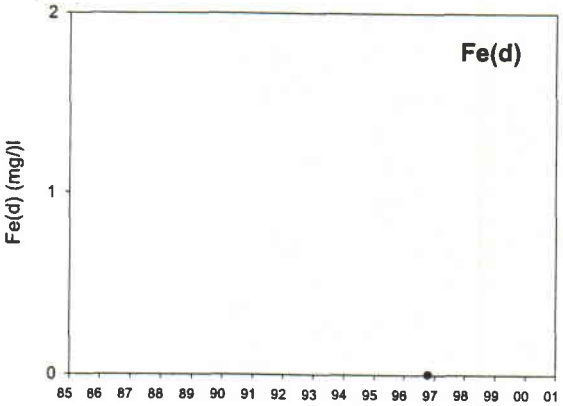
Indian Creek

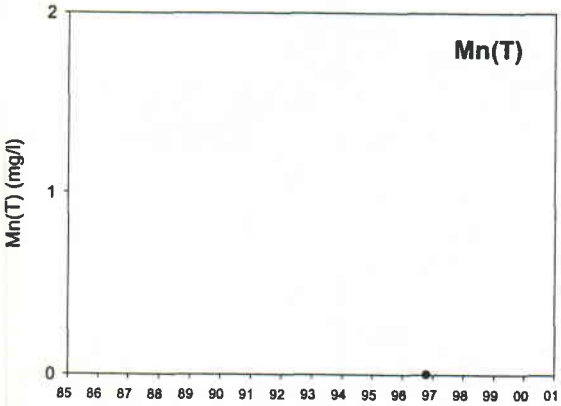




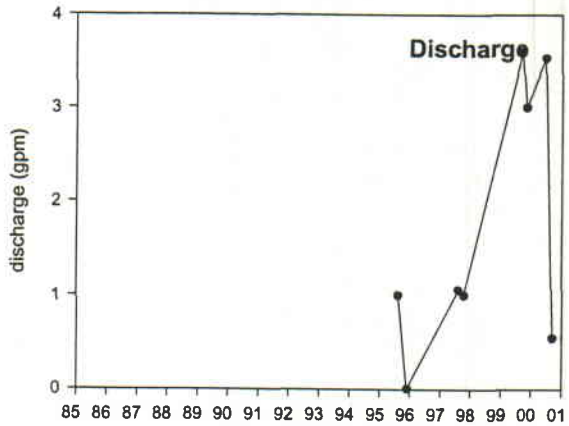


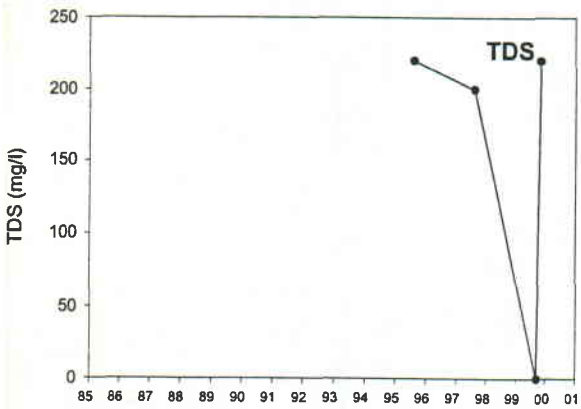


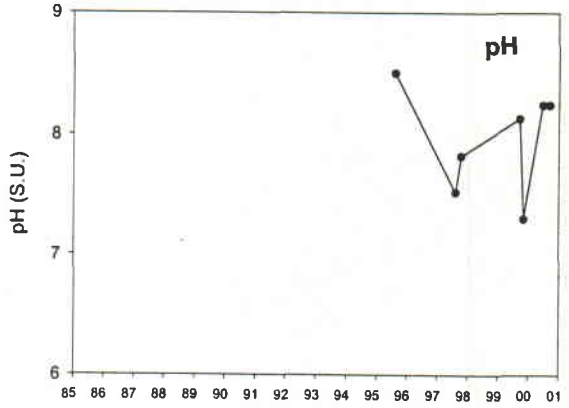


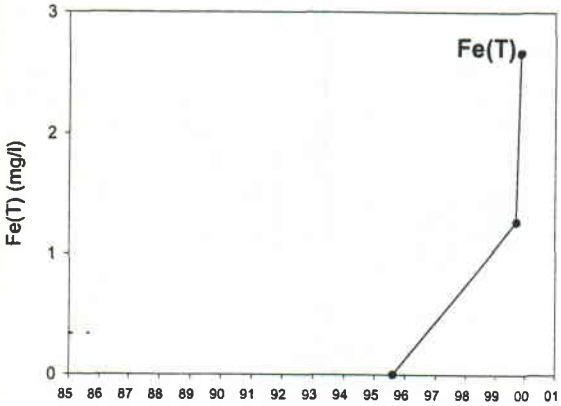


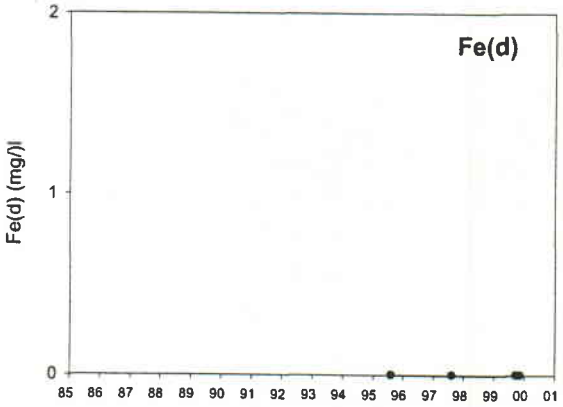
Spring SP1-19

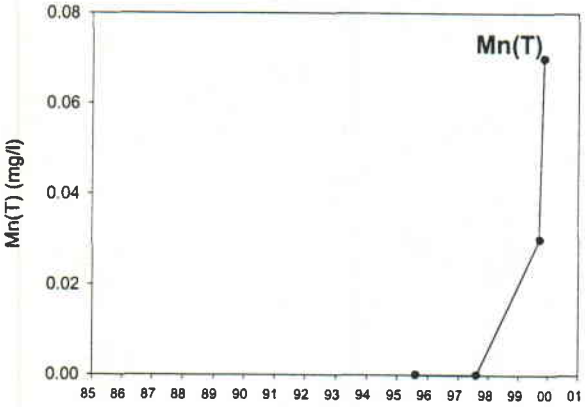




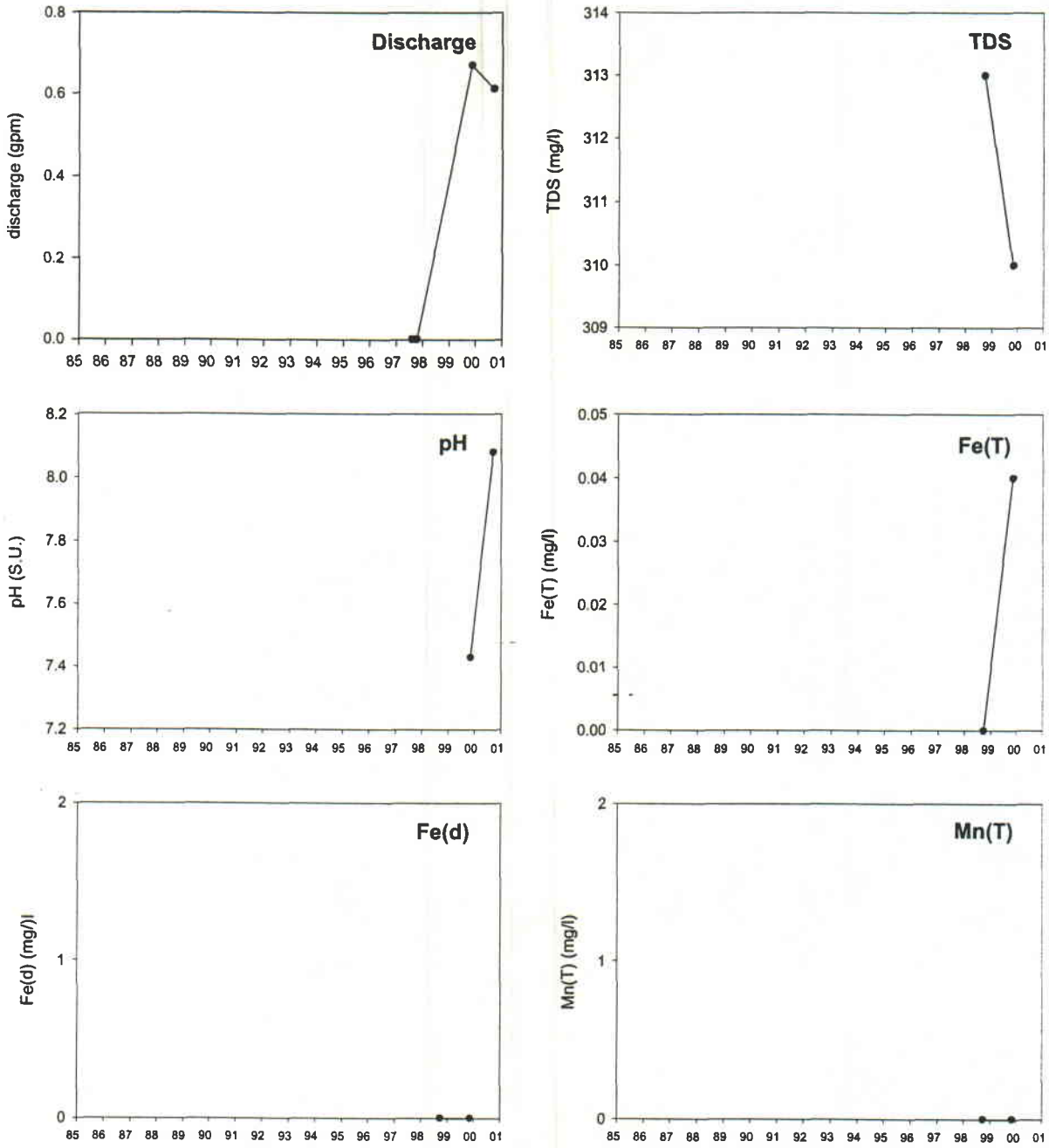




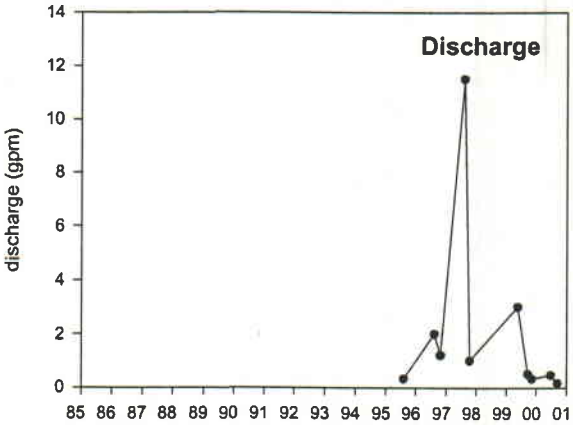


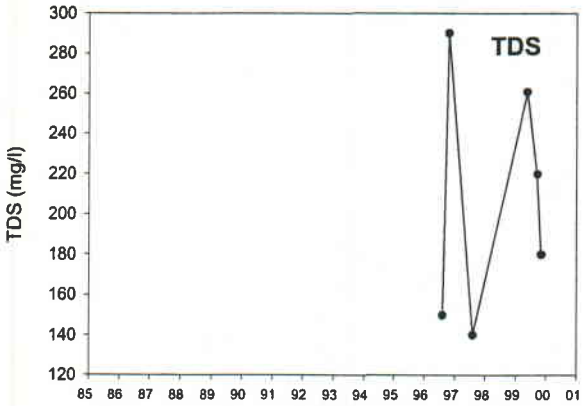


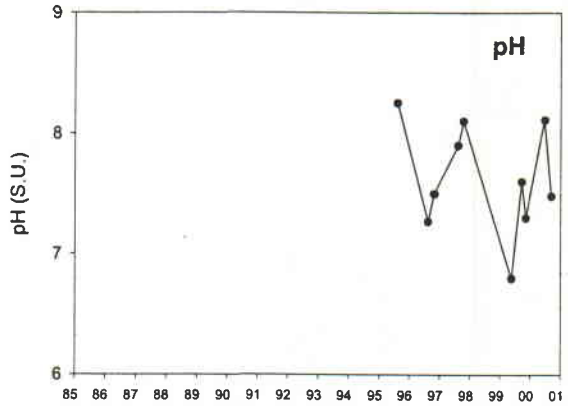
Spring SP1-22

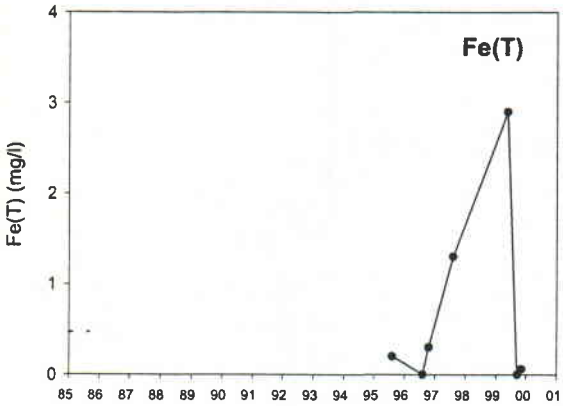


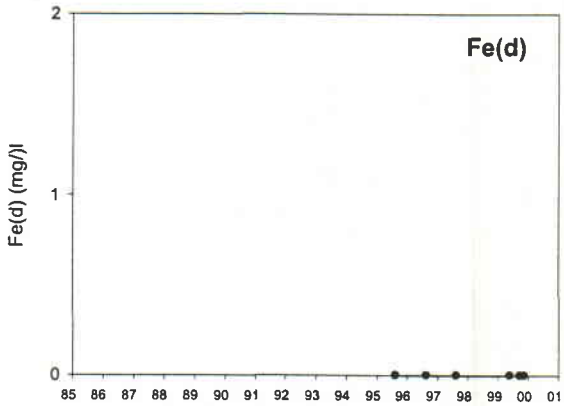
Spring SP1-24

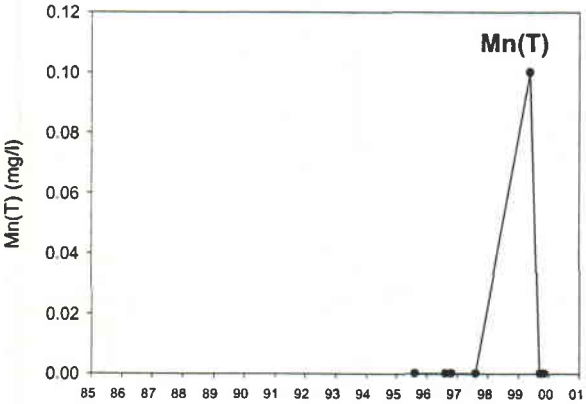

Discharge
discharge (gpm)
0
2
4
6
8
10
12
14
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
120
140
160
180
200
220
240
260
280
300
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

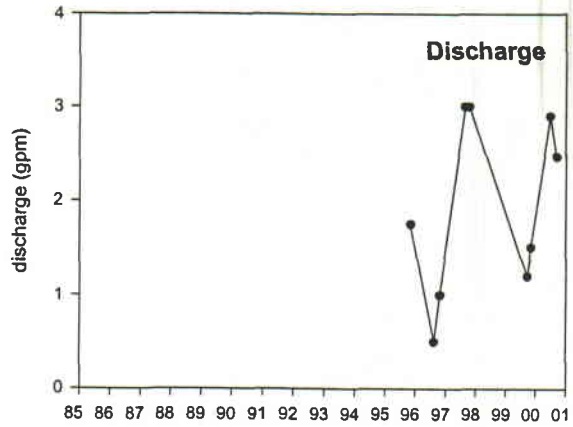

pH
pH (S.U.)
6
7
8
9
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

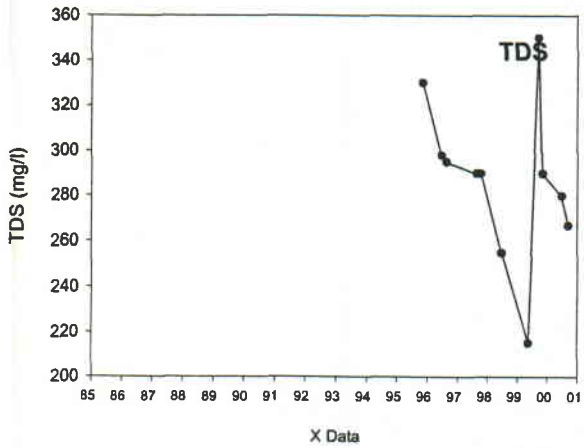

Fe(T)
Fe(T) (mg/l)
0
1
2
3
4
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

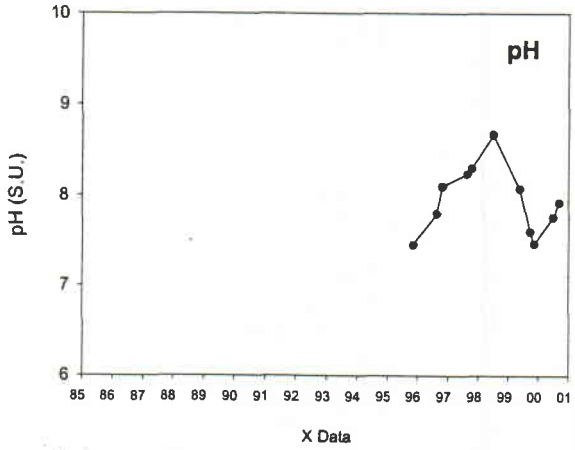

Fe(d)
Fe(d) (mg/l)
0
1
2
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

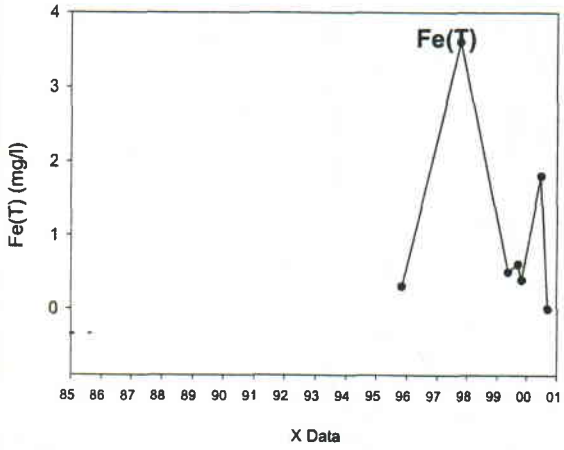

Mn(T)
Mn(T) (mg/l)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

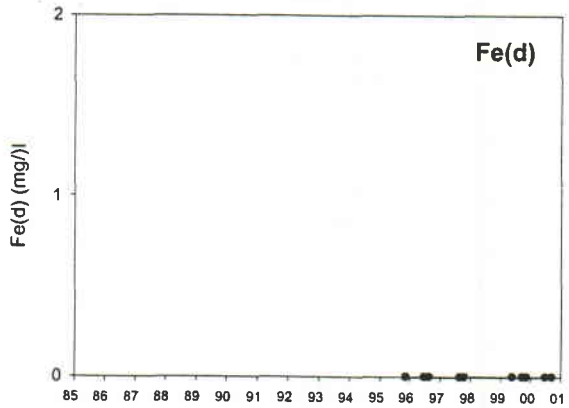
Spring SP1-3

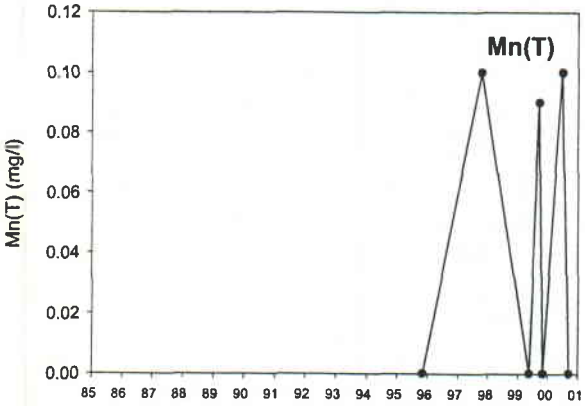




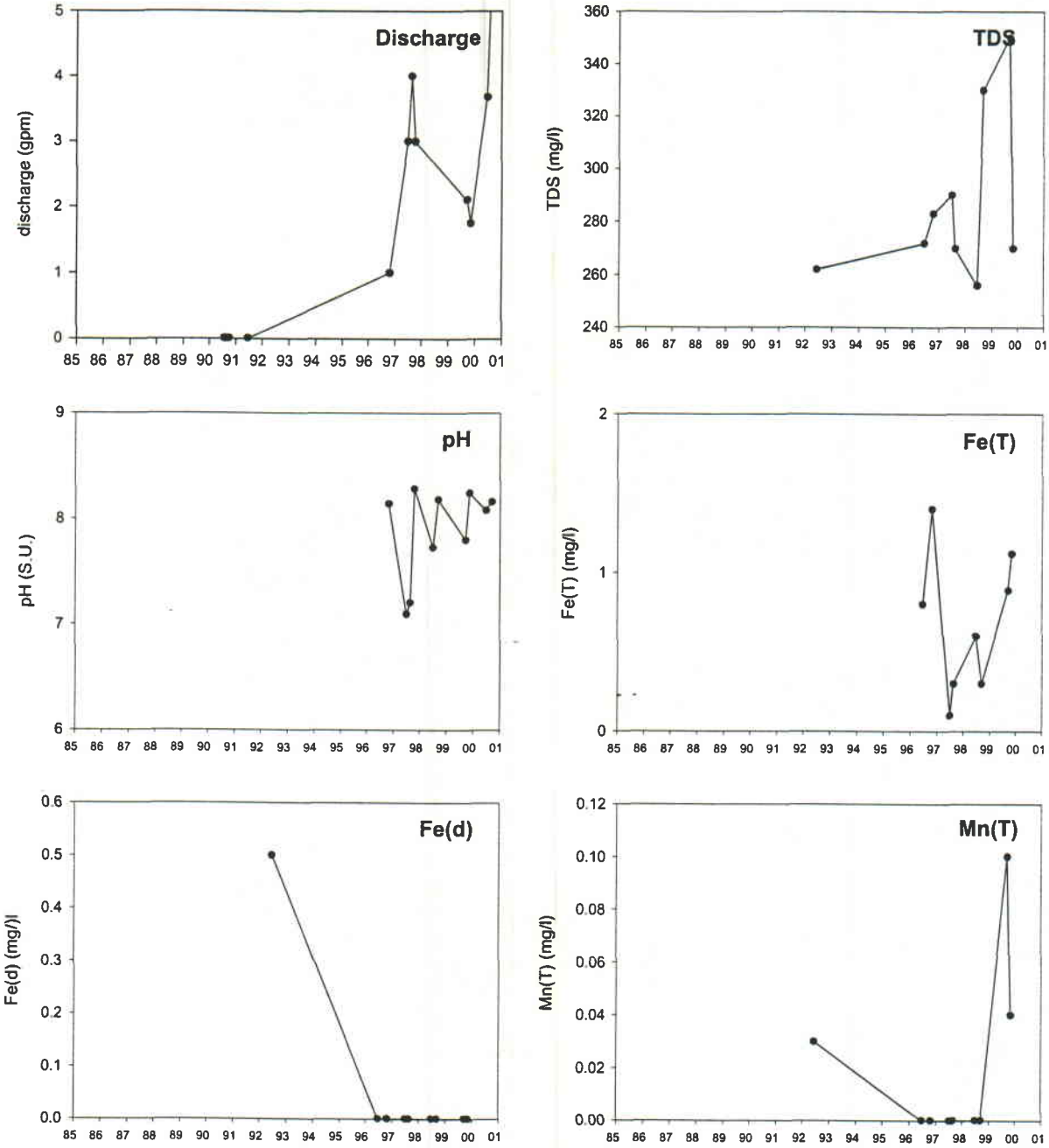




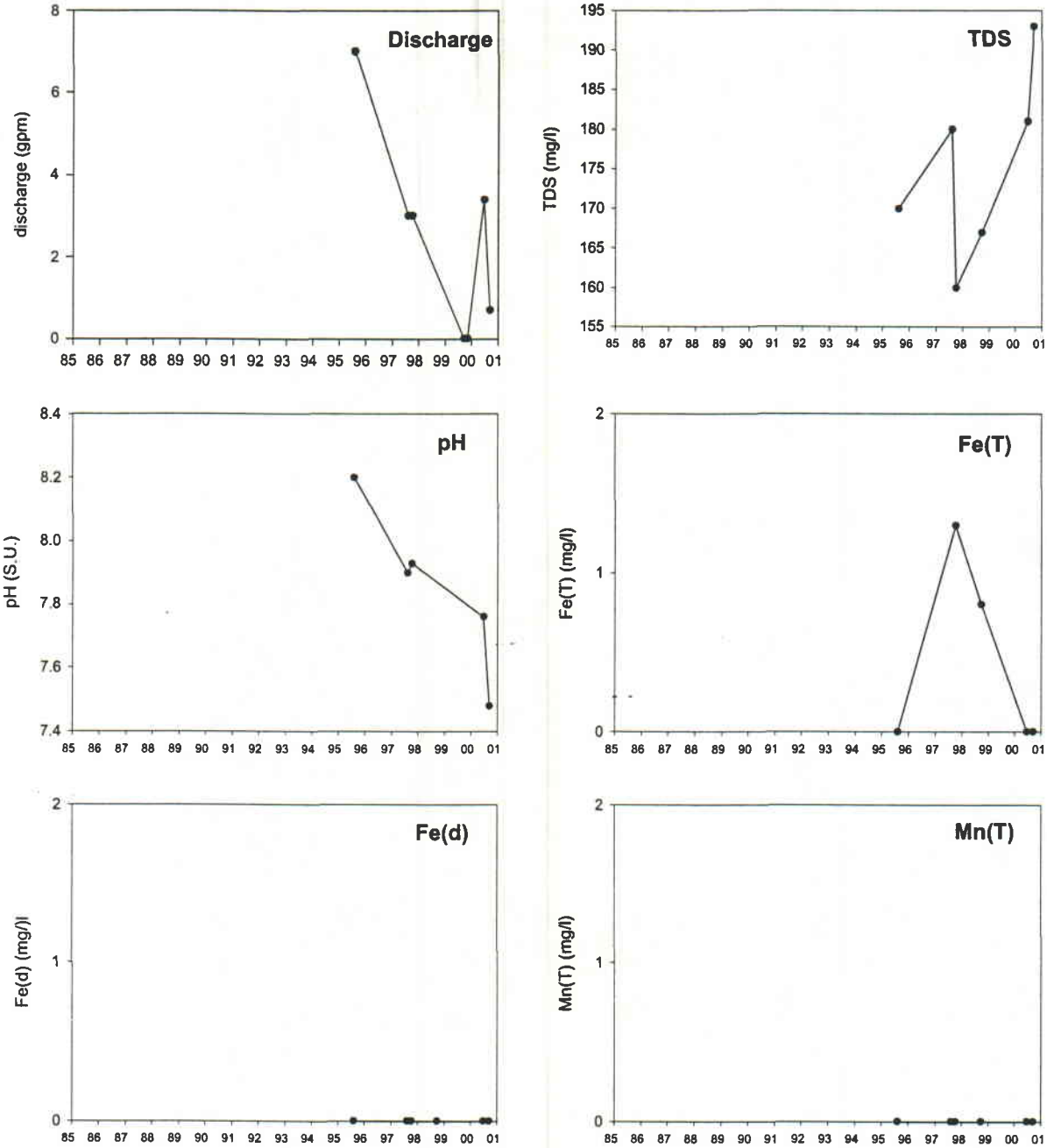




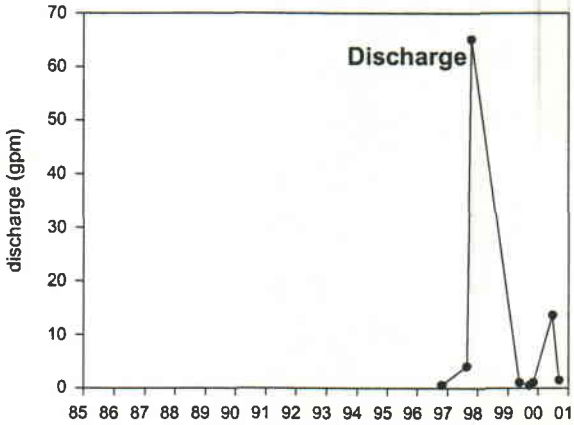
Spring SP1-33

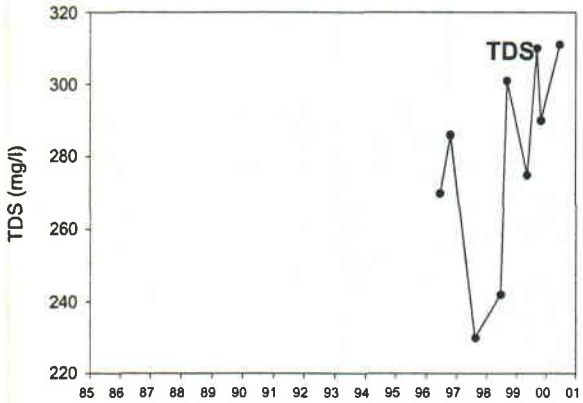


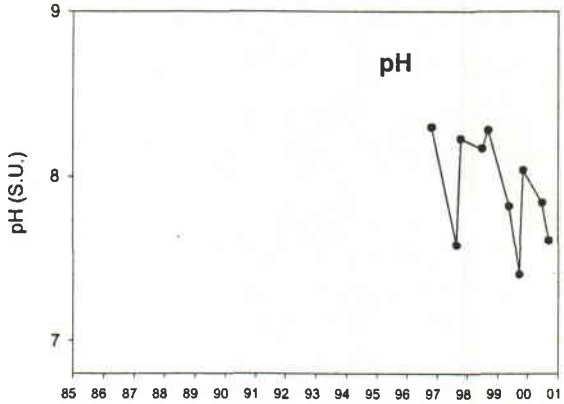
Spring SP1-47

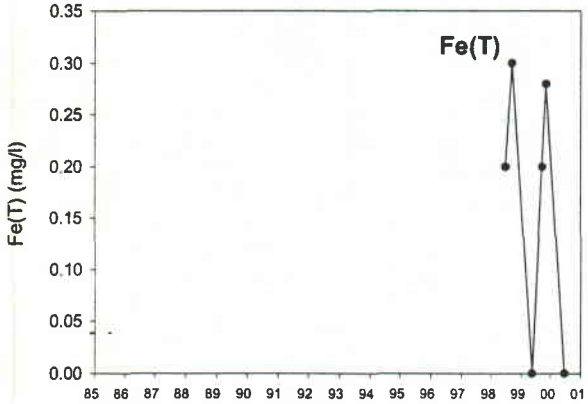

Discharge
discharge (gpm)
TDS
TDS (mg/l)
pH
pH (S.U.)
Fe(T)
Fe(T) (mg/l)
Fe(d)
Fe(d) (mg/l)
Mn(T)
Mn(T) (mg/l)
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

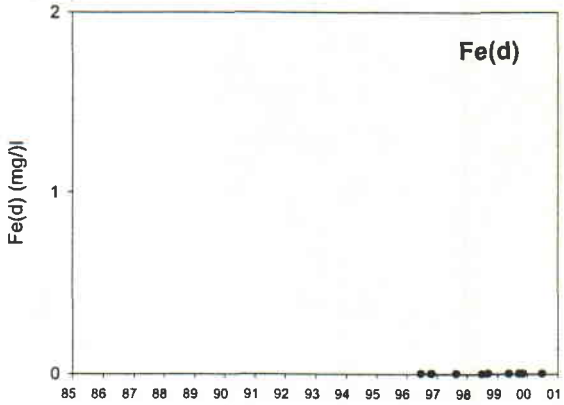
Spring SP1-9

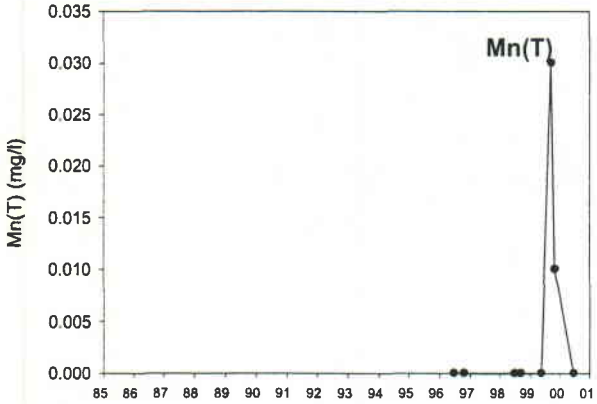

Discharge
discharge (gpm)
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
320
300
280
260
240
220
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

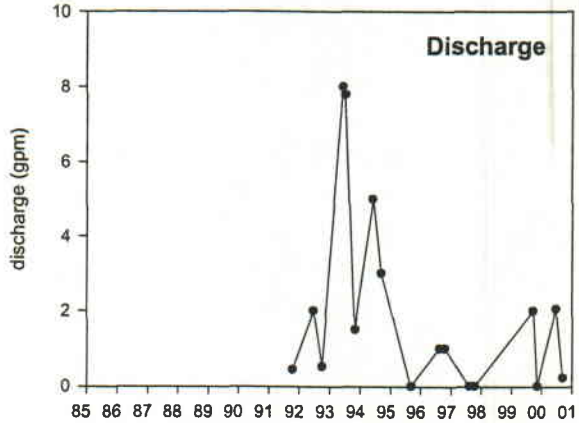

pH
pH (S.U.)
9
8
7
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

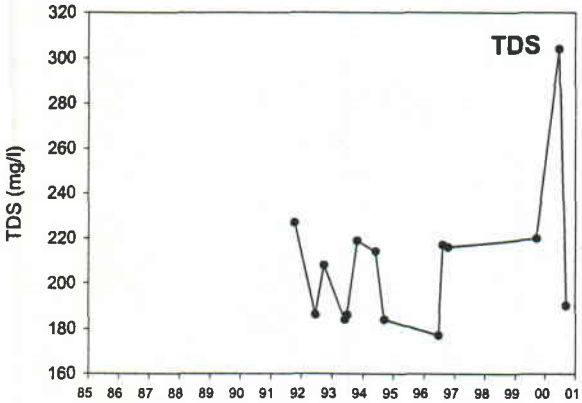

Fe(T)
Fe(T) (mg/l)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

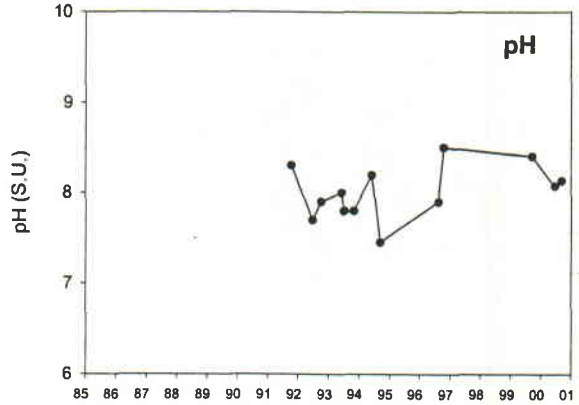

Fe(d)
Fe(d) (mg/l)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

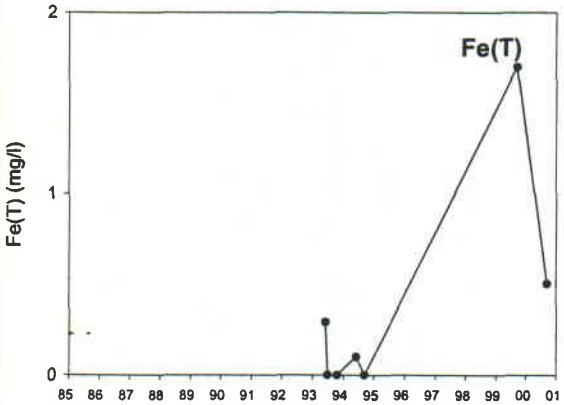

Mn(T)
Mn(T) (mg/l)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

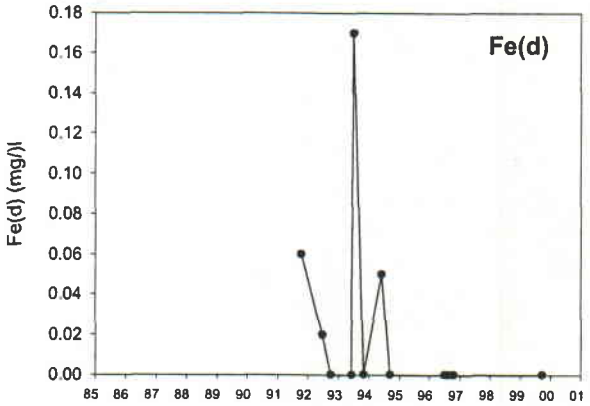
Spring SP2-1

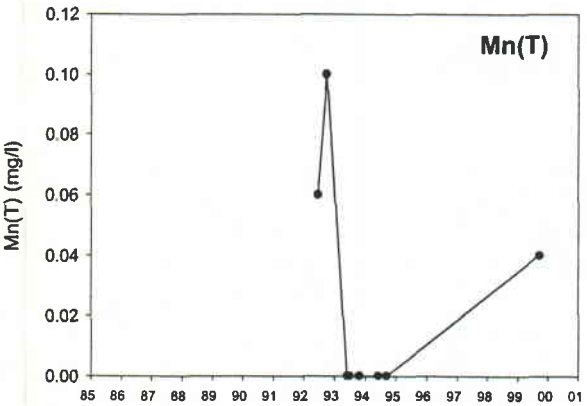




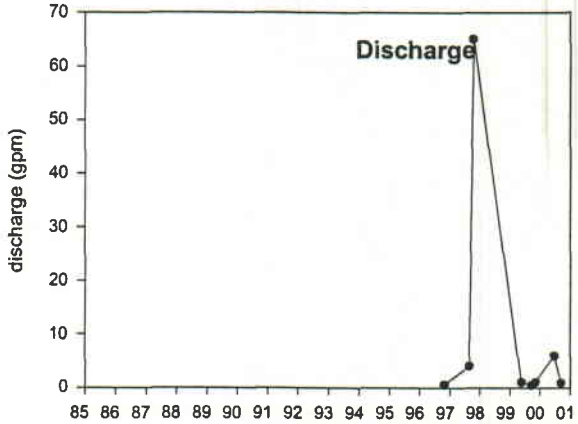


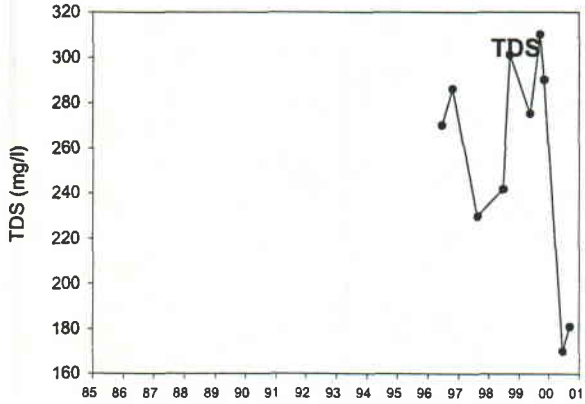


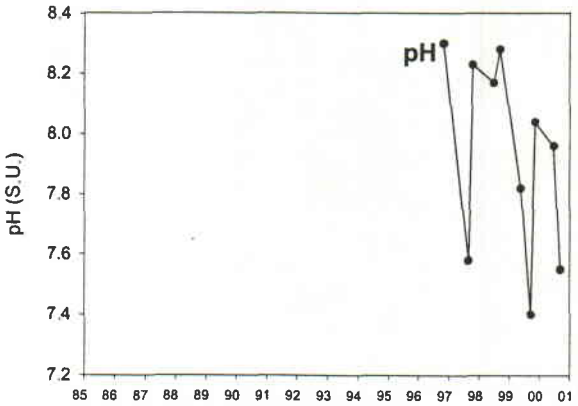


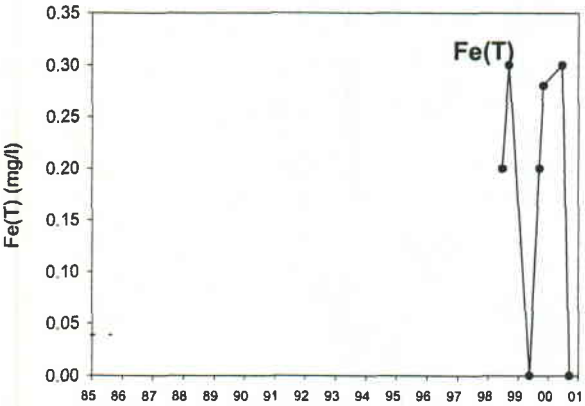


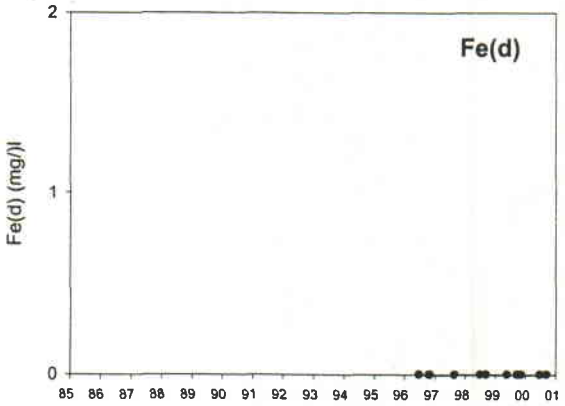
Spring SP2-24

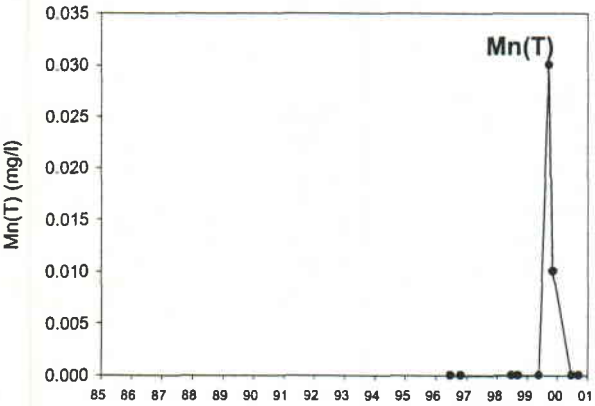

Discharge
discharge (gpm)
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
320
300
280
260
240
220
200
180
160
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

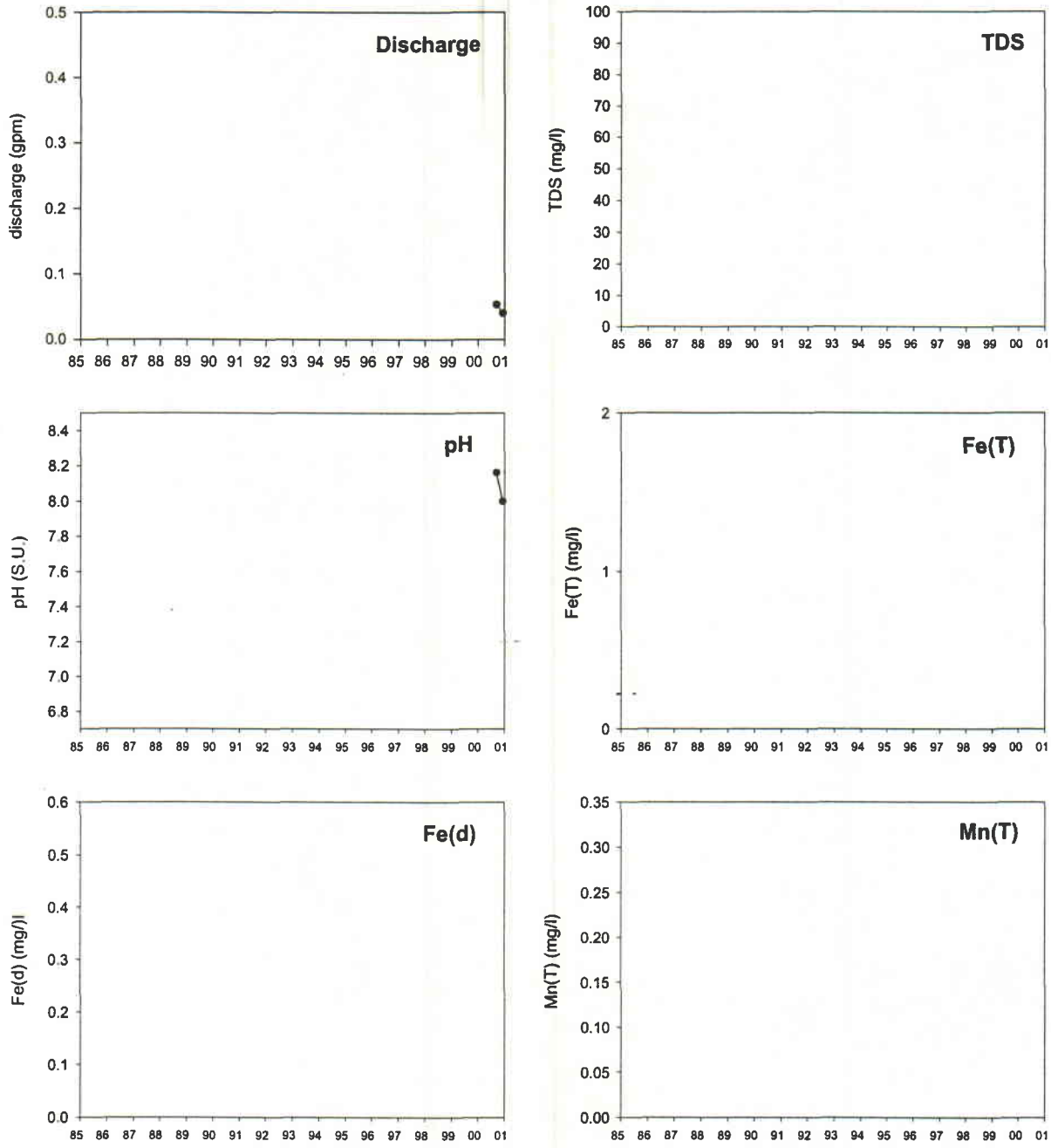

pH
pH (S.U.)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


Fe(T)
Fe(T) (mg/l)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

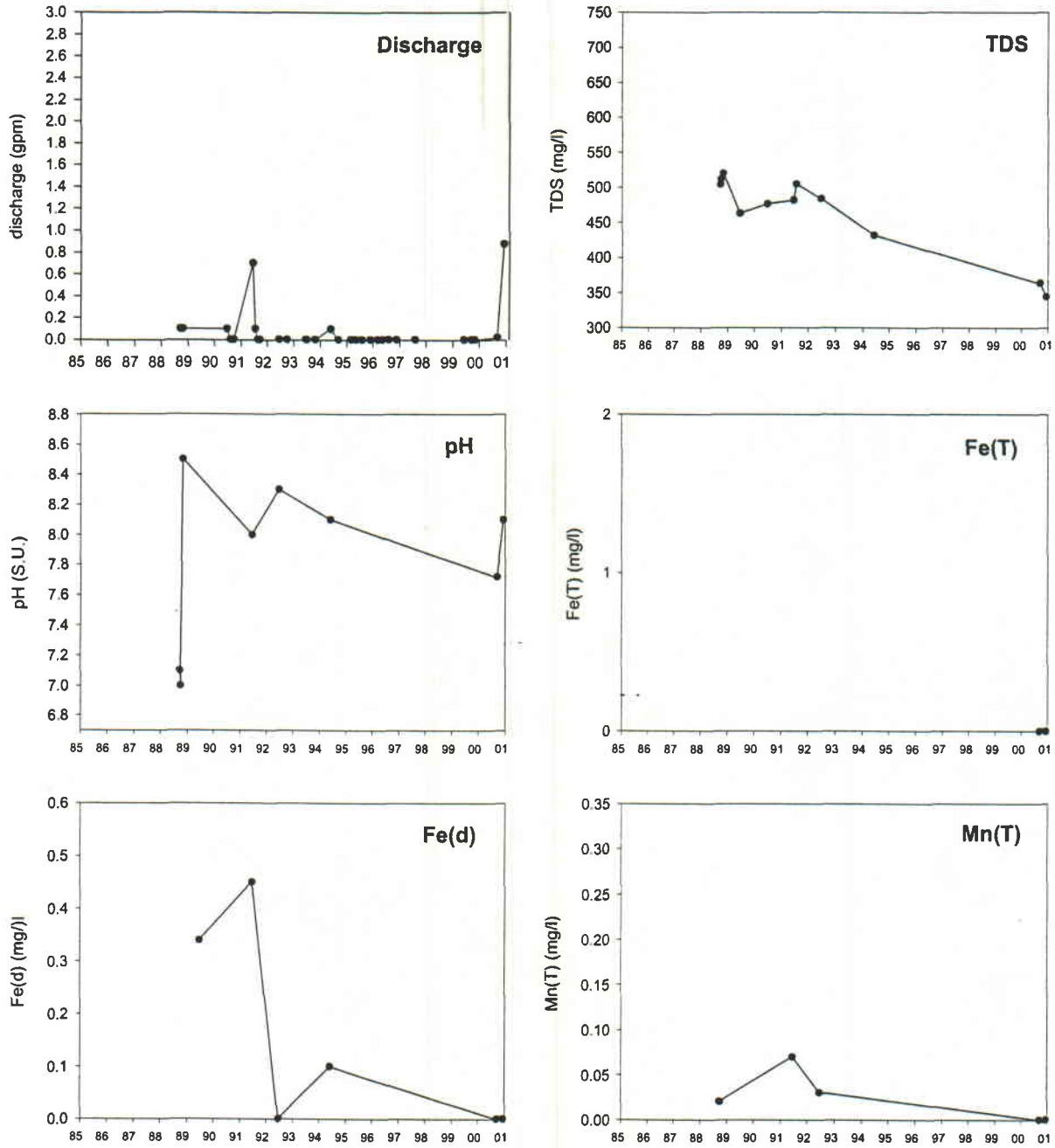

Fe(d)
Fe(d) (mg/)l
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


Mn(T)
Mn(T) (mg/l)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

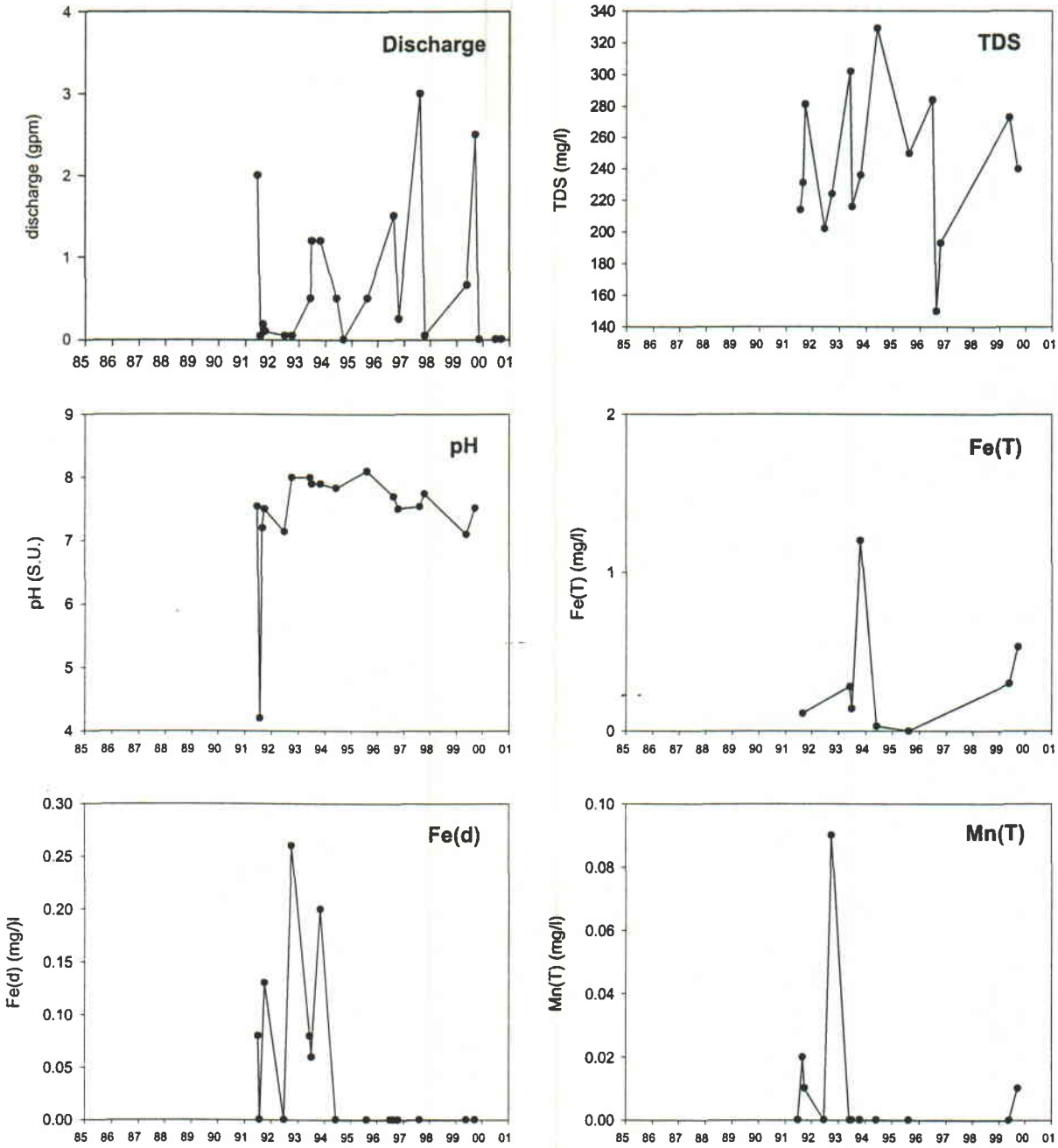
Spring SP2-9


Discharge
discharge (gpm)
0.0
0.1
0.2
0.3
0.4
0.5
TDS
TDS (mg/l)
0
10
20
30
40
50
60
70
80
90
100
pH
pH (S.U.)
6.8
7.0
7.2
7.4
7.6
7.8
8.0
8.2
8.4
Fe(T)
Fe(T) (mg/l)
0
1
2
Fe(d)
Fe(d) (mg/)l
0.0
0.1
0.2
0.3
0.4
0.5
0.6
Mn(T)
Mn(T) (mg/l)
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

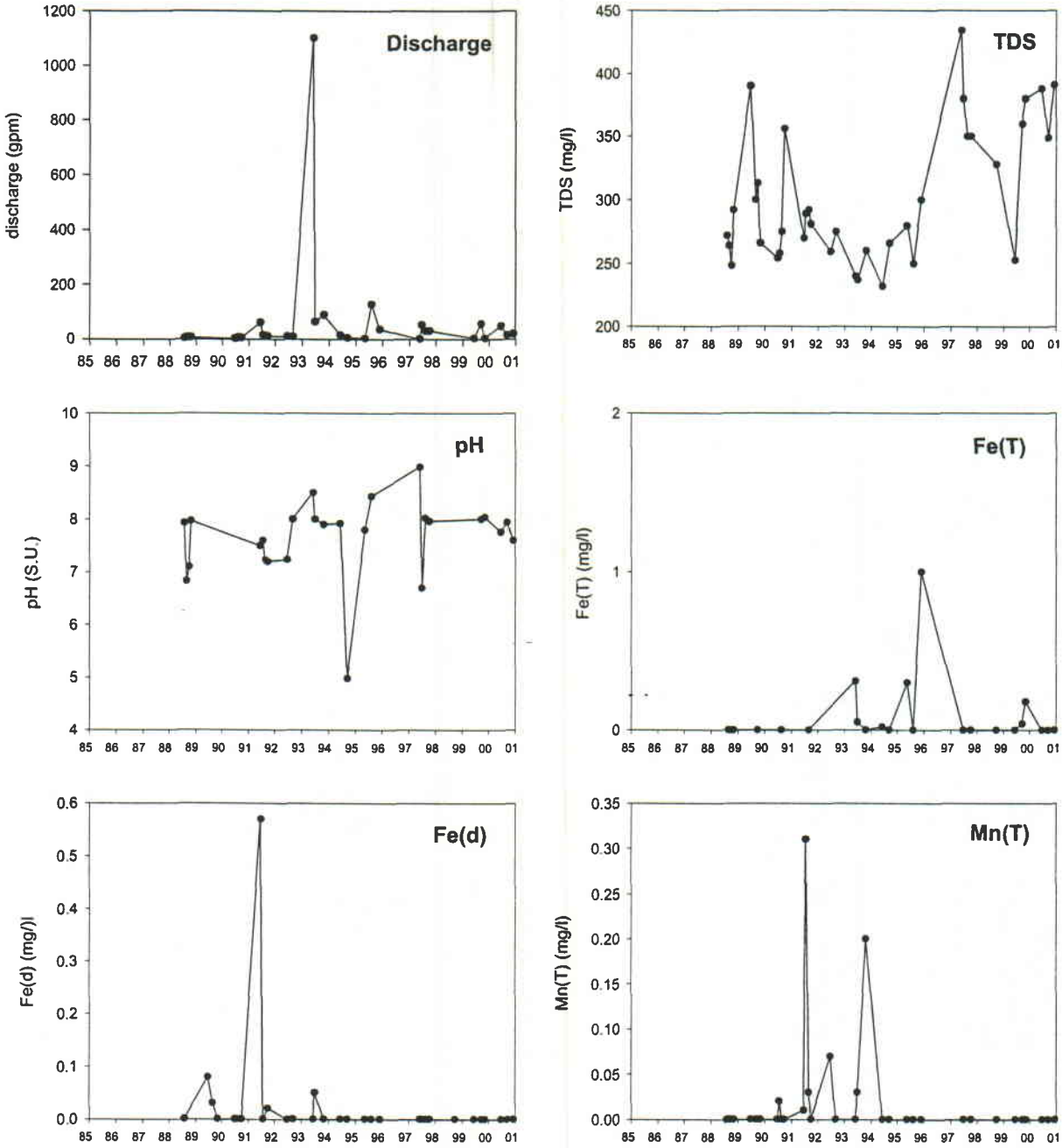
Spring SP-30


Discharge
discharge (gpm)
TDS
TDS (mg/l)
pH
pH (S.U.)
Fe(T)
Fe(T) (mg/l)
Fe(d)
Fe(d) (mg/l)
Mn(T)
Mn(T) (mg/l)
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

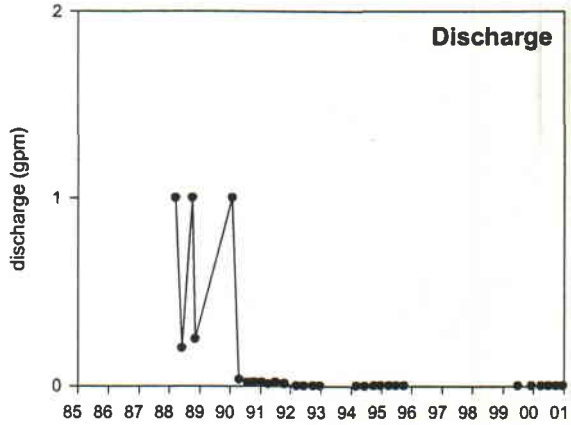
Spring SP-36

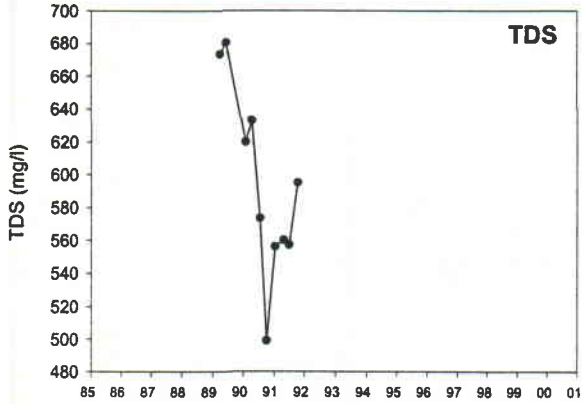


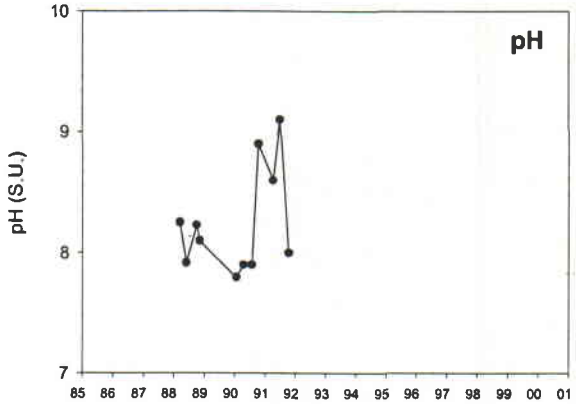
Spring SP-47a

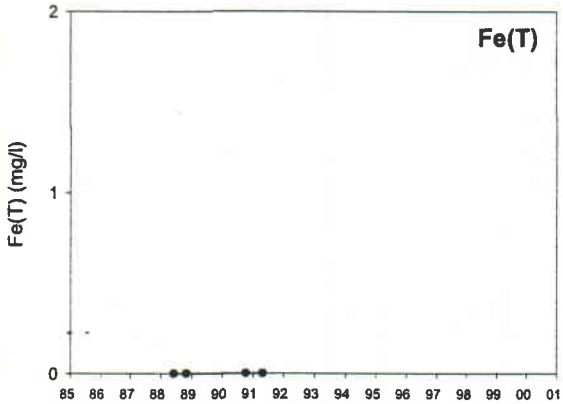

Discharge
discharge (gpm)
TDS
TDS (mg/l)
pH
pH (S.U.)
Fe(T)
Fe(T) (mg/l)
Fe(d)
Fe(d) (mg/l)
Mn(T)
Mn(T) (mg/l)
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

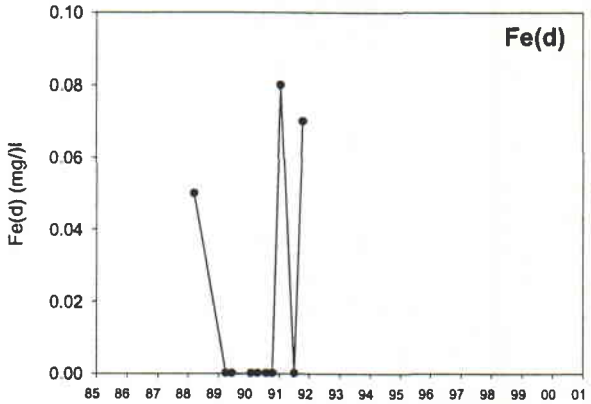
Spring SP-58

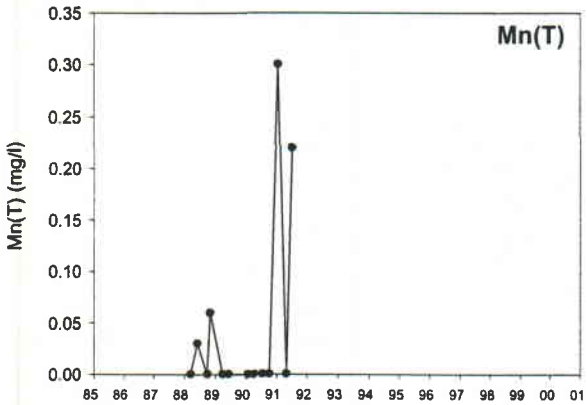

Discharge
discharge (gpm)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
700
680
660
640
620
600
580
560
540
520
500
480
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

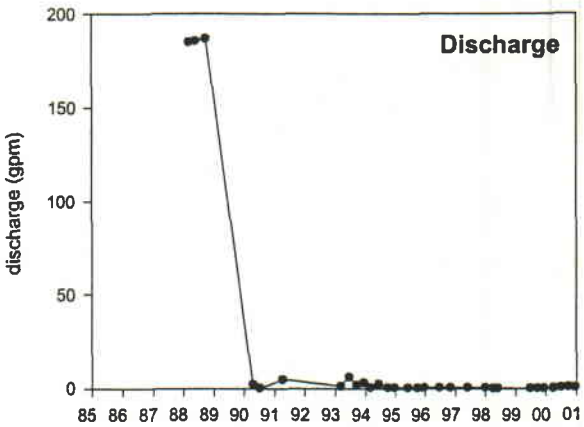

pH
pH (S.U.)
10
9
8
7
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

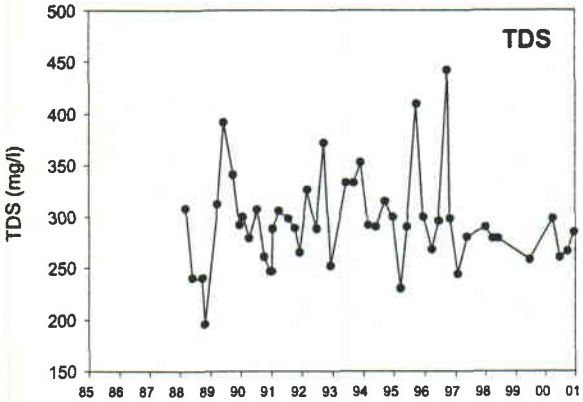

Fe(T)
Fe(T) (mg/l)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

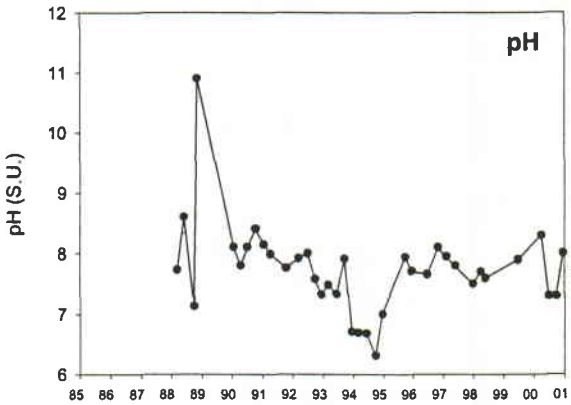

Fe(d)
Fe(d) (mg/l)
0.10
0.08
0.06
0.04
0.02
0.00
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

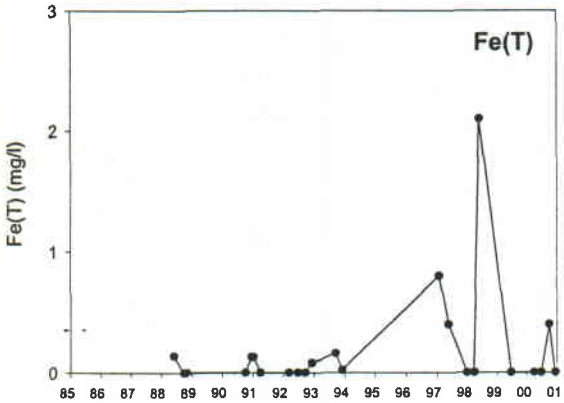

Mn(T)
Mn(T) (mg/l)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

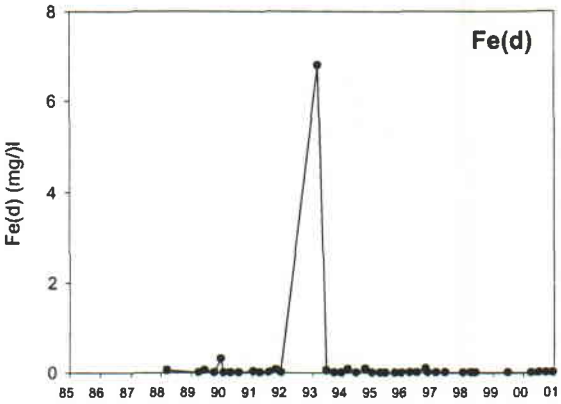
DH-1

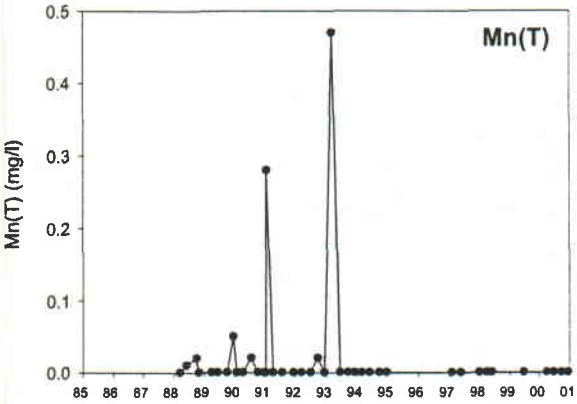

Discharge
discharge (gpm)
200
150
100
50
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
500
450
400
350
300
250
200
150
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

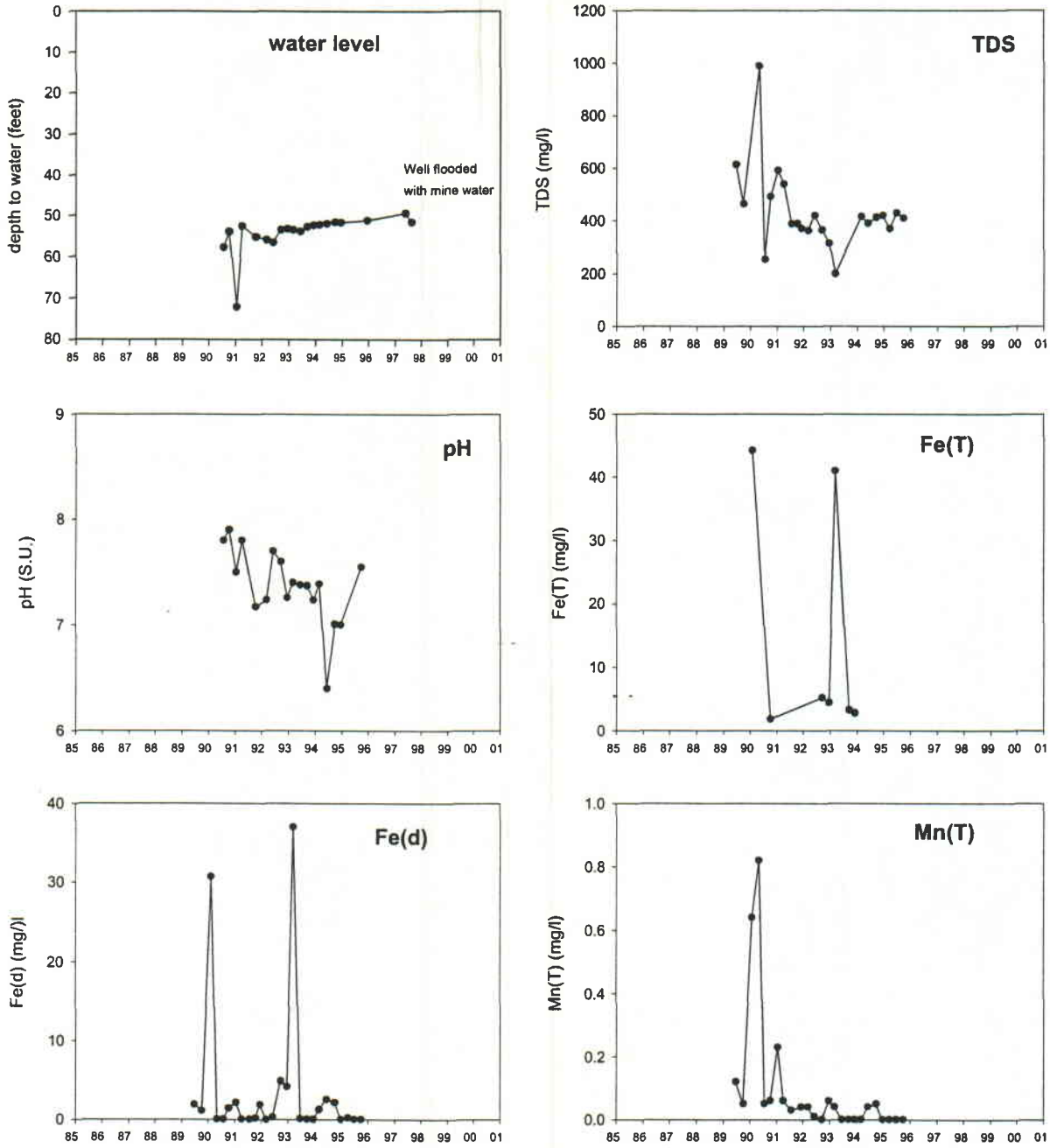

pH
pH (S.U.)
12
11
10
9
8
7
6
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


Fe(T)
Fe(T) (mg/l)
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

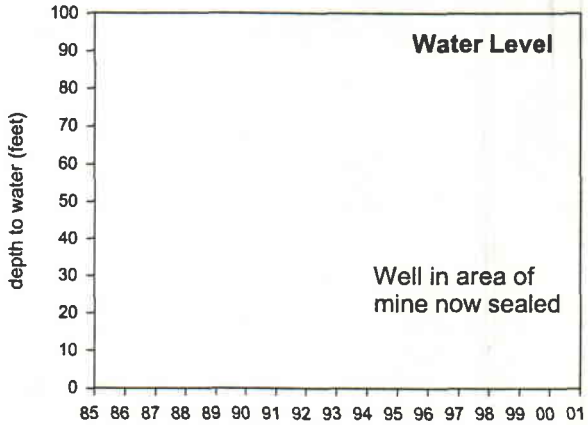

Fe(d)
Fe(d) (mg/l)
8
6
4
2
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

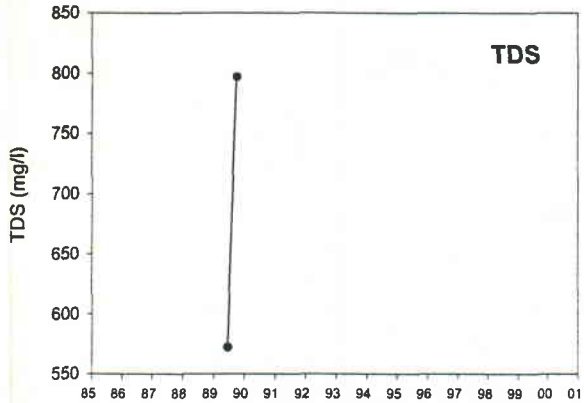

Mn(T)
Mn(T) (mg/l)
0.5
0.4
0.3
0.2
0.1
0.0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

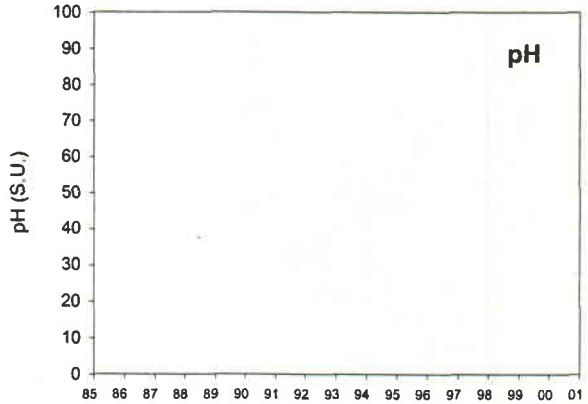
MW-1

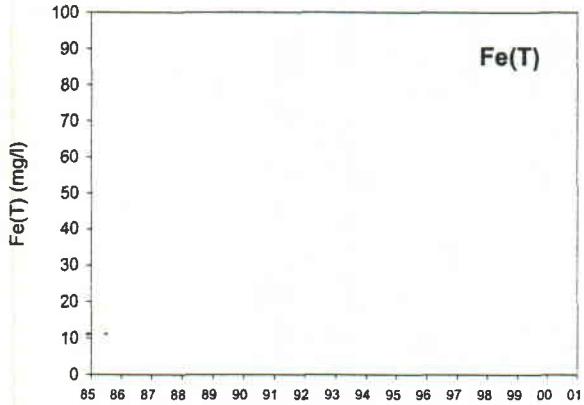

water level
depth to water (feet)
Well flooded
with mine water
TDS
TDS (mg/l)
pH
pH (S.U.)
Fe(T)
Fe(T) (mg/l)
Fe(d)
Fe(d) (mg/l)
Mn(T)
Mn(T) (mg/l)
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

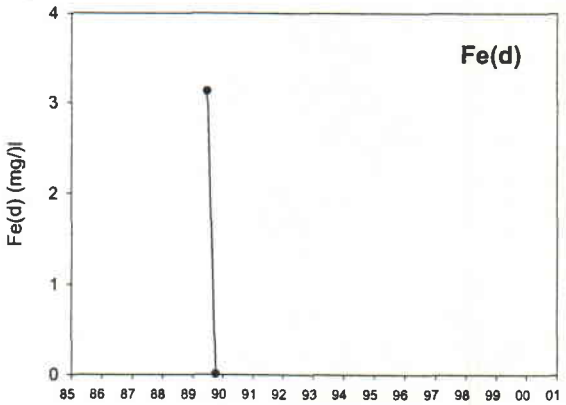
MW-2

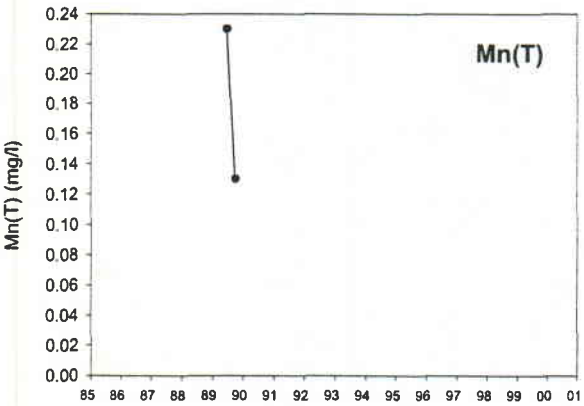

Water Level
depth to water (feet)
Well in area of
mine now sealed


TDS
TDS (mg/l)

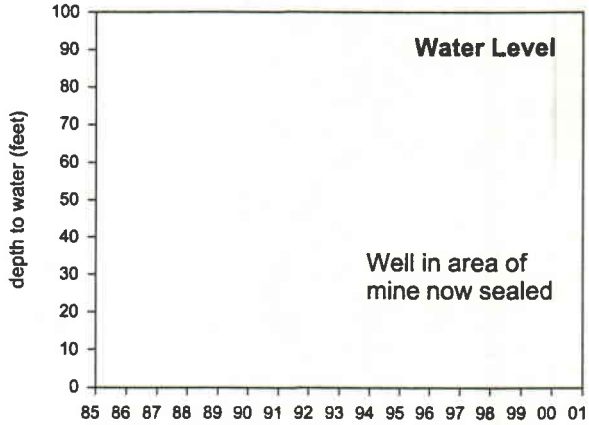

pH
pH (S.U.)

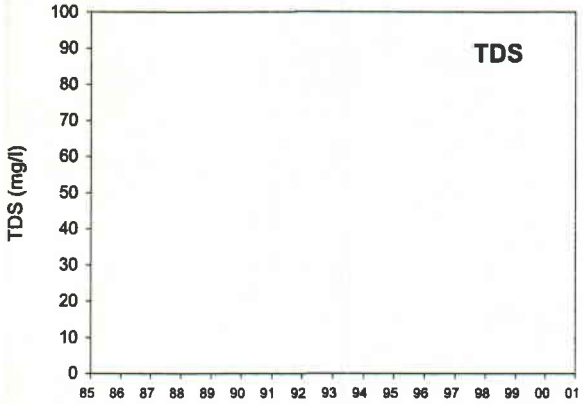

Fe(T)
Fe(T) (mg/l)

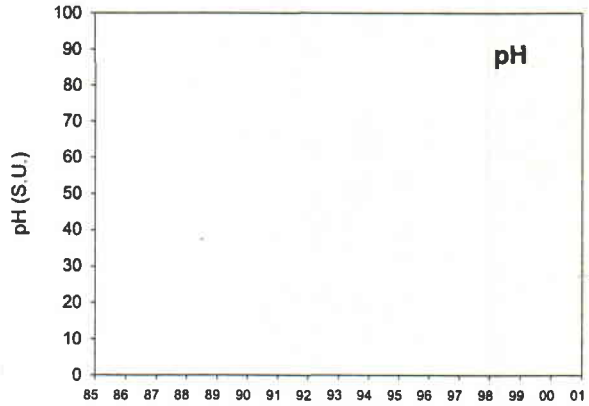

Fe(d)
Fe(d) (mg/l)

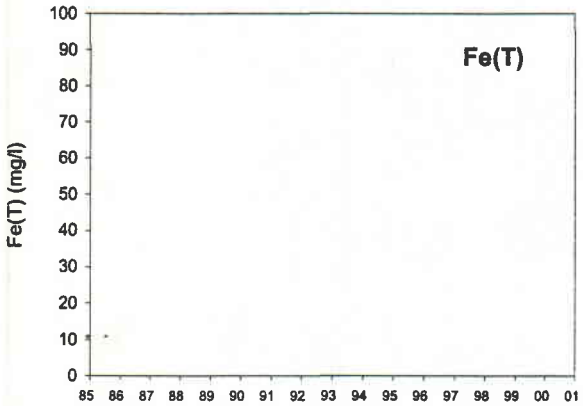

Mn(T)
Mn(T) (mg/l)

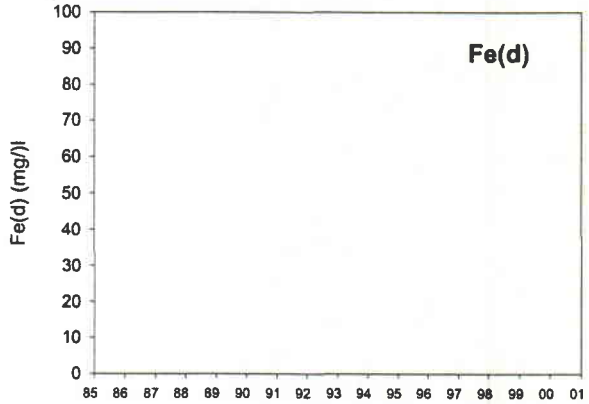
MW-3

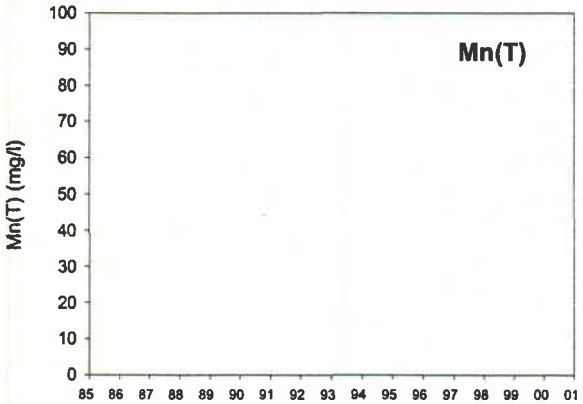

Water Level
depth to water (feet)
Well in area of
mine now sealed
100
90
80
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
100
90
80
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

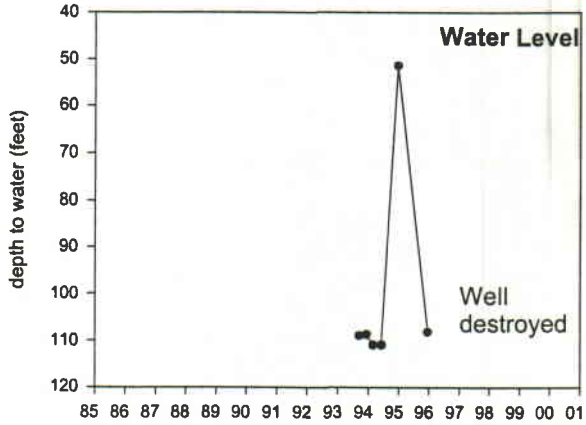

pH
pH (S.U.)
100
90
80
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

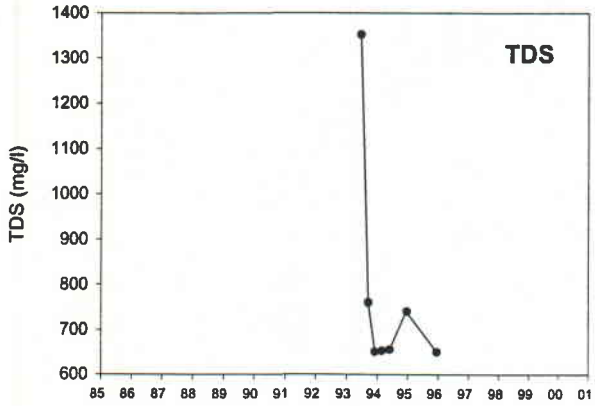

Fe(T)
Fe(T) (mg/l)
100
90
80
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

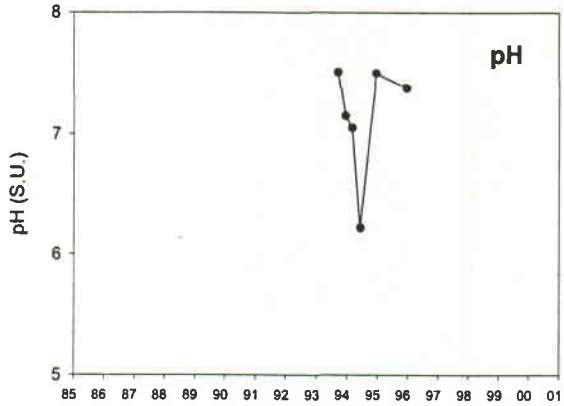

Fe(d)
Fe(d) (mg/l)
100
90
80
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

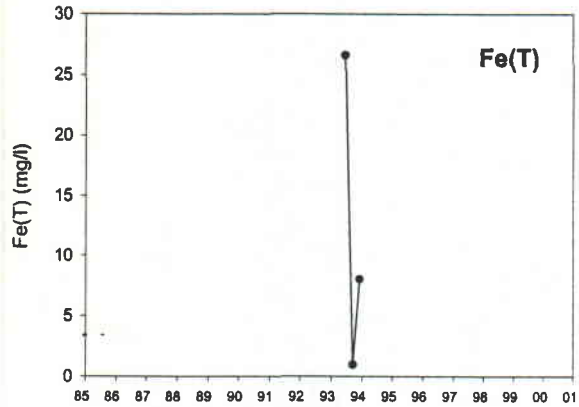

Mn(T)
Mn(T) (mg/l)
100
90
80
70
60
50
40
30
20
10
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

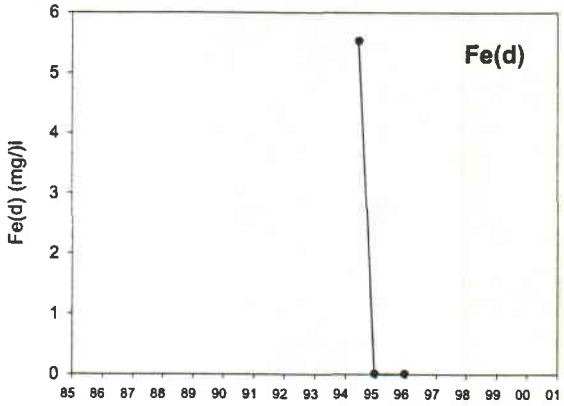
MW-4

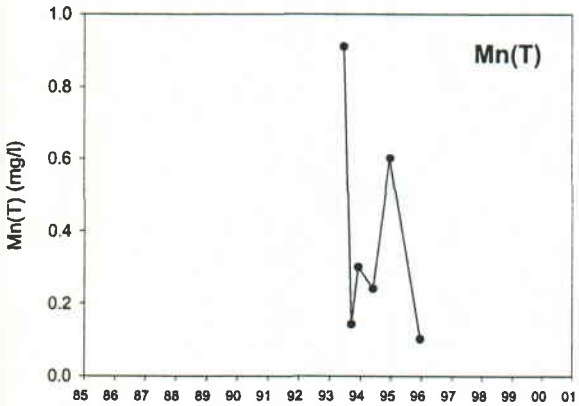

Water Level
depth to water (feet)
Well destroyed
40
50
60
70
80
90
100
110
120
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
1400
1300
1200
1100
1000
900
800
700
600
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

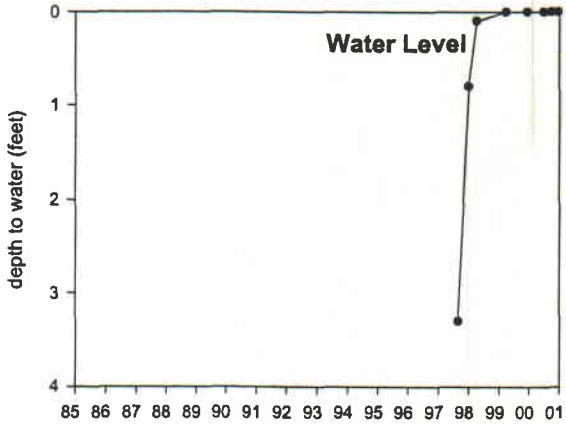

pH
pH (S.U.)
8
7
6
5
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

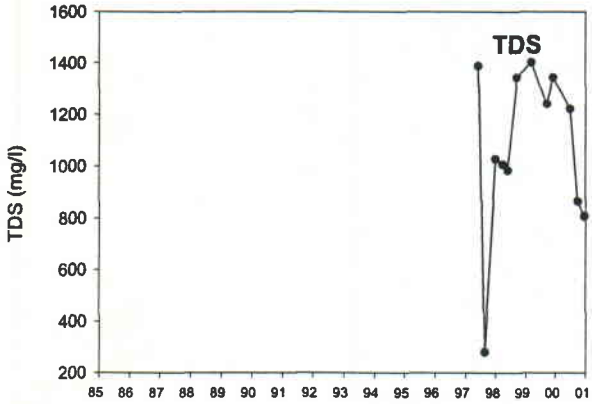

Fe(T)
Fe(T) (mg/l)
30
25
20
15
10
5
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

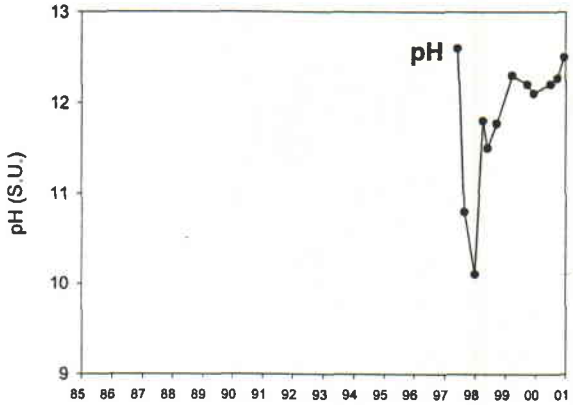

Fe(d)
Fe(d) (mg/l)
6
5
4
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

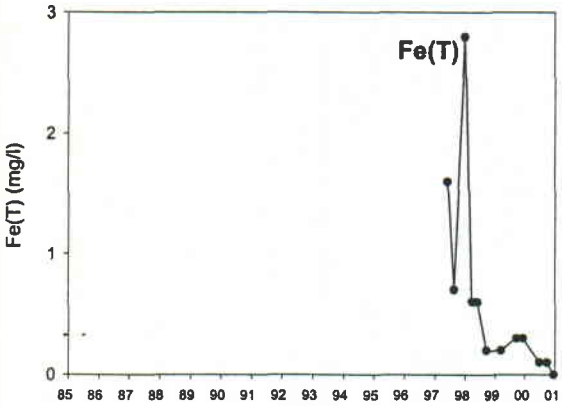

Mn(T)
Mn(T) (mg/l)
1.0
0.8
0.6
0.4
0.2
0.0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

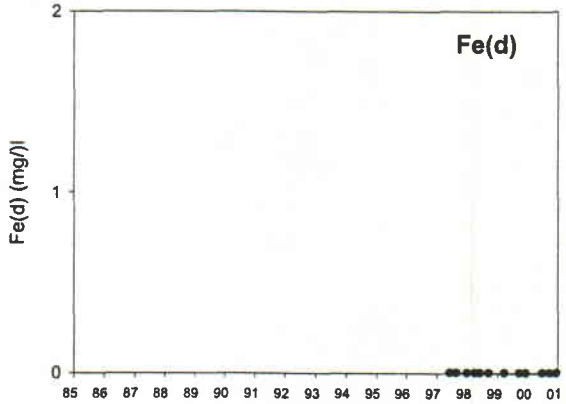
MW-5

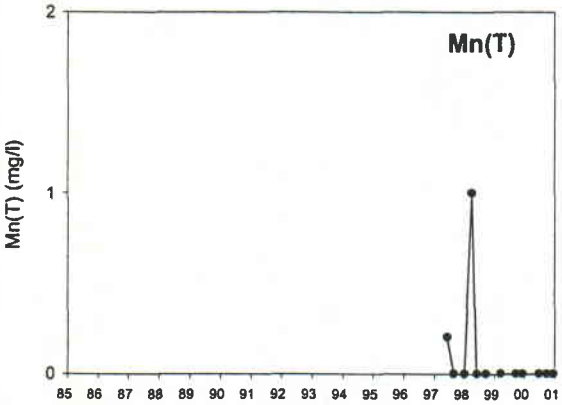

Water Level
depth to water (feet)
0
1
2
3
4
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
1600
1400
1200
1000
800
600
400
200
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

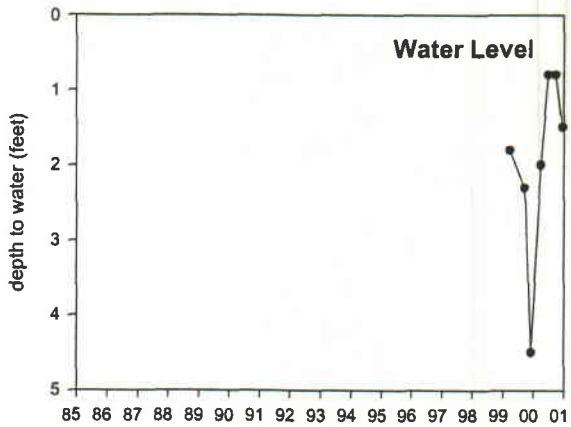

pH
pH (S.U.)
13
12
11
10
9
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

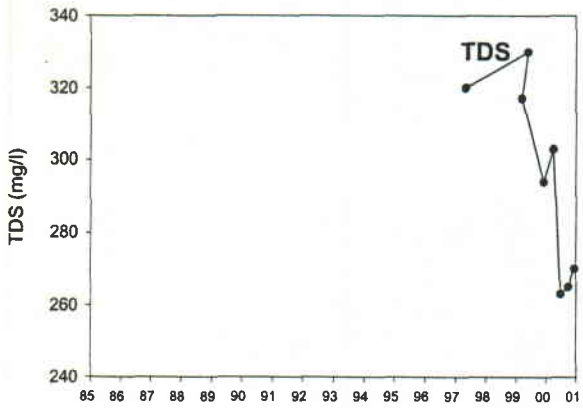

Fe(T)
Fe(T) (mg/l)
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

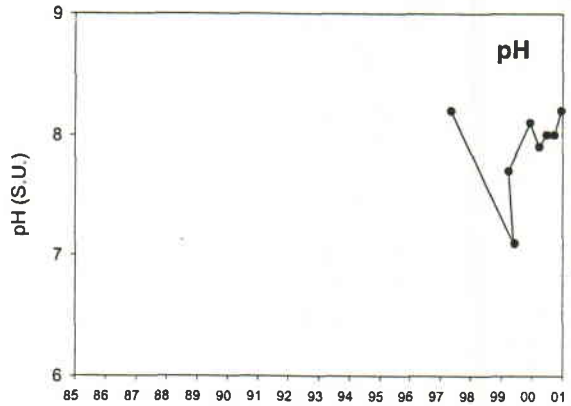

Fe(d)
Fe(d) (mg/l)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

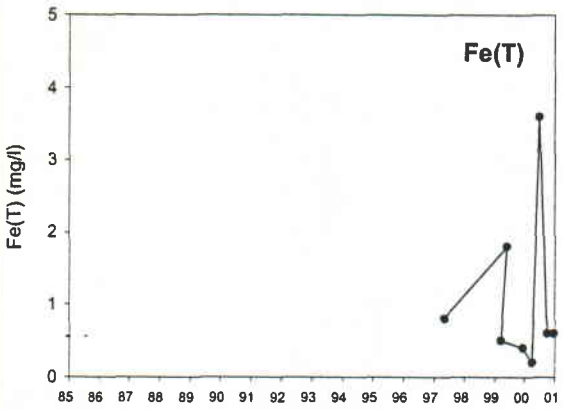

Mn(T)
Mn(T) (mg/l)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

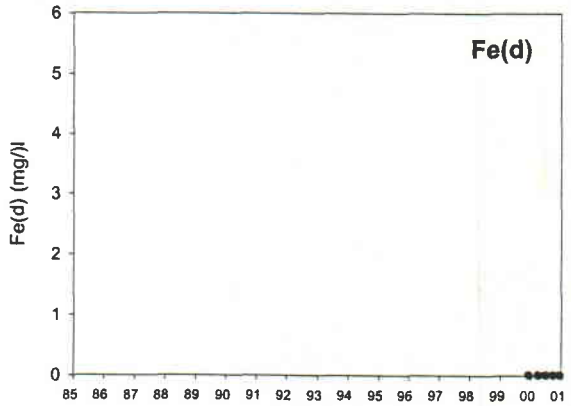
MW-6

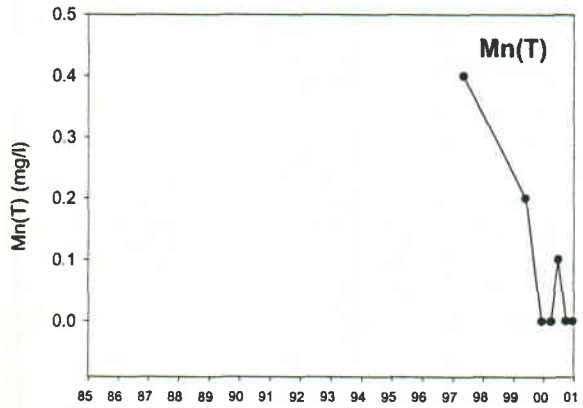

Water Level
depth to water (feet)
0
1
2
3
4
5
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
340
320
300
280
260
240
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

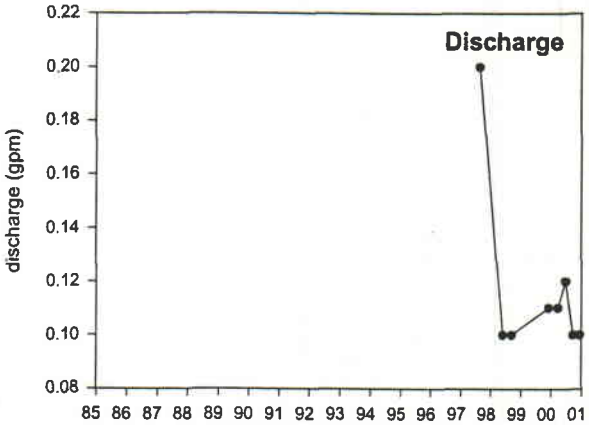

pH
pH (S.U.)
9
8
7
6
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

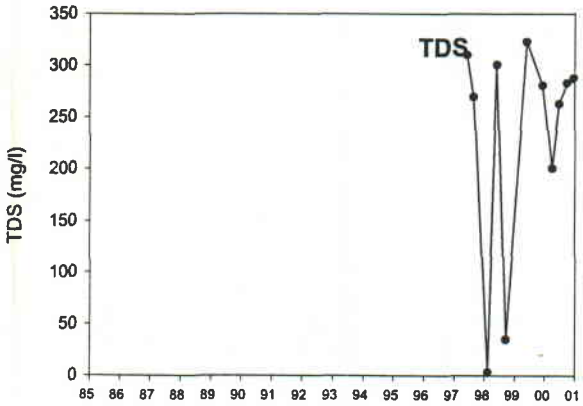

Fe(T)
Fe(T) (mg/l)
5
4
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

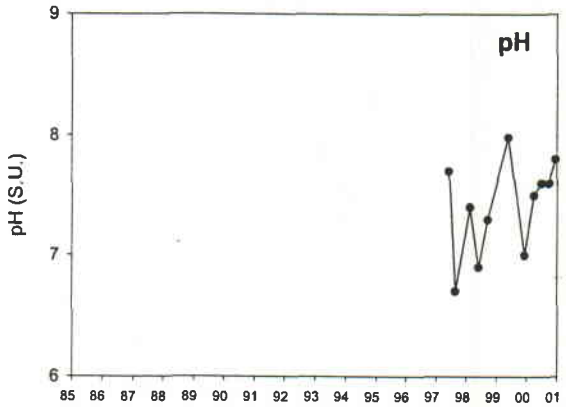

Fe(d)
Fe(d) (mg/l
6
5
4
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

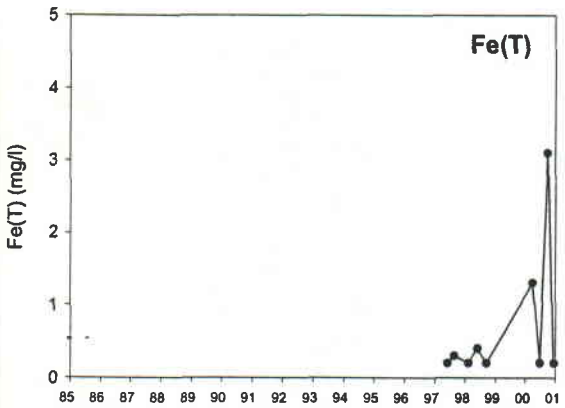

Mn(T)
Mn(T) (mg/l)
0.5
0.4
0.3
0.2
0.1
0.0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

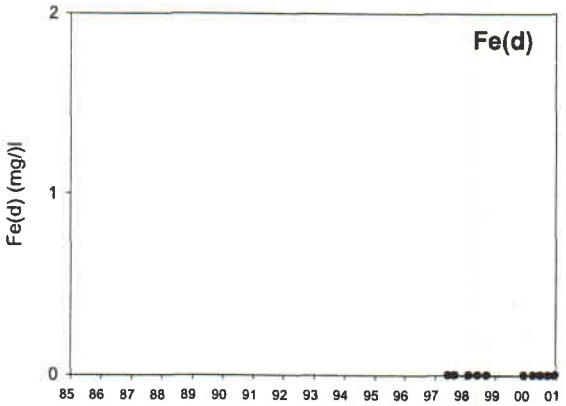
MW-6a

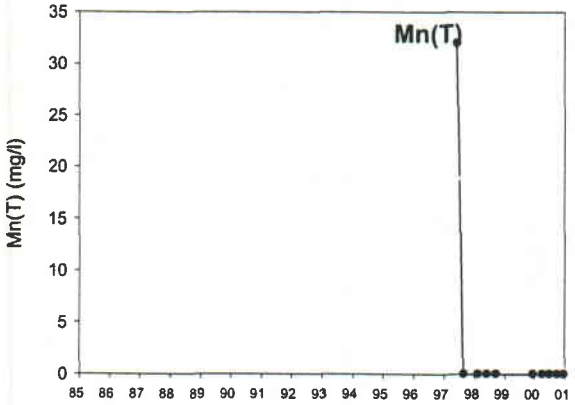

Discharge
discharge (gpm)
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
350
300
250
200
150
100
50
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

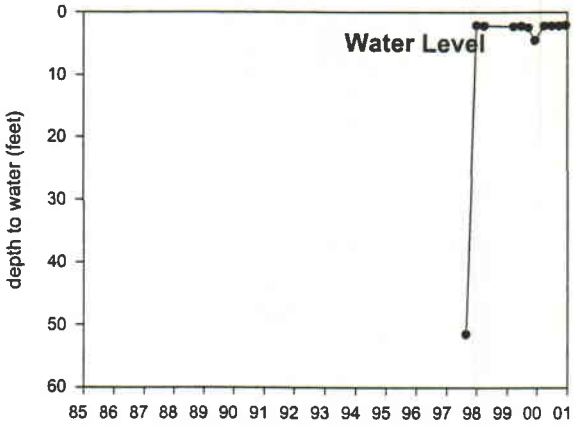

pH
pH (S.U.)
9
8
7
6
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

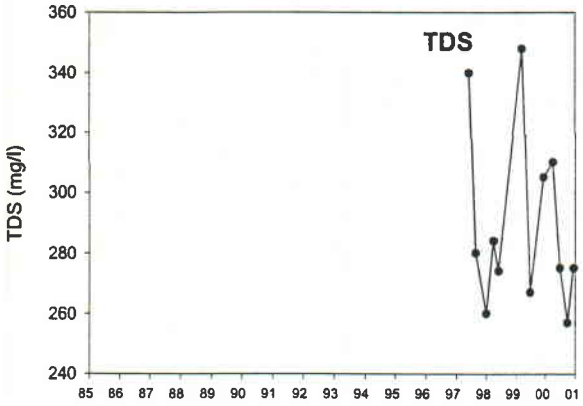

Fe(T)
Fe(T) (mg/l)
5
4
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

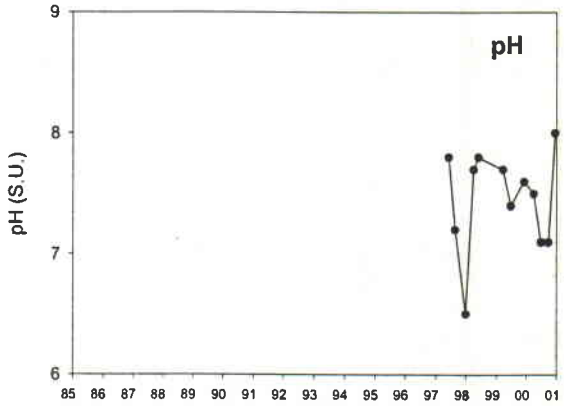

Fe(d)
Fe(d) (mg/l)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

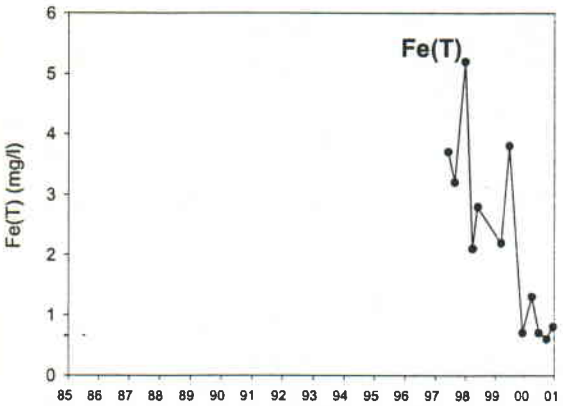

Mn(T)
Mn(T) (mg/l)
35
30
25
20
15
10
5
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

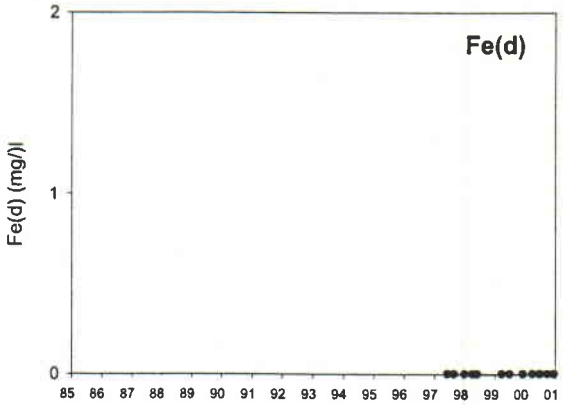
MW-7

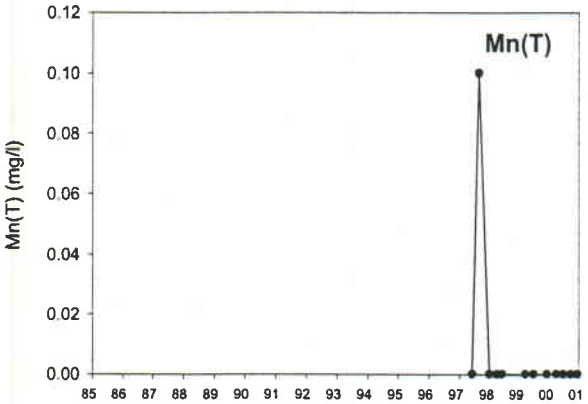

Water Level
depth to water (feet)
0
10
20
30
40
50
60
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01


TDS
TDS (mg/l)
360
340
320
300
280
260
240
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

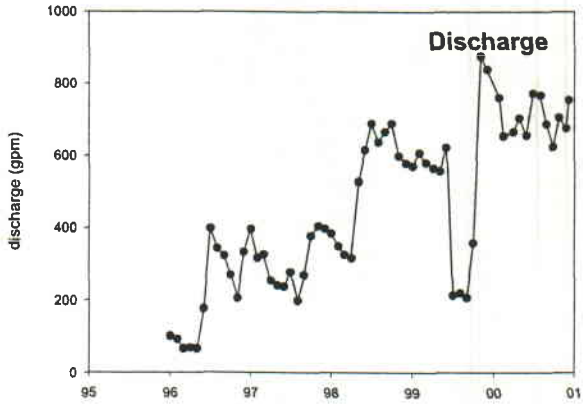

pH
pH (S.U.)
9
8
7
6
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

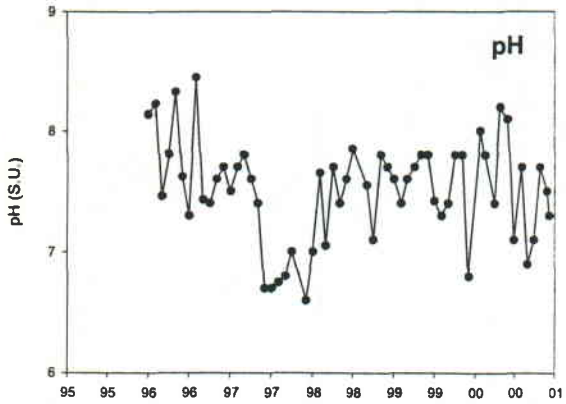

Fe(T)
Fe(T) (mg/l)
6
5
4
3
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

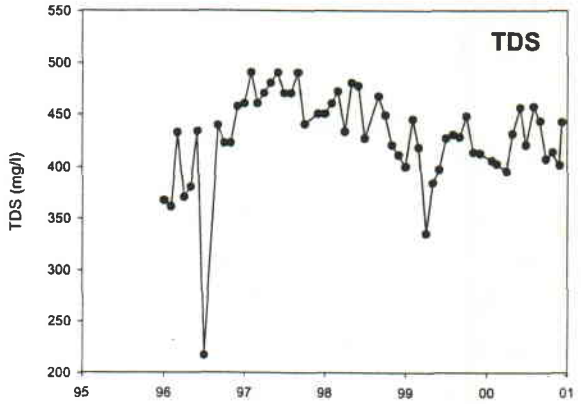

Fe(d)
Fe(d) (mg/l)
2
1
0
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

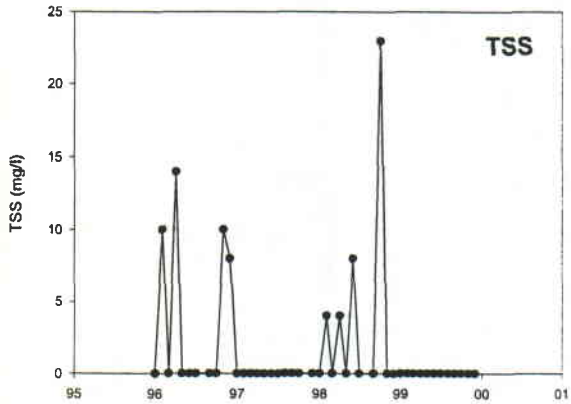

Mn(T)
Mn(T) (mg/l)
0.12
0.10
0.08
0.06
0.04
0.02
0.00
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01

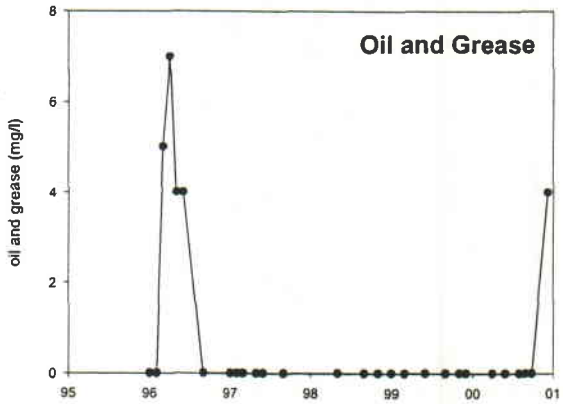
MW-8

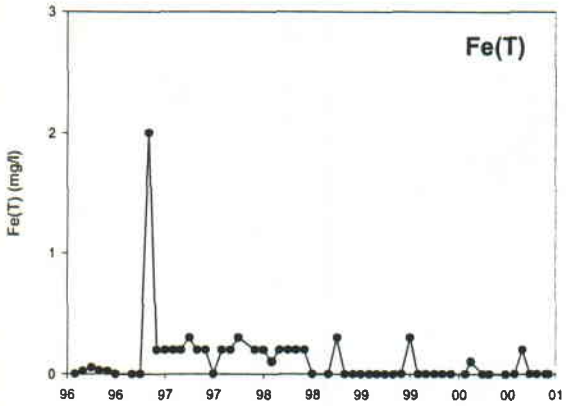


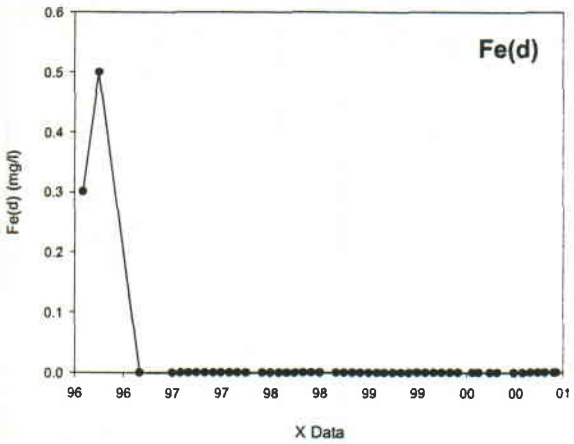




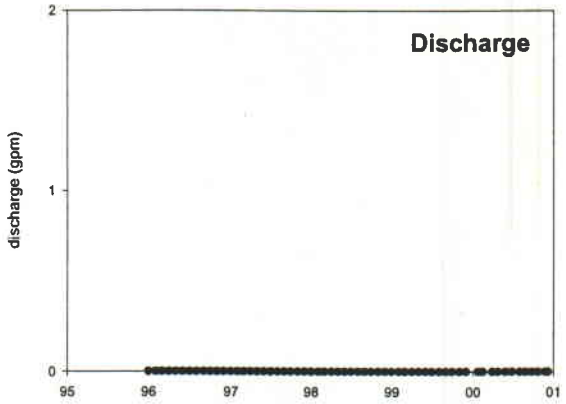


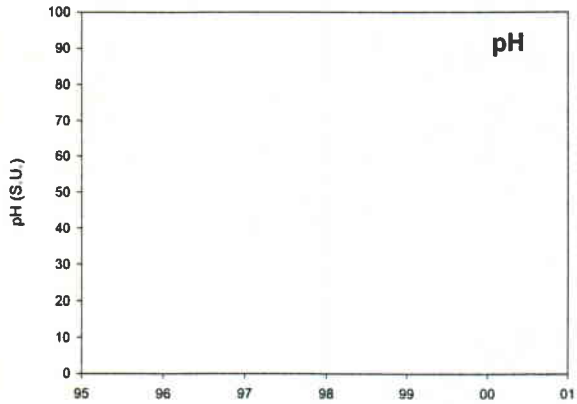


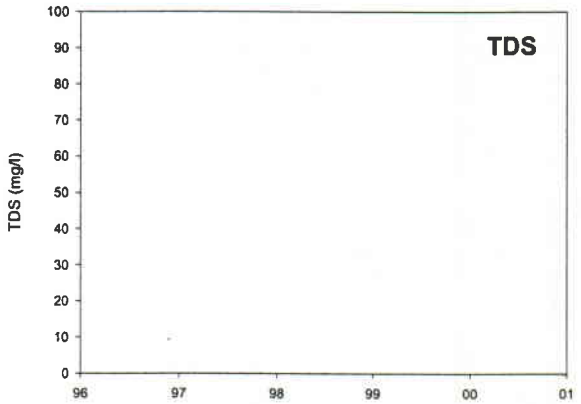


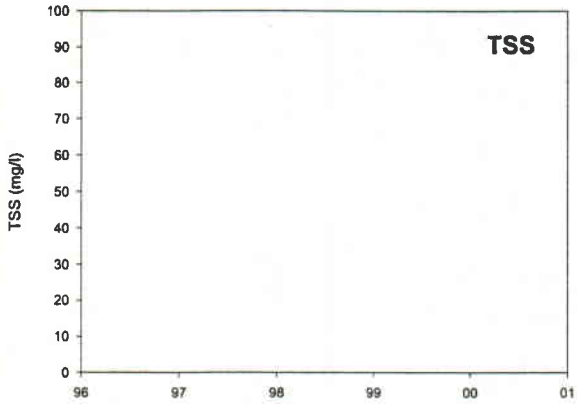


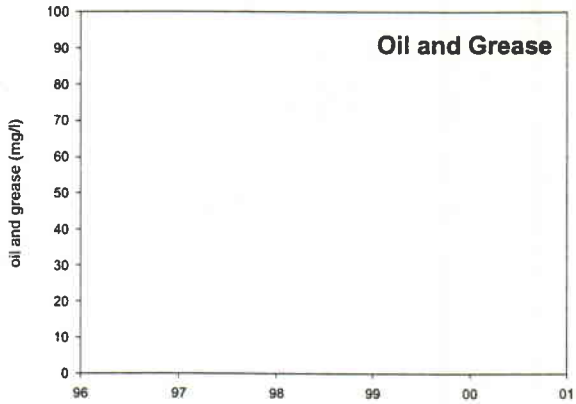
Mine Discharge

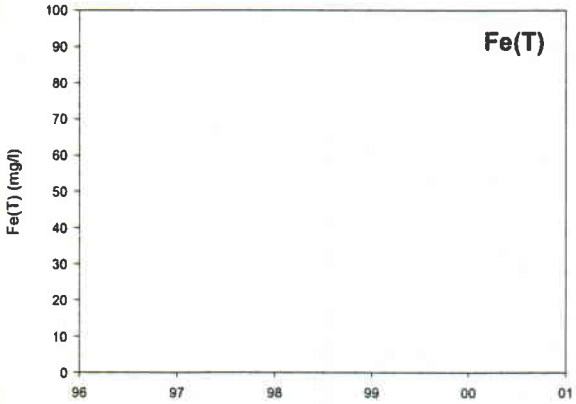


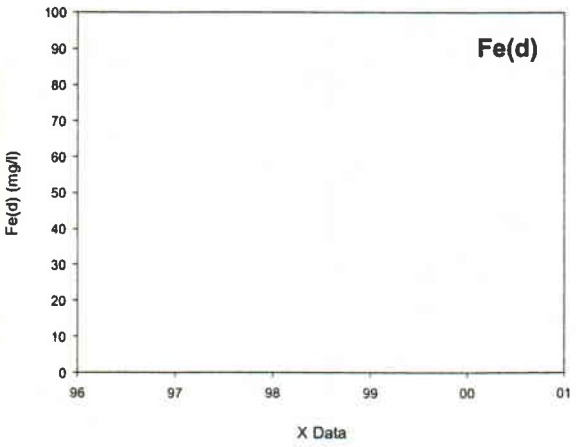












Sediment Pond
Discharge

Table 1 Results of hydrologic monitoring at GENWAL's Crandall Canyon Mine permit area during 2000

	Date	Monitored	Flow (gpm)	T (°C)	pH (S.U.)	Cond (µs/cm)	TDS (mg/l)	TSS (mg/l)	Set Sol (mg/l)	DO (mg/l)	O&G (mg/l)	acidity (mg/l)	T Alk ($CaCO_3$) (mg/l)	Hardness (mg/l)	HCO_3 (mg/l)	CO_3 (mg/l)	SO_4 (mg/l)	Cl (mg/l)	OH (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions (meq/l)	Cations (meq/l)	Fe(d) (mg/l)	Fe(T) (mg/l)	Mn(d) (mg/l)	Mn(T) (mg/l)	depth (bgs)
Springs																														
SP-30	30-Mar-00	inaccessible																												
	19-Jun-00	dry/not found																												
	13-Sep-00	yes	0.053	13.4	8.16	820																								
	09-Dec-00	yes	0.04	4.9	8	660																								
SP-36	30-Mar-00	inaccessible																												
	19-Jun-00	dry/not found																												
	13-Sep-00	yes	0.023	16.4	7.72	664	364					53	314	339	382	<5	43	7		60	46	8	<1	7.4	7.1	<0.1	<0.1	<0.1	<0.1	
	09-Dec-00	yes	0.875	8.2	8.1	613	345					27	306	329	374	<5	46	6		59	44	7	1	7.3	6.9	<0.1	<0.1	<0.1	<0.1	
SP-58	30-Mar-00	inaccessible																												
	20-Jun-00	yes	47.8	4.5	7.76	592	388					<10	278	325	340	<5	62	2		74		2	2	6.9	6.6	<0.1	<0.1	<0.1	<0.1	
	14-Sep-00	yes	15.4	4.8	7.94	605	349					58	273	321	334	<5	69	3		74	33	4	2	7	6.6	<0.1	<0.1	<0.1	<0.1	
	08-Dec-00	yes	19.4	4.7	7.6	599	391					35		330	348	<5	69	3		76	34	4	1	7.2	6.8	<0.1	<0.1	<0.1	<0.1	
SP2-24	30-Mar-00	inaccessible																												
	22-Jun-00	yes	2.05	4.5	8.07	331	304					<10	174	176	212	<5	3	2		49	13	<1	<1	3.6	3.5	<0.1	<0.1	<0.1	<0.1	
	12-Sep-00	yes	0.233	8.4	8.13	320	190					13	173	168	211	<5	3	1		44	14	2	<1	3.5	3.4	<0.1	0.5	<0.1	<0.1	
	09-Dec-00	inaccessible																												
SP2-9	30-Mar-00	inaccessible																												
	21-Jun-00	yes	5.9	3.9	7.96	277	170					<10	145	145	177	<5	4	<1		45	8	<1	<1	3	2.9	<0.1	0.3	<0.1	<0.1	
	11-Sep-00	yes	0.903	5.8	7.55	299	181					17	153	152	187	<5	6	<1		46	9	2	<1	3.2	3.1	<0.1	<0.1	<0.1	<0.1	
	09-Dec-00	inaccessible																												
SP47A	30-Mar-00	inaccessible																												
	22-Jun-00	yes	dry																											
	11-Sep-00	yes	dry																											
	09-Dec-00	inaccessible																												
SP1-3	30-Mar-00	inaccessible																												
	21-Jun-00	yes	0.46	6.5	8.11	206																								
	11-Sep-00	yes	0.16	4	7.48	288																								
	09-Dec-00	inaccessible																												
SP1-19	30-Mar-00	inaccessible																												
	22-Jun-00	yes	18.8	6.4	8.28	417																								
	12-Sep-00	yes	1.35	7.2	8.27	456																								
	09-Dec-00	inaccessible																												
SP1-22	30-Mar-00	inaccessible																												
	22-Jun-00	yes	3.53	5.1	8.24	304																								
	12-Sep-00	yes	0.545	7.5	8.24	347																								
	09-Dec-00	inaccessible																												
SP1-33	30-Mar-00	inaccessible																												
	23-Jun-00	yes	2.9	4.3	7.76	504	280					<10	261	265	318	<5	16	2		70	22	4	<1	5.6	5.5	<0.1	1.8	<0.1	0.1	
	13-Sep-00	yes	2.47	5.5	7.92	492	267					46	255	255	311	<5	19	3		66	22	5	1	5.6	5.3	<0.1	<0.1	<0.1	<0.1	
	09-Dec-00	inaccessible																												
SP1-47	30-Mar-00	inaccessible																												
	21-Jun-00	yes	3.68	25.3	8.08	384																								
	13-Sep-00	yes	7.32	15.4	8.16	445																								
	09-Dec-00	inaccessible																												
SP2-1	30-Mar-00	Inaccessible																												
	22-Jun-00	yes	13.6	5.1	7.84	488	311					<10	297	276	363	<5	2	<1		79	19	1	<1	6	5.5	<0.1	<0.1	<0.1	<0.1	
	13-Sep-00	yes	1.37	6.7	7.61	529																								
	09-Dec-00	inaccessible																												
SP1-9	30-Mar-00	inaccessible																												
	21-Jun-00	yes	3.39	4.2	7.76	271	181					<10	150	154	183	<5	11	<1		42	12	2	<1	3.2	3.2	<0.1	<0.1	<0.1	<0.1	
	11-Sep-00	yes	0.698	5.8	7.48	324	193					11	165	166	201	<5	11	<1		45	13	2	1	3.5	3.4	<0.1	<0.1	<0.1	<0.1	
	09-Dec-00	inaccessible																												
SP1-24	30-Mar-00	inaccessible																												
	22-Jun-00	dry/not found																												
	12-Sep-00	yes	0.612	6.9	8.08	399																								
	09-Dec-00	inaccessible																												
Surface Water																														

	Date	Monitored	Flow (gpm)	T (°C)	pH (S.U.)	Cond (µs/cm)	TDS (mg/l)	TSS (mg/l)	Set Sol (mg/l)	DO (mg/l)	O&G (mg/l)	acidity (mg/l)	($CaCO_3$) (mg/l)	Hardness (mg/l)	HCO_3 (mg/l)	CO_3 (mg/l)	SO_4 (mg/l)	Cl (mg/l)	OH (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions (meq/l)	Cations (meq/l)	Fe(d) (mg/l)	Fe(T) (mg/l)	Mn(d) (mg/l)	Mn(T) (mg/l)	depth (bgs)
Streams																														
Upper Flume Crandall Creek	30-Mar-00	inaccessible																												
	20-Jun-00	yes	950	8.7	8.31	479	304	<5	<0.4	8.68	<2	<10	225	259	270	<5	45	2		59	27	3	<1	5.4	5.3	<0.1	<0.1	<0.1	<0.1	
	14-Sep-00	yes	321	9.2	8.06	557	325	<5	<0.4	10.18	<2	12	230	290	281	<5	76	3		60	34	5	2	6.3	6.1	<0.1	<0.1	<0.1	<0.1	
	09-Dec-00	yes	350	-0.3	8.26	590	333	<5	<0.4	11.08	3	20	265	313	324	<5	73	2		66	36	4	1	6.9	6.5	<0.1	<0.1	<0.1	<0.1	
Lower Flume Crandall Creek	30-Mar-00	inaccessible																												
	20-Jun-00	yes	1135	10.6	8.33	539	333	<5	<0.4	9.51	<2	<10	231	273	275	<5	56	8		60	30	7	2	5.9	5.8	<0.1	<0.1	<0.1	<0.1	
	14-Sep-00	yes	1210	11.2	7.99	708	413	<5	<0.4	9.42	<2	41	282	310	344	<5	93	12		63	37	30	6	7.9	7.6	<0.1	<0.1	<0.1	<0.1	
	09-Dec-00	yes	1135	9	8.15	717	401	<5	<0.4	7.22	3	29	283	310	345	<5	95	12		63	37	30	6	8	7.6	<0.1	<0.1	<0.1	<0.1	
Horse Canyon Creek	30-Mar-00	inaccessible																												
	20-Jun-00	yes	235	15.9	8.33	522	321	7	<0.4	9.03	<2	<10	249	272	303	<5	43	3		56	32	5	1	5.9	5.7	<0.1	0.1	<0.1	<0.1	
	14-Sep-00	yes	80	11.6	8.21	675	422	5	<0.4	10.56	<2	40	273	341	308	12	108	5		64	44	13	3	7.8	7.5	<0.1	<0.1	<0.1	<0.1	
	08-Dec-00	yes	75	0	8.4	622	399	9	<0.4	10.2	3	26	278	340	339	<5	96	4		67	42	10	2	7.7	7.3	<0.1	0.2	<0.1	<0.1	
Blind Canyon Creek	30-Mar-00	inaccessible																												
	20-Jun-00	yes	173	13.9	8.61	482	290	13	<0.4	9.73	<2	<10	242	259	289	<5	29	2		51	32	2	1	5.4	5.3	<0.1	0.1	<0.1	<0.1	
	14-Sep-00	yes	54	10.1	8.27	514	303	14	<0.4	10.94	<2	26	256	275	312	<5	25	3		49	37	4	2	5.7	5.7	<0.1	0.1	<0.1	<0.1	
	08-Dec-00	yes	10	-0.4	8.4	511	337	21	<0.4	10.58	4	33	292	296	356	<5	30	3		56	38	4	1	6.5	6.1	<0.1	0.3	<0.1	<0.1	
Indian Creek	30-Mar-00	inaccessible																												
	21-Jun-00	yes	1250	8	8.49	466	281	8	<0.4	9.88	<2	<10	261	253	318	<5	5	1		70	19	2	<1	5.3	5.1	<0.1	0.1	<0.1	<0.1	
	13-Sep-00	yes	634	13.8	8.01	390	238	5	<0.4	8.22	<2	24	239	232	291	<5	7	2		60	20	3	<1	5	4.8	<0.1	0.1	<0.1	<0.1	
	09-Dec-00	inaccessible																												
UPDES																														
001 -- Sed Pond Discharge		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
		yes																												
002 -- Mine Water Discharge	24-Jan-00	yes	760	11.5	8.0	666	405	<5		5.7																<0.1	<0.1			
	14-Feb-00	yes	654	11.5	7.8	675	402	<5		4.1																<0.1	0.1			
	30-Mar-00	yes	665	11.5	7.4	681	395	<5			<2															<0.1	<0.1			
	25-Apr-00	yes	703	11.7	8.2	704	431	<5																		<0.1	<0.1			
	30-May-00	yes	655	13.3	8.1	714	456	6	<0.4	5.1	<2						114					34	7							
	27-Jun-00	yes	772	11.9	7.1	715	420	<5		8.8																<0.1	<0.1			
	31-Jul-00	yes	766	16.6	7.7	731	457	<5		7.8	<2															<0.1	<0.1			
	29-Aug-00	yes	687	16.9	6.9	724	443	<5		6.8	<2															<0.1	0.2			
	27-Sep-00	yes	623	11.9	7.1	715	407	<5		8.8	<2															<0.1	<0.1			
	25-Oct-00	yes	705	12.8	7.7	676	413	6		10.2																<0.1	<0.1			
	27-Nov-00	yes	675	12.1	7.5	675	401	<5		9.1																<0.1	<0.1			
	07-Dec-00	yes	754	12.1	7.3	691	442	<5		7.8	4															<0.1	<0.1	<0.1		
In-Mine Monitoring Wells																														
DH-1	30-Mar-00	yes	dry																											
	27-Jun-00	yes	dry																											
	27-Sep-00	yes	dry																											
	14-Dec-00	yes	dry																											
DH-2	30-Mar-00	Inaccessible																												
	27-Jun-00	Inaccessible																												
	27-Sep-00	Inaccessible																												
	14-Dec-00	Inaccessible																												
MW-1	30-Mar-00	yes	0.30	13.4	8.3	491	298					<10	242	125	297	<5	18	12		22	17	74	4	5.6	5.8	<0.1	<0.1		<0.1	
	27-Jun-00	yes	0.67	14.2	7.3	494	260			3.2		<10	246	109	300	<5	18	11		19	15	71	4	5.6	5.4	<0.1	<0.1	<0.1	<0.1	
	27-Sep-00	yes	0.7	14.7	7.3	494	266			3.2		<10	242	109	295	<5	19	13		19	15	73	4	5.6	5.5	<0.1	0.4	<0.1	<0.1	
	14-Dec-00	yes	0.5	13.4	8	545	285			3		23	249	103	303	<5	16	10		18	14	68	4	5.6	5.1	<0.1	<0.1	<0.1	<0.1	
MW-2	30-Mar-00	flooded																												
	27-Jun-00	flooded																												
	27-Sep-00	flooded																												
	14-Dec-00	flooded																												

	Date	Monitored	Flow (gpm)	T (°C)	pH (S.U.)	Cond (µs/cm)	TDS (mg/l)	TSS (mg/l)	Set Sol (mg/l)	DO (mg/l)	O&G (mg/l)	acidity (mg/l)	($CaCO_3$) (mg/l)	Hardness (mg/l)	HCO_3 (mg/l)	CO_3 (mg/l)	SO_4 (mg/l)	Cl (mg/l)	OH (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions (meq/l)	Cations (meq/l)	Fe(d) (mg/l)	Fe(T) (mg/l)	Mn(d) (mg/l)	Mn(T) (mg/l)	depth (bgs)
MW-3	30-Mar-00	Inaccessible																												
	27-Jun-00	Inaccessible																												
	27-Sep-00	Inaccessible																												
	14-Dec-00	Inaccessible																												
MW-4	30-Mar-00	Inaccessible																												
	27-Jun-00	Inaccessible																												
	27-Sep-00	Inaccessible																												
	14-Dec-00	Inaccessible																												
MW-5	30-Mar-00	destroyed																												
	27-Jun-00	destroyed																												
	27-Sep-00	destroyed																												
	14-Dec-00	destroyed																												
MW-6	27-Jun-00	yes		13.8	12.2	6190	1223			3.9		<10	1489	1363	<5	40	18	8		546	<1	25	7	1.9	28.5	<0.1	0.1	<0.1	<0.1	0
	27-Sep-00	yes		13.8	12.27	6190	866			3.9		<10	983	856	31	<5	36	6		343	<1	22	6	1.4	18.2	<0.1	0.1	<0.1	<0.1	0
	14-Dec-00	yes		13	12.5	4090	808			3.9		<10	295	674	<5	38	16	7		270	<1	21	6	1.8	14.5	<0.1	<0.1	<0.1	<0.1	0
MW-6a	30-Mar-00	yes		12.5	7.9	526	303					<10	278	289	340	<5	34	3		53	38	13	4	6.4	6.4	<0.1	0.2		<0.1	2
	27-Jun-00	yes		13.3	8.00	480	263			8.2		<10	250	248	305	<5	28	4		48	31	8	3	5.7	5.4	<0.1	3.6	<0.1	0.1	0.8
	27-Sep-00	yes		13.3	8.00	480	265			8.2		21	241	247	294	<5	34	5		46	32	9	4	5.7	5.4	<0.1	0.6	<0.1	<0.1	0.8
	14-Dec-00	yes		12.9	8.2	489	270			3.9		21	246	236	300	<5	14	2		45	30	9	3	5.3	5.2	<0.1	0.6	<0.1	<0.1	1.5
MW-7	30-Mar-00	yes	0.11	10.5	7.5	503	200					<10	257	301	313	<5	34	4		63	35	4	2	6.0	6.2	<0.1	1.3		<0.1	
	27-Jun-00	yes	0.12	11	7.6	500	263			4.3		<10	263	277	321	<5	32	3		58	32	4	2	6	5.8	<0.1	0.2	<0.1	<0.1	
	27-Sep-00	yes	0.1	11	7.6	500	283			4.3		47	257	274	313	<5	34	4		57	32	5	2	6	5.7	<0.1	3.1	<0.1	<0.1	
	14-Dec-00	yes	0.1	11.1	7.8	512	288			2.5		26	259	263	316	<5	29	3		56	30	4	2	5.9	5.5	<0.1	0.2	<0.1	<0.1	
MW-8																														
	30-Mar-00	yes		13	7.5	519	310					<10	249	340	304	<5	41	3		67	42	13	4	5.9	7.5	<0.1	1.3		<0.1	2.2
	27-Jun-00	yes		13.6	7.1	515	275			3.7		<10	262	256	320	<5	38	3		48	33	12	4	6.1	5.7	<0.1	0.7	<0.1	<0.1	2.2
	27-Sep-00	yes		13.6	7.1	515	257			3.7		29	253	253	309	<5	40	3		47	33	13	4	6	5.7	<0.1	0.6	<0.1	<0.1	2.2
	14-Dec-00	yes		13.3	8	518	275			3.7		19	256	247	312	<5	34	2		46	32	12	4	5.9	5.6	<0.1	0.8	<0.1	<0.1	2.1

Table 2 Solute compositions and discharge rates of streams, springs and wells in the GENWAL permit area.

summer's table revised for annual report 2000.xls 31 Mar 00

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Streams																		
L. Flume (Crandall Creek)	11-Mar-88	76.3	3.00	8.24	743	384	64.0	36.5	10.6	3.3	289	0	91.0	5.8		<0.05	<0.01	
	31-May-88	350.1	3.60	8.14	528	252	64.0	21.9	4.7	2.8	269	0	18.0	4.1		<0.05	0.02	
	30-Sep-88	58.3	9.90	7.68	483	256	60.0	25.5	6.9	1.6	267	16	38.1	5.6		<0.05	<0.01	
	02-Nov-88	62.8	6.80	8.40	670	330	60.0	42.6	8.6	2.5	298	0	73.3	4.2	<0.05		<0.01	
	31-Mar-89					298	56.5	29.4	5.8	1.4	259	7	0.0	20.0		0.03	<0.01	
	22-Jun-89					198	56.3	23.1	3.9	0.7	248	<1	28.0	25.0	<0.02	<0.02	<0.01	
	28-Sep-89					32	57.6	32.2	5.3	0.4	314	<1	25.0	10.0	<0.02	<0.02	<0.01	
	18-Dec-89					326	68.7	29.2	5.4	0.1	294	<1	40.0	10.0	0.06		<0.01	
	30-Jan-90					291	60.7	28.4	1.0	0.4	292	<1	33.0	10.0	<0.02	<0.02	<0.01	
	18-Jan-90	4.5	3.10	7.20	450													
	30-Jan-90					291	60.7	28.4	1.0	0.4	292	<1	33.0	10.0	<0.02	<0.02	<0.01	
	13-Apr-90					225	66.0	28.0	3.3	4.6	274	<1	35.0	20.0		<0.02	0.02	
	14-Apr-90	430.9	3.20	7.20	448													
	23-Jul-90	502.7	3.30	7.20	448													
	24-Jul-90					254	61.8	21.6	3.4	0.0	270	<1	28.0	10.0		<0.02	0.02	
	11-Oct-90	103.2	4.80	7.60	300													
	12-Oct-90					189	70.5	30.5	5.6	0.0	363	<1	22.0	5.0	<0.02	<0.02	<0.01	
	12-Jan-91	148.1	2.80	8.46	300													
	14-Jan-91					323	86.7	39.7	9.3	0.6	346	<1	43.0	70.0	0.03	0.03	0.39	
	04-Apr-91	148.1	1.40	8.00	330	318	69.0	28.1	5.0	0.5	252	<1	47.0	15.0	<0.02	<0.02	<0.01	
	21-Jul-91	538.6	4.90	7.20	500													
	11-Oct-91	237.8	7.00	8.26	600	298	74.6	24.9	4.1	0.0	270	<1	52.0	15.0		0.09		
	08-Mar-92	44.9	3.33	7.60	400	564	99.7	28.9	75.1	1.0	326	0	58.0	125.0	0.00	0.00	0.00	
	18-Jun-92	116.7	17.33	8.24	513	265	71.5	19.0	3.1	0.0	228	5	30.0	20.0	0.00		0.00	
	30-Sep-92	134.6	16.1	8.2	550	357	91.2	24.1	3.1	0.0	406	0	50.0	10.0	0.44		0.06	
	16-Dec-92	224.4	0.6	7.9	620	254	93.4	35.5	10.3	1.3	301	0	100.0	15.0	0.10	0.05	0.00	
	04-Mar-93	234.0	1.0	7.8	490	615	68.8	27.9	94.1	0.0	311	0	60.0	164.0	0.12	0.00	0.00	
	03-Jun-93	6500.0	12.0	8.1	300	244	57.8	20.2	4.8	0.6	248	0	19.0	4.9	0.28	<0.5	<0.03	
	01-Jul-93	290.0	10.0	8.1	540	249	57.7	21.3	5.7	0.1	253	0	24.0	5.3	<0.05	0.05	<0.03	
	25-Oct-93	380.0	7.0	7.2	440	368	59.0	32.0	9.0	<2	281	<1	50.0	28.0	<0.2	<0.2	0.10	
	09-Feb-94	220.0	29.4	7.3	506	265	46.0	35.0	4.5	1.7	296	0	29.0	4.1	0.00		0.00	
	15-Jul-94	30.0	57.2	7.6	610	301	46.0	30.0	21.0	1.9	246	0	46.0	31.0	0.09	0.21	< 02	
	06-Sep-94	40.0	46.4	7.6	848	308	42.0	31.0	25.0	2.4	241	0	44.0	40.0	0.13	< .05	< .02	
	22-Nov-94	125.0	28.4	6.7		450	65.0	40.0	38.0	<5	290	0	50.0	68.0	< .2	< .2	< .2	
	10-Mar-95	184.0	0.0	7.9	480	700	70.0	55.0	113.0	3.0	260	20	75.0	230.0	0.10	<0.1	<0.1	
	16-May-95	535.0	7.0	8.2	380	310	60.0	31.0	10.0	2.0	240	240	42.0	15.0	0.40	<0.1	<0.1	
	10-Aug-95	636.0	12.0	8.4	534	290	55.0	25.0	10.0	1.0	249	14	34.0	14.0	0.1<	<0.1	<0.1	
	28-Nov-95	71.6	10.0	8.8	546	390	61.0	37.0	19.0	4.0	240	15	82.0	21.0	0.1<	<0.1	<0.1	
	26-Mar-96	150.0	1.0	8.1	640	328	57.0	35.0	6.0	1.1	350	<2	28.0	10.0	0.18	< .03		< .04
	26-Jun-96					266	56.0	24.0	8.0	2.0	254	18	29.0	11.0	<.1	<.1		<0.1
	16-Aug-96	15.0	15.0	7.3	605	327	53.0	37.0	17.0	4.0	246	16	45.0	17.0	<.1	<.2		<0.1
	24-Oct-96	2.5	0.0	8.3	686	377	61.0	41.0	17.0	3.0	318	<5	62.0	20.0	<.1	<.1		<0.1
	25-Mar-97	11.3	10.0	8.7	670	422	61.0	37.5	14.8	2.0	300	<1	62.1	23.0	<0.02	0.03		<0.005
	05-May-97	224.4	6.0	8.6	724	330	52.2	31.8	8.7	1.7	267	<1	44.9	9.5	0.07	<0.02		<0.005
	20-Aug-97	673.2	8.0	8.0	620	370	68.0	36.0	15.0	4.0	353	<5	59.0	9.0	0.10	<0.1	<0.1	
	07-Oct-97	507.1	7.0	8.0	569	370	71.0	38.0	18.0	4.0	368	<5	100.0	7.6	0.30	<0.1	<0.1	
	08-Sep-98			8.2	655	405	71.0	37.0	16.0	4.0	366	<5	66.0	10.0	0.50	<0.1	<0.1	
	04-Mar-99	399.0	3.0	8.2	454	435	79.0	43.0	19.0	2.0	334	<5	101.0	31.0	<0.1	<0.1	<0.1	
	10-Jun-99	4406.0				292	83.0	29.0	7.0	2.0	294	<5	33.0	4.0	0.1	<0.1	<0.1	
	15-Sep-99	502.0	7.3	8.6	500	410	71.1	38.7	10.5	2.0	318	<1	70.0	12.0	0.12	<0.02	0.01	
	04-Nov-99	336.0	10.0	8.5	592	450	50.7	46.5	31.2	5.9	325	<1	88.0	29.0	0.08	<0.02	<0.01	
	20-Jun-00	1135	10.6	8.33	539	333	60	30	7	2	275	<5	56	8	<0.1	<0.1	<0.1	<0.1
	14-Sep-00	1210	11.2	7.99	708	413	63	37	30	6	344	<5	93	12	<0.1	<0.1	<0.1	<0.1
	09-Dec-00	1135	9	8.15	717	401	63	37	30	6	345	<5	95	12	<0.1	<0.1	<0.1	<0.1
U. Flume (Crandall Creek)	11-Mar-88	112.2	1.6	8.6	755	296	58.0	17.0	4.3	1.6	284	0	35.1	4.4		<0.05	0.01	
	31-May-88	561.0	3.5	8.2	463	276	62.0	21.9	4.8	5.0	264	0	16.2	5.7		<0.05	0.01	
	30-Sep-88	67.3	9.8	7.7	430	232	56.0	28.0	5.3	1.2	235	24	27.1	8.0		<0.05		<0.01
	02-Nov-88	80.8	6.7	8.4	478	252	50.0	30.4	4.1	1.1	246	0	32.2	3.4	<0.05		<0.01	
	31-Mar-89					198	53.3	30.7	3.8	0.9	272	25	30.0	15.0		<0.02	<0.01	
	22-Jun-89					198	50.5	22.1	2.8	1.1	228	<1	25.0	5.0	<0.02	<0.02	<0.01	
	28-Sep-89					265	52.9	27.6	3.7	0.1	273	<1	20.0	10.0	<0.02	<0.02	<0.01	
	18-Dec-89					289	60.2	24.2	1.2	0.0	224	<1	45.0	15.0	<0.02		<0.01	
	29-Jan-90					282	67.7	26.3	0.9	0.2	266	<1	50.0	10.0		<0.02	<0.01	
	18-Jan-90	3.5	2.9	7.0	400													
	30-Jan-90					282	67.7	26.3	0.9	0.2	266	<1	50.0	10.0		<0.02	<0.01	
	13-Apr-90					185	89.9	24.6	4.9	4.5	325	<1	40.0	20.0		<0.02		<0.01
	14-Apr-90	430.9	3.0	7.0	400													
	23-Jul-90	430.9	3.2	7.1	410													
	24-Jul-90					247	62.2	21.3	2.8	0.0	251	<1	32.0	15.0		<0.02	0.03	
	11-Oct-90	170.5	5.2	7.5	300													
	12-Oct-90					261	63.4	22.4	2.0	0.0	279	<1	25.0	10.0	<0.02	<0.02	0.02	
	12-Jan-91		3.2	8.5	300													
	14-Jan-91					300	76.6	33.1	4.9	0.1	323	<1	27.0	45.0	0.09	0.11	0.24	
	04-Apr-91	368.0	1.4	8.0	400	290	67.9	24.8	2.9	0.0	252	<1	33.0	25.0	<0.02	<0.02	<0.01	
	21-Jul-91	852.7	5.1	7.0	500	234	56.5	22.9	2.8	1.8	261	<1	23.0	5.0	<0.02	<0.02	0.05	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	11-Oct-91	273.8	8.0	8.5	600	262	67.7	25.9	3.0	0.0	263	<1	36.0	10.0		0.05		
	08-Mar-92	67.3	1.1	7.5	300	320	72.2	22.2	3.2	0.0	274	0	32.0	20.0	0.00		0.00	
	18-Jun-92	161.6	16.8	8.2	517	250	53.5	26.8	1.4	0.0	217	5	27.0	10.0	0.00		0.00	
	30-Sep-92	94.3	13.3	8.2	600	288	63.9	23.7	1.3	0.0	224	0	28.0	20.0	0.13		0.00	
	04-Mar-93	68.7	0.8	7.9	440	611	56.7	25.7	3.2	1.4	306	0	60.0	3.3	1.20	0.14	0.00	
	03-Jun-93	5386.0	3.0	8.2	300	245	60.3	18.0	3.0	0.2	244	0	18.0	3.9	0.34	<0.05	<0.03	
	01-Jul-93	129.0	9.4	8.1	427	231	54.8	20.0	23.1	<0.10	247	0	26.0	2.3	<0.05	<0.05	<0.03	
	25-Oct-93	147.0	6.0	7.9	440	297	56.0	28.0	4.0	<2.0	194	<1	28.0	6.0	<0.20	<0.20	<0.10	
	09-Feb-94	168.0	32.0	7.2		409	55.0	44.0	39.0	1.7	312	3						
	15-Jul-94	70.0	55.4	7.6	430	228	44.0	26.0	4.1	1.1	227	0						
	06-Sep-94	50.0	41.0	7.6	613	225	41.0	25.0	5.0	<10	241	0						
	22-Nov-94	125.0	28.4	6.8		280	58.0	30.0	<5	<5	260	<1						
	10-Mar-95	180.0	0.6	7.9	450	280	55.0	30.0	6.0	2.0	245	10	25.0	6.0	<0.1	<0.1	<0.1	
	16-May-95	522.0	8.0	8.0	490	260	60.0	31.0	5.0	1.0	250	20	38.0	10.0	0.30	<0.1	<0.1	
	10-Aug-95	254.0	11.0	8.9	467	230	56.0	23.0	5.0	<1	248	13	27.0	55.0	<0.1	<0.1	<0.1	
	28-Nov-95	47.7	6.0	9.2	432	290	62.0	27.0	5.0	<1	250	15	31.0	20.0	<0.1	<0.1	<0.1	
	26-Mar-96	150.0	1.0	8.0	580	322	61.0	30.0	4.0	<.3	314	<2	38.0	5.0	0.19	<.03		<.04
	26-Jun-96					266	52.0	21.0	4.0	<1	240	13	24.0	4.0	<0.1	<0.1		<0.1
	16-Aug-96	15.0	14.0	8.3	499	261	55.0	29.0	5.0	<1	232	25	29.0	7.0	<0.1	<0.1		<0.1
	24-Oct-96	2.0	3.0	8.2	564	312	60.0	34.0	6.0	1.0	326	<5	38.0	7.0	<0.1	<0.1		<0.1
	25-Mar-97	11.2	3.0	8.4	730	370	59.9	35.0	4.7	1.6	293	<1	50.6	3.9	<0.005		<0.005	
	05-May-97	47.0	6.0	9.0	656	314	59.9	35.0	4.7	1.6	293	<1	50.6	3.9	<0.02	<0.02	<0.005	
	20-Aug-97	673.2	8.0	7.7	502	310		31.0	5.0	1.0	301	<5	48.0	4.0	270.00	<0.1		<0.1
	01-Oct-97	507.1	6.0	7.9	641	320	68.0	32.0	5.0	<1	352	<5	48.0	4.0	<0.1	<0.1	<0.1	
	08-Sep-98			8.4	548	337	70.0	33.0	4.0	1.0	321	<5	50.0	3.0	0.60	<0.1	<0.1	
	04-Mar-99	367.0	3.0	8.1	380	344	71.0	37.0	5.0	2.0	356	<5	79.0	4.0	<0.1	<0.1	<0.1	
	10-Jun-99	4173.0				256	64.0	21.0	3.0	<1	272	<5	21.0	1.0	0.1	<0.1	<0.1	
	15-Sep-99	467.0	7.2	8.0	480	370	62.1	35.2	4.4	1.4	283	<1	57.0	7.0	0.09	<0.02	0.01	
	04-Nov-99	305.0	12.0	7.9	479	340	61.0	40.6	4.2	1.7	313	<1	63.0	7.0	0.05	<0.02	<0.01	
	20-Jun-00	950	8.7	8.31	479	304	59	27	3	<1	270	<5	45	2	<0.1	<0.1	<0.1	<0.1
	14-Sep-00	321	9.2	8.06	557	325	60	34	5	2	281	<5	76	3	<0.1	<0.1	<0.1	<0.1
	09-Dec-00	350	-0.3	8.26	590	333	66	36	4	1	324	<5	73	2	<0.1	<0.1	<0.1	<0.1
Blind cyn flume	12-Jan-91		4.2	8.6	300													
	14-Jan-91					293	58.2	40.7	4.6	0.2	325	<1	23.0	55.0	0.38	0.34	0.26	
	04-Apr-91		0.9	8.5	200	257	52.3	21.0	1.3	1.6	207	<1	23.0	20.0	0.05	<0.02	<0.01	
	21-Jul-91	368.0	10.5		600	253	56.6	26.9	11.9	2.2	279	<1	9.0	10.0	<0.02	0.06	0.17	
	11-Oct-91	67.3	7.0	8.5	600	279	71.4	22.8	3.9	0.0	318	<1	10.0	15.0		0.11		
	08-Mar-92	Frozen	0.0	7.4	400	315	85.4	25.9	3.1	0.0	312	0	22.0	20.0		0.00	0.05	
	18-Jun-92	80.8	10.1	8.4	624	241	69.4	21.9	0.3	0.0	259	6	7.0	30.0		0.00	0.00	
	30-Sep-92	0.0																
	16-Dec-92	0.0																
	03-Jun-93	1.0	4.5	8.4	300	234	52.5	19.3	1.8	<0.10	246	0	11.0	3.1	0.53	0.06	<0.03	
	01-Jul-93	1.0	10.1	7.8	517	245	49.2	21.6	21.2	<0.10	257	0	18.0	3.6	1.35	0.06	<0.03	
	25-Oct-93	0.0																
	15-Jul-94	dry																
	06-Sep-94	dry																
	16-May-95	147.0	9.0	8.4	610	300	61.0	33.0	4.0	2.0	265	25	24.0	5.0	1.00	<0.01	<0.1	
	09-Aug-95	0.0																
	28-Nov-95	0.0																
	05-May-97	0.0																
	15-Aug-97	0.0																
	09-Oct-97	0.0																
	08-Sep-98			8.4	497	296	50.0	37.0	4.0	1.0	281	13	24.0	4.0	0.10	<0.01	<0.1	
	15-Sep-99	26.0	10.0	8.1	580	450	54.1	61.2	10.2	2.0	378	9	56.0	11.0	0.04	<0.02	<0.01	
	04-Nov-99	1.0	11.0	8.2	517	380	51.2	64.1	9.6	2.0	389	<1	55.0	11.0	0.06	<0.02	<0.01	
	20-Jun-00	173	13.9	8.61	482	290	51	32	2	1	289	<5	29	2	0.1	<0.1	<0.1	<0.1
	14-Sep-00	54	10.1	8.27	514	303	49	37	4	2	312	<5	25	3	0.1	<0.1	<0.1	<0.1
	08-Dec-00	10	-0.4	8.4	511	337	56	38	4	1	356	<5	30	3	0.3	<0.1	<0.1	<0.1
Horse Canyon	22-Nov-94	6.0	-2.0	6.8		340	65.0	40.0	7.0	<5	290	0	50.0	8.0	2.00	<.2	<.2	
	16-May-95	387.0	9.0	8.3	440	290	58.0	30.0	5.0	1.0	240	30	21.0	1.0	0.70	<0.1	<0.1	
	09-Aug-95	72.0	10.0	8.1	765	280	50.0	33.0	7.0	1.0	274	17	25.0	6.0	0.20	<0.1	<0.1	
	28-Nov-95	15.9	9.0	8.9	436	280	62.0	35.0	6.0	1.0	280	25	30.0	7.0	0.10	<0.1	<0.1	
	26-Mar-96	280.0	1.0	7.9	340	128	57.0	35.0	6.0	1.1	350	<2	28.0	10.0	0.18	<.03		<.04
	13-Jun-96					203	45.0	16.0	3.0	<1	212	12	<1	5.0	<.1	<0.1		<0.1
	12-Aug-96	7.0	14.0	8.0	509	270	41.0	36.0	6.0	1.0	245	17	30.0	7.0	<.1	<0.1		<0.1
	24-Oct-96	3.0	0.0	8.9	584	301	55.0	37.0	6.0	1.0	331	<5	16.0	7.0	<.1	<0.1		<0.1
	25-Mar-97	12.6	3.0	8.6	789	410	59.1	41.2	6.1	1.5	344	<1	34.8	6.1	0.23	<0.2		0.02
	05-May-97	64.0	5.0	8.7	608	284	57.1	30.4	4.3	1.0	279	4	21.6	3.9	0.21	<0.02		0.01
	20-Aug-97	60.0	9.0	7.8	438	270	45.0	27.0	4.0	<1	<10	<5	17.0	<0.1	<0.1		<0.1	
	07-Oct-97	179.5	7.0	8.0	473	260	63.0	30.0	4.0	<1	321	<5	16.0	5.0	0.20	<0.1	<0.1	
	08-Sep-98			8.5	557	346	62.0	38.0	7.0	2.0	276	31	43.0	5.0	0.50	<0.1	<0.1	
	10-Jun-99	337.0				229	57.0	22.0	3.0	<1	250	<5	13.0	2.0	0.2	<0.1	<0.1	
	15-Sep-99	860.0	7.0	8.1	400	410	61.5	42.3	8.6	1.9	320	<1	58.0	8.0	0.11	<0.02	0.02	
	04-Nov-99	352.0	10.0	8.3	502	400	55.4	46.4	8.4	2.2	353	<1	60.0	8.0	0.17	<0.02	0.01	
	20-Jun-00	235	15.9	8.33	522	321	56	32	5	1	303	<5	43	3	0.1	<0.1	<0.1	<0.1
	14-Sep-00	80	11.6	8.21	675	422	64	44	13	3	308	12	108	5	<0.1	<0.1	<0.1	<0.1
	08-Dec-00	75	0	8.4	622	399	67	42	10	2	339	<5	96	4	0.2	<0.1	<0.1	<0.1

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Indian Creek	26-Jun-96					290	67.0	19.0	3.0	<1	302	9	5.0	2.0		<.1	<.1	
	16-Aug-96	673.2	12.0	7.4	465	260	68.0	22.0	3.0	<1	293	9	4.0	4.0		<.1	<.1	
	24-Oct-96	1570.8	3.0	8.4	724	262	67.0	22.0	3.0	1.0	334	<5	6.0	5.0		<.1	<.1	
	01-Jul-97	4936.8	13.9	7.4	425	260	71.0	19.0	3.0	1.0	310		7.0	2.0		<0.1	<0.1	
	20-Aug-97	448.8	12.0	7.8	423	250	72.0	21.0	3.0	<1	<10	<5	5.0	2.0		<0.1	<0.1	
	10-Oct-97	3927.0	7.0	8.3	483	240	74.0	21.0	3.0	<1	318	<5	6.0	4.0	<0.1	<0.1	<0.1	
	25-Jun-98					235	72.0	19.0	3.0	<1	307	<5	6.0	5.0	0.30	<0.1	<0.1	
	26-Sep-98					321	62.0	22.0	7.0	3.0	211	<5	78.0	<1	11.00	<0.1	<0.1	
	21-May-99	1571.0	11.0	7.5	395													
	15-Sep-99	1282.0	4.0	8.2	380	290	73.5	21.9	2.9	1.1	320	7	11.0	<1	0.2	<0.02	0.03	
	04-Nov-99	3.5 ft	10.0	8.4	380	270	57.2	23.0	2.6	0.9	299	<1	12.0	6.0	0.12	<0.02	<0.01	
	21-Jun-00	1250	8	8.49	466	281	70	19	2	<1	318	<5	5	1	0.1	<0.1	<0.1	<0.1
	13-Sep-00	634	13.8	8.01	390	238	60	20	3	<1	291	<5	7	2	0.1	<0.1	<0.1	<0.1
Springs																		
SP1-33	07-Nov-95	1.8	9.0	7.5	479	330	71.0	23.0	5.0	1.0	335	<5	17.0	6.0	0.30	<0.1	<0.1	
	21-Jun-96					298	70.0	23.0	5.0	<1	321	<5	14.0	4.0		<0.1		<0.1
	16-Aug-96	0.5	7.0	7.8	480	295	72.0	23.0	4.0	1.0	316	<5	17.0	7.0		<0.1		<0.1
	24-Oct-96	1.0	5.0	8.1	733													
	20-Aug-97	3.0	7.0	8.2	502	290		22.0	5.0	<1	321	<5	17.0	3.0		<0.1		<0.1
	10-Oct-97	3.0	6.0	8.3	501	290	82.0	24.0	5.0	1.0	315	<5	18.0	5.0	3.60	<0.1	0.10	
	25-Jun-98			8.7	463	255	70.0	23.0	5.0	<1								
	21-May-99			8.1		215	68.0	17.0	5.0	2.0	245	<5	2.0	<1	0.5	<0.1	<0.1	
	15-Sep-99	1.2	4.0	7.6	550	350	85.8	25.1		2.3	366	<1	11.0	7.0	0.61	<0.02	0.09	
	04-Nov-99	1.5	13.0	7.5	395	290	65.7	24.4	3.9	1.1	329	<1	21.0	7.0	0.39	<0.02	<0.01	
	23-Jun-00	2.9	4.3	7.76	504	280	70	22	4	<1	318	<5	16	2	1.8	<0.1	<0.1	0.1
	13-Sep-00	2.47	5.5	7.92	492	267	66	22	5	1	311	<5	19	3	<0.1	<0.1	<0.1	<0.1
SP1-47	23-Jul-90	no flow																
	19-Aug-90	no flow																
	26-Sep-90	no flow																
	18-Jun-91	no flow																
	12-Jun-92					262	91.9	21.2	2.3	1.0	332	0	9.5	3.5		0.50	0.03	
	21-Jun-96					272	69.0	19.0	3.0	<1	307	<5	4.0	3.0	0.80	<0.1	<0.1	
	24-Oct-96	1.0	3.0	8.1	571	283	70.0	21.0	3.0	1.0	330	<5	4.0	5.0	1.40	<0.1	<0.1	
	30-Jun-97	3.0	18.0	7.1	427	290	76.0	17.0	2.0	1.0	310	<5	7.0	1.0	0.10	<0.1	<0.1	
	20-Aug-97	4.0	8.0	7.2	488	270	77.0	20.0	3.0	2.0	334	<5	17.0	5.0	0.30	<0.1	<0.1	
	10-Oct-97	3.0	9.0	8.3	509													
	25-Jun-98			7.7	473	256	75.0	18.0	3.0	<1	340	<5	6.0	4.0	0.60	<0.1	<0.1	
	08-Sep-98			8.2	532	330	79.0	24.0	3.0	4.0	330	<5	3.0	6.0	0.30	<0.1	<0.1	
	15-Sep-99	2.1	5.0	7.8	490	350	89.0	19.3	2.9	0.9	343	<1	9.0	6.0	0.89	<0.02	<0.1	
	04-Nov-99	1.8	12.0	8.2	372	270	76.4	21.1	2.0	0.8	306	<1	13.0	6.0	1.12	<0.02	0.04	
	21-Jun-00	3.68	25.3	8.08	384													
	13-Sep-00	7.32	15.4	8.16	445													
SP2-24	10-Oct-91	0.4	6.0	8.3	500	227	65.1	13.6	2.1	0.0	248	<1	5.0	10.0		0.06		
	18-Jun-92	2.0	5.4	7.7	265	186	63.0	6.0	1.0	0.0	190	0	5.0	20.0		0.02	0.06	
	29-Sep-92	0.5	7.8	7.9	300	208	94.5	20.4	0.5	0.0	204	0	80.0	20.0		0.00	0.10	
	03-Jun-93	8.0	2.0	8.0	200	184	37.9	86.0	0.3	3.7	272	0	4.0	3.1	0.29	<0.05	<0.03	
	01-Jul-93	7.8	12.0	7.8	200	186	41.1	9.9	1.4	6.7	158	0	4.0	3.6	<0.05	0.17	<0.03	
	25-Oct-93	1.5	6.0	7.8	290	219	48.0	15.0	1.0	3.0	179	<1	5.0	7.0	<0.2	<0.2	<0.1	
	02-Jun-94	5.0	42.8	8.2	280	214	40.3	9.9	1.2	8.5	168	5	<10	7.0	0.10	0.05	<0.1	
	12-Sep-94	3.0	41.0	7.5	402	184	52.0	15.0	1.3	5.5	195	0	7.3	7.8	<.05	<0.05	<0.02	
	09-Sep-95	dry																
	25-Jun-96					177	39.0	11.0	1.0	5.0	171	3	2.0	2.0		<0.1		<0.1
	12-Aug-96	1.0	10.0	7.9	380	217	50.0	16.0	2.0	1.0	207	13	10.0	4.0		<0.1		<0.1
	13-Oct-96	1.0	4.0	8.5	840	216	62.0	14.0	3.0	1.0	254	<5	11.0	3.0		<0.1		<0.1
	07-Aug-97	dry																
	09-Oct-97	dry																
	15-Sep-99	2.0	13.0	8.4	300	220	43.8	15.0	2.0	0.7	197	<1	10.0	6.0	1.7	<0.02	0.04	
	04-Nov-99	dry																
	22-Jun-00	2.05	4.5	8.07	331	304	49	13	<1	<1	212	<5	3	2	<0.1	<0.1	<0.1	<0.1
	12-Sep-00	0.233	8.4	8.13	320	190	44	14	2	<1	211	<5	3	1	0.5	<0.1	<0.1	<0.1
SP-47a	14-Jun-91	2.0	5.0	7.5	400													
	28-Jun-91						47.7	16.4	5.2	0.7	212	0	21.4	3.1		0.08	<0.01	
	21-Jul-91	0.0	6.4	4.2	400	214	54.5	14.6	4.3	3.0	208	<1	17.0	10.0		<0.02		
	24-Aug-91	0.2	8.0	7.2	400													
	27-Aug-91					231	60.1	18.1	4.4	2.3	235	<1	24.0	15.0	0.11		0.02	
	21-Sep-91	0.1	8.0	7.5	400													
	24-Sep-91					281	54.1	9.0	5.7	0.0	190	<1	18.0	10.0		0.13	0.01	
	18-Jun-92	<0.1	9.7	7.1	402	202	63.7	7.8	2.7	0.0	185	0	8.0	30.0		0.00	0.00	
	29-Sep-92	0.1	8.9	8.0	310	224	50.3	27.1	5.3	0.0	209	0	26.0	15.0		0.26	0.09	
	04-Jun-93	<1	8.1	8.0	475	302	49.0	16.8	4.3	1.1	219	0	3.0	25.9	0.28	0.08	<0.03	
	01-Jul-93	1.2	10.0	7.9	140	216	47.0	14.7	5.2	<1.1	241	0	27.0	5.7	0.14	0.06	<0.03	
	25-Oct-93	1.2	4.0	7.9	310	236	46.0	17.0	3.0	<2	154	<1	22.0	9.0	1.20	0.20	<0.1	
	02-Jun-94	<1	4.0	7.8	380	329	68.7	19.5	5.0	1.8	313	<1	53.5	8.0	0.03	<0.1	<0.1	
	12-Sep-94	dry																
	09-Aug-95	0.5	10.0	8.1	280	250	50.0	17.0	6.0	2.0	226	<5	24.0	8.0	<0.1	<0.1	<0.1	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	25-Jun-96					284	65.0	19.0	6.0	1.0	303	<5	18.0	8.0		<0.1		<0.1
	12-Aug-96	1.5	10.0	7.7	473	150	46.0	9.0	2.0	1.0	177	0	6.0	2.0		<0.1		<0.1
	13-Oct-96	0.3	8.0	7.5	250	193	48.0	15.0	6.0	2.0	209	<5	24.0	9.0		<0.1		<0.1
	07-Aug-97	3.0	8.3	7.5	349			16.0	5.0	2.0	212	<5	7.0	7.0		<0.1		
	09-Oct-97	<0.10	1.0	7.7	752													
	21-May-99	0.7	10.0	7.1	450	273	62.0	20.0	6.0	2.0	274	<5	23.0	6.0	0.3	<0.1	<0.1	
	15-Sep-99	2.5	10.0	7.5	410	240	52.5	18.0	7.3	2.1	215	<1	28.0	10.0	0.53	<0.02	0.01	
	04-Nov-99	dry																
	22-Jun-00	dry																
	11-Sep-00	dry																
SP1-19x	13-Oct-96	0.3	6.0	7.5	180	190	56.0	13.0	2.0	<1	235	<5	11.0	3.0	<0.1	<0.1	<0.1	
	07-Aug-97	dry																
SP1-22	09-Aug-95	1.0	7.0	8.5	211	220	46.0	11.0	3.0	7.5	177	5	5.0	6.0	<0.1	<0.1	<0.1	
	28-Nov-95	dry																
	07-Aug-97	1.1	8.0	7.5	293	200		14.0	2.0	6.0	186	<5	5.0	6.0		<0.1	<0.1	
	09-Oct-97	1.0	8.0	7.8	585													
	15-Sep-99	3.6	13.0	8.1	380	<10	48.8	16.9	2.3	0.8	217	<1	11.0	7.0	1.27	<0.02	0.03	
	04-Nov-99	3.0	9.6	7.3	245	220	53.0	18.4	1.4	2.8	220	<1	11.0	8.0	2.66	<0.02	0.07	
	22-Jun-00	3.53	5.1	8.24	304													
	12-Sep-00	0.545	7.5	8.24	347													
SP1-24	07-Aug-97	dry																
	09-Oct-97	dry																
	25-Sep-98					313	60.0	21.0	3.0	<1	289	<5	19.0	2.0	<0.1	<0.1	<0.1	
	15-Sep-99	dry																
	04-Nov-99	0.7	8.6	7.4	328	310	62.6	28.1	2.6	3.7	287	<1	23.0	8.0	0.04	<0.02	<0.01	
	12-Sep-00	0.612	6.9	8.08	399													
SP1-9	09-Aug-95	7.0	8.2	8.2		170	43.0	6.0	3.0	<1	171	<5	6.0	4.0	<0.1	<0.1	<0.1	
	07-Aug-97	3.0	5.6	7.9	171	180	46.0	13.0	2.0	1.0	193	<5	12.0	3.0		<0.1	<0.1	
	04-Oct-97	3.0	1.0	7.9	328	180	53.0	13.0	3.0	2.0	179	<5	27.0	2.0	1.30	<0.1	<0.1	
	25-Sep-98					167	44.0	6.0	1.0	<1	175	<5	2.0	<1	0.80	<0.1	<0.1	
	15-Sep-99	dry																
	04-Nov-99	dry																
	21-Jun-00	3.39	4.2	7.76	271	181	42	12	2	<1	183	<5	11	<1	<0.1	<0.1	<0.1	<0.1
	11-Sep-00	0.698	5.8	7.48	324	193	45	13	2	1	201	<5	11	<1	<0.1	<0.1	<0.1	<0.1
SP2-1	21-Jun-96					270	74.0	15.0	2.0	<1	307	<5	1.0	2.0		<0.1	<0.1	
	24-Oct-96	0.5	3.0	8.3	865	286	79.0	17.0	3.0	<1	359	<5	5.0	4.0		<0.1	<0.1	
	20-Aug-97	4.0	7.0	7.6	391	230		14.0	2.0	<1	264	<5	<5	3.0		<0.1		<0.1
	10-Oct-97	65.0	8.0	8.2	507													
	25-Jun-98			8.2	454	242	75.0	17.0	2.0	<1	326	<5	5.0	3.0	0.20	<0.1	<0.1	
	08-Sep-98			8.3	492	301	83.0	17.0	2.0	<1	345	<5	1.0	3.0	0.30	<0.1	<0.1	
	21-May-99	1.0	9.0	7.8	450	275	87.0	12.0	1.0	1.0	318	<5	2.0	<1	<0.1	<0.1	<0.1	
	15-Sep-99	0.4	8.0	7.4	460	310	81.8	18.2	1.5	0.4	325	<1	8.0	7.0	0.2	<0.02	0.03	
	04-Nov-99	1.0	11.0	8.0	392	290	71.4	18.7	1.9	0.5	290	<1	8.0	6.0	0.28	<0.02	0.01	
	22-Jun-00	13.6	5.1	7.84	488	311	79	19	1	<1	363	<5	2	<1	<0.1	<0.1	<0.1	<0.1
	13-Sep-00	1.37	6.7	7.61	529													
SP2-9	10-Oct-91	0.6	7.0	8.0	300	170	56.4	4.4	1.8	0.0	173	<1	4.0	10.0		0.16		
	09-Aug-95	dry																
	07-Aug-97	4.0	5.4	7.5	294	160		9.0	2.0	<1	172	<5	8.0	1.0		<0.1		
	09-Oct-97	<0.25	2.0	7.5	295	64	44.0	9.0	2.0	2.0	197	<5	10.0	2.0	0.70	<0.1	<0.1	
	25-Sep-98					198	50.0	9.0	2.0	<1	192	<5	6.0	<1	0.30	<0.1	<0.1	
	15-Sep-99	dry																
	04-Nov-99	0.5	10.0	7.1	272	180	58.8	10.3	0.8	5.8	190	<1	12.0	8.0	1.8	<0.02	0.03	
	21-Jun-00	5.9	3.9	7.96	277	170	45	8	<1	<1	177	<5	4	<1	0.3	<0.1	<0.1	<0.1
	11-Sep-00	0.903	5.8	7.55	299	181	46	9	2	<1	187	<5	6	<1	<0.1	<0.1	<0.1	<0.1
SP1-3	09-Aug-95	0.3	7.0	8.3	283		37.0	6.0	4.0	<1	152	<5	6.0	3.0	0.20	<0.1	<0.1	
	12-Aug-96	2.0	5.0	7.3	313	150	46.0	8.0	2.0	<1	180	0	7.0	3.0	<.1	<0.1	<0.1	
	24-Oct-96	1.2	6.0	7.5	150	290	48.0	8.0	2.0	<1	389	<5	<2	4.0	0.30		<0.1	
	07-Aug-97	11.5	4.8	7.9	271	140	41.0	7.0	3.0	<1	156	<5	8.0	3.0	1.30	<0.1	<0.1	
	09-Oct-97	1.0	3.0	8.1	367													
	21-May-99	3.0	10.0	6.8	400	261	73.0	14.0	1.0	<1	293	<5	10.0	<1	2.9	<0.1	0.1	
	15-Sep-99	0.5	13.0	7.6	290	220	43.6	9.1	4.0	0.7	174	<1	13.0	6.0	<0.05	<0.02	<0.01	
	04-Nov-99	0.3	8.0	7.3	245	180	50.7	9.3	2.5	0.8	179	<1	13.0	7.0	0.06	<0.02	<0.01	
	21-Jun-00	0.46	6.5	8.11	206													
	11-Sep-00	0.16	4	7.48	288													
SP-19	31-Jul-88	4.0	6.8	8.4	490	284	46.0	43.8	6.4	1.7	307	0	26.6	5.7	<0.05		<0.1	
	24-Aug-88	1.0		7.9	510	280	50.0	45.0	7.6	1.3	304	22	37.2	6.6	<0.05		<0.01	
	30-Sep-88	<1	8.0	8.0	550	284	50.0	43.8	7.2	1.3	285	16	37.4	6.3	<0.05		<0.01	
	09-Jun-89					336	47.0	33.9	4.1	1.2	271	<1	30.0	15.0		0.21	0.07	
	27-Jun-90	0.0	14.6		500													
	28-Jun-90					665	55.8	37.7	5.0	4.0	342	<1	6.0	15.0		<0.02	<0.01	
	23-Jul-90	6.0	15.0															
	24-Jul-90					553	58.1	23.1	3.3	0.4	254	<1	22.0	20.0		0.03	0.02	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	19-Aug-90	dry																
	19-Sep-90	dry																
	18-Jun-91	60.0	6.5	7.9	600													
	19-Jun-91					305	46.6	41.8	4.8	1.0	315	<1	28.0	75.0		0.67	<0.01	
	21-Jul-91	0.2	10.4			434	75.0	67.6	9.5	3.2	458	<1	110.0	15.0		0.22	<0.01	
	24-Aug-91	0.2	15.0	7.5	800													
	27-Aug-91					320	62.5	37.9	6.7	1.8	325	<1	35.0	5.0	0.04		0.05	
	18-Jun-92	5.0	12.4	8.3	784	271	65.5	36.6	3.8	0.0	362	9	33.0	10.0		0.02	0.04	
	30-Sep-92	dry																
	01-Jul-93	N/A	9.0	8.1	360	349	47.0	47.9	9.8	<0.1	305	0	50.0	8.2	0.18	<0.05	<003	
	25-Oct-93	dry																
	02-Jun-94	20.0	39.2	8.2	320	193	41.9	13.1	1.0	0.5	218	7	<10	<2	0.02	<0.01	<0.01	
	13-Sep-94	0.0																
	09-Aug-95	7.6	6.0	8.3	540	200	58.0	15.0	3.0	<1	213	9	6.0	2.0	0.40	<0.01	<0.01	
	28-Nov-95	dry																
	16-Aug-96	dry																
	24-Oct-96	dry																
	08-Sep-98			8.4	612	383	50.0	54.0	9.0	2.0	367	<5	43.0	8.0	<0.1	<0.1	<0.1	
SP1-19	15-Sep-99	2.5	12.0	8.2	500	330	71.2	23.3	2.7	0.7	264	<1	52.0	6.0	0.69	<0.02	<0.01	
	04-Nov-99	1.0	9.4	7.8	403	360	75.0	26.8	1.5	6.4	301	<1	68.0	9.0	0.19	<0.02	<0.01	
SP-22	31-Jul-88	7.0	6.0	8.5	500	296	44.0	45.0	8.0	2.4	316	0	26.4	7.0	<0.05		0.06	
	24-Aug-88	2.5		8.1	790	328	58.0	55.9	11.2	1.8	395	0	42.1	9.1	<0.05		<0.01	
	30-Sep-88	2.0	9.2	8.1		332	54.0	60.8	11.5	1.8	411	0	41.6	8.9	<0.05		<0.01	
	31-Oct-88	3.0	7.2	8.6	500	360	50.0	54.7	9.9	1.7	361	0		43.8	<0.05		<0.01	
	09-Jun-89					336	50.0	35.8	6.5	4.8	340	<1	33.0	10.0		0.16	<0.01	
	27-Jun-90	0.1	5.4		400													
	28-Jun-90					372	72.5	59.2	9.8	0.2	437	<1	50.0	20.0		<0.02	<0.01	
	23-Jul-90	0.4	5.7		400													
	24-Jul-90					293	58.7	28.1	3.6	0.3	299	<1	25.0	10.0		<0.02	0.02	
	19-Aug-90	no flow																
	27-Sep-90	no flow																
	18-Jun-91	2.0	10.9	7.9	800													
	19-Jun-91					355	56.4	51.2	7.1	1.3	367	<1	27.0	65.0		1.24	0.05	
	21-Jul-91	3.0	6.2		700	306	54.9	42.3	5.3	2.8	305	<1	27.0	5.0		<0.02	<0.01	
	24-Aug-91	no flow																
	21-Sep-91	no flow																
	18-Jun-92	0.3	17.2	8.1	830	353	60.1	46.4	9.6	0.0	390	0	10.0	15.0		0.06	0.09	
	30-Sep-92	dry																
	01-Jul-93	7.0	10.0	7.9	410	351	53.3	49.0	25.8	3.7	370	0	50.0	8.5	2.39	<0.05	0.07	
	25-Oct-93	dry																
	12-Sep-94	dry																
SP-30	18-Jan-90	no flow																
	14-Apr-90	no flow																
	23-Jul-90	no flow																
	09-Oct-90	no flow																
	12-Jan-91	no flow																
	04-Apr-91	no flow																
	21-Jul-91	no flow																
	10-Oct-91	no flow																
	23-Jun-93	dry																
	01-Jul-93	dry																
	25-Oct-93	dry																
	02-Jun-94	dry																
	12-Sep-94	dry																
	10-Mar-95	dry																
	16-May-95	dry																
	10-Aug-95	dry																
	28-Nov-95	dry																
	16-Aug-96	dry																
	24-Oct-96	dry																
	07-Aug-97	dry																
	09-Oct-97	dry																
	15-Sep-99	dry																
	04-Nov-99	dry																
	13-Sep-00	0.053	13.4	8.16	820													
	09-Dec-00	0.04	4.9	8	660													
SP-36	25-Sep-88	<1	11.7	7.1	890	504	52.0	98.5	20.1	4.8	537	40	83.4	25.9	<0.05		0.02	
	30-Sep-88	<1	12.5	7.0	914	512	52.0	98.5	20.0	4.8	532	18	85.3	24.9	<0.05		0.02	
	31-Oct-88	<1	7.1	8.5	995	520	48.0	87.6	17.1	2.5	523	0	73.0	11.8	<0.05		<0.01	
	23-Jun-89					463	50.9	85.6	16.7	1.9	444	33	120.0	15.0		0.34	<0.01	
	27-Jun-90	0.1	6.3		600													
	28-Jun-90					476	54.0	83.6	16.9	0.5	587	<1	25.0	20.0		<0.02	<0.01	
	19-Aug-90	no flow																
	26-Sep-90	no flow																
	18-Jun-91	0.7	13.6	8.0	600													
	19-Jun-91					482	53.8	79.4	15.0	2.9	459	<1	60.0	85.0		0.45	0.07	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	21-Jul-91	0.1	6.4		1100	505	41.2	82.4	15.2	2.6	485	<1	64.0	10.0		<0.02	<0.01	
	24-Aug-91	no flow																
	21-Sep-91	no flow																
	18-Jun-92	0.0	22.9	8.3	910	484	54.1	84.9	18.3	0.0	468	12	69.0	15.0		0.00	0.03	
	30-Sep-92	dry																
	23-Jun-93	dry																
	01-Jul-93	dry																
	25-Oct-93	dry																
	02-Jun-94	<1	6.0	8.1	840	432	68.2	42.1	8.7	2.1	638	<1	52.4	12.5		0.10	<.01	
	12-Sep-94	dry																
	10-Mar-95	dry																
	16-May-95	dry																
	09-Aug-95	dry																
	28-Nov-95	dry																
	10-Mar-96	dry																
	16-May-96	dry																
	09-Aug-96	dry																
	28-Nov-96	dry																
	07-Aug-97	dry																
	10-Jun-99	dry																
	15-Sep-99	dry																
	04-Nov-99	dry																
	13-Sep-00	0.023	16.4	7.72	684	364	60	46	8	<1	382	<5	43	7	<0.1	<0.1	<0.1	<0.1
	09-Dec-00	0.875	8.2	8.1	613	345	59	44	7	1	374	<5	46	6	<0.1	<0.1	<0.1	<0.1
SP-58	31-Jul-88	3.0	5.2	7.9	490	272	68.0	26.8	4.5	1.0	293	0	22.4	4.8		<0.05	<0.01	
	25-Aug-88	7.0	8.9	6.8	545	264	70.0	28.0	5.0	1.1	293	0	23.5	3.8	<0.05		<0.01	
	28-Sep-88	6.0	8.8	7.1	590	248	68.0	29.2	4.9	1.1	296	0	20.8	3.9	<0.05		<0.01	
	31-Oct-88	6.0	5.2	8.0	597	292	68.0	26.8	3.8	1.2	294	0	28.6	3.1	<0.05		<0.01	
	22-Jun-89					390	53.7	24.9	3.6	0.5	265	<1	28.0	15.0		0.08	<0.01	
	31-Aug-89					300	69.9	26.0	31.0	0.8	344	<1	68.0	5.0		0.03	<0.01	
	28-Sep-89					313	59.8	26.2	3.4	0.2	290	<1	20.0	10.0	<0.02		<0.01	
	31-Oct-89					266	58.1	24.8	3.4	0.9	284	<1	200.0	10.0		<0.02	<0.01	
	26-Jun-90	2.0	16.7		500													
	26-Jun-90					254	89.5	25.9	2.1	0.1	330	<1	50.0	15.0		<0.02	<0.01	
	23-Jul-90	2.5	18.9		500													
	24-Jul-90					258	64.0	17.0	2.6	0.1	256	<1	15.0	20.0		<0.02	0.02	
	19-Aug-90	6.0	8.3		400	275	75.2	20.0	9.6	0.1	303	<1	15.0	30.0	<0.02		<0.01	
	27-Sep-90					356	79.1	22.4	7.4	0.5	321	<1	27.0	20.0		<0.02	<0.02	
	26-Sep-90	5.5	8.7		400													
	18-Jun-91	60.0	4.5	7.5	500													
	19-Jun-91					270	58.2	25.7	3.0	1.0	290	<1	25.0	25.0		0.57	0.01	
	19-Jul-91					289	67.9	24.8	3.7	3.2	312	<1	24.0	10.0		<0.02	0.31	
	21-Jul-91	15.0	6.0	7.6	570													
	24-Aug-91	12.0	6.0	7.2	600													
	27-Aug-91					292	80.4	24.2	0.5	0.0	295	<1	26.0	15.0	<0.02		0.03	
	21-Sep-91	10.0	7.0	7.2	600													
	24-Sep-91					281	81.3	23.4	3.4	0.0	277	<1	28.0	20.0		0.02	<0.01	
	18-Jun-92	10.0	10.0	7.2	694	259	81.0	19.7	1.1	0.0	317	0	5.0	5.0		0.00	0.07	
	31-Aug-92	9.7	13.3	8.0	740	275	66.8	19.1	3.7	0.0	275	0	27.0	15.0		0.00	0.00	
	04-Dec-92	N/A																
	03-Jun-93	1100.0	3.0	8.5	300	240	65.4	18.6	3.6	0.1	272	0	16.0	2.7	0.31	<0.05	<0.03	
	01-Jul-93	62.0	9.0	8.0	340	237	56.5	15.2	3.3	1.0	242	0	21.0	3.0	0.05	0.05	0.03	
	25-Oct-93	87.0	6.0	7.9	410	260	55.0	32.0	3.0	<2	265	<1	26.0	5.0	<0.2	<0.2	0.20	
	09-Jun-94	15.0	41.0	7.9	450	232	60.5	22.8	3.2	1.0	306	1	28.0	<2	0.02	<.01	<.01	
	12-Sep-94	5.0	41.0	5.0	571	266	64.0	24.0	3.9	1.2	263	6	34.0	3.8	<.05	<.05	<.02	
	16-May-95	3.8	7.0	7.8	340	280	61.0	29.0	5.0	1.0	240	20	40.0	5.0	0.30	<0.1	<0.1	
	10-Aug-95	125.9	9.0	8.4	368	250	58.0	22.0	5.0	<1	244	14	29.0	4.0	<0.1	<0.1	<0.1	
	28-Nov-95	35.8	10.0		572	300	70.0	26.0	5.0	1.0	255	15	35.0	6.0	1.00	<0.1	<0.1	
	25-May-97	0.5	7.0	9.0	815	434	73.0	51.9	7.1	1.8	387	<1	71.6	5.1		<0.02		<0.005
	27-Jun-97	52.0	7.4	6.7	560	380	81.0	35.0	4.0	1.0	348	<5	90.0	4.0	<0.1	<0.1	<0.1	
	15-Aug-97	30.0	5.0	8.0	567	350		35.0	4.0	1.0	353	<5	60.0	3.0		<0.1		<0.01
	07-Oct-97	30.0	6.0	8.0	569	350	77.0	34.0	4.0	1.0	350	<5	57.0	6.8	<0.1	<0.1	<0.1	
	25-Sep-98					328	71.0	28.0	4.0	1.0	307	<5	42.0	3.0	<0.1	<0.1	<0.1	
	10-Jun-99	3.0				253	68.0	19.0	4.0	<1	270	7	17.0	<1	<0.1	<0.1	<0.1	
	15-Sep-99	56.0	6.6	8.0	500	360	68.4	27.8	6.6	1.3	285	<1	46.0	7.0	0.04	<0.02	<0.01	
	04-Nov-99	4.0	11.0	8.0	499	380	81.4	39.3	3.4	1.6	380	<1	61.0	7.0	0.18	<0.02	<0.01	
	20-Jun-00	47.8	4.5	7.76	592	388	74		2	2	340	<5	62	2	<0.1	<0.1	<0.1	<0.1
	14-Sep-00	15.4	4.8	7.94	605	349	74	33	4	2	334	<5	69	3	<0.1	<0.1	<0.1	<0.1
	08-Dec-00	19.4	4.7	7.6	599	391	76	34	4	1	348	<5	69	3	<0.1	<0.1	<0.1	<0.1
DH-1	11-Mar-88	1.0	5.4	8.3	1125		60.0	85.1	14.1	8.0	521	0	88.5	10.0		0.05	<0.01	
	31-May-88	0.2	7.0	7.9	1100		92.0	86.3	14.2	11.0	605	0	63.0	11.8	<0.05		0.03	
	28-Sep-88	1.0	8.2	8.2	460		84.0	82.7	14.8	7.5	312	0	82.5	10.4			<0.01	
	03-Nov-88	0.3	7.6	8.1	1039		58.0	81.5	14.1	7.8	560	0	91.2	8.1	<0.05		0.06	
	31-Mar-89					673	91.1	86.8	15.3	8.1	556	28	150.0	5.0		<0.02	<0.01	
	12-Jun-89					680	104.0	87.2	11.4	6.3	614	<1	150.0	10.0		<0.02	<0.01	
	18-Jan-90	1.0	7.5	7.8	840													
	29-Jan-90					620	92.8	85.1	11.9	6.2	617	<1	100.0	7.5		<0.02	<0.01	
	13-Apr-90					633	120.0	79.5	12.0	8.1	559	<1	170.0	35.0		<0.02	<0.01	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	14-Apr-90	0.0	7.8	7.9	835													
	23-Jul-90	0.0	7.0	7.9	840													
	24-Jul-90					573	83.1	84.5	3.6	6.3	531	<1	100.0	30.0		<0.02	<0.01	
	09-Oct-90	0.0	4.9	8.9	600													
	10-Oct-90					499	87.5	89.9	14.0	5.6	574	<1	130.0	20.0	<0.02	<0.02	<0.01	
	12-Jan-91	0.0	9.5		300													
	14-Jan-91					556	97.2	89.4	15.6	7,41	564	<1	130.0	100.0		0.08	0.30	
	04-Apr-91	0.0	4.4	8.6	500													
	30-Apr-91					560	96.2	84.5	11.4	6.5	602	<1	90.0	30.0	<0.02		<0.01	
	01-Jul-91	0.0	7.2	9.1	710	557	84.6	58.0	23.1	8.0	543	<1	76.0	10.0		<0.02	0.22	
	11-Oct-91	0.0	8.0	8.0	900	595	79.0	82.3	13.9	2.3	584	<1	100.0	10.0		0.07		
	08-Mar-92	dry																
	02-Jun-92	dry																
	22-Sep-92	dry																
	16-Dec-92	dry																
	02-Mar-94	dry																
	06-Jun-94	dry																
	28-Sep-94	dry																
	20-Dec-94	dry																
	29-Mar-95	dry																
	27-Jun-95	dry																
	27-Sep-95	dry																
	18-Mar-99	dry																
	24-Jun-99	dry																
	15-Sep-99	dry																
	07-Dec-99	dry																
	30-Mar-00	dry																
	27-Jun-00	dry																
	27-Sep-00	dry																
	14-Dec-00	dry																
MW-1	11-Mar-88	185.0	9.5	7.7	530	308	34.0	25.5	32.5	6.4	284	0	6.6	5.3		0.05	<0.01	
	31-May-88	185.5	8.2	8.6	350	240	34.2	24.2	33.4	0.0	284	0	5.7	4.5	0.14		0.01	
	28-Sep-88	186.7	19.0	7.1	460	240	34.0	24.3	44.0	4.7	295	0	5.1	5.3	<0.05		0.02	
	03-Nov-88		10.9	10.9	460	196	32.0	17.0	39.1	4.3	282	0	5.7	3.5	<0.05		<0.01	
	31-Mar-89					312	23.8	16.5	69.7	4.5	301	<1	24.0	10.0		<0.02	<0.01	
	12-Jun-89					392	25.1	18.0	77.2	3.8	285	<1	50.0	20.0		0.06	<0.01	
	03-Oct-89					341	15.7	13.2	78.6	3.2	311	<1	10.0	15.0		<0.02	<0.01	
	18-Dec-89					292	20.6	14.5	74.0	2.1	311	<1	23.0	15.0		0.31	0.05	
	18-Jan-90		10.2	8.1	450													
	29-Jan-90					300	31.0	17.0	65.2	0.2	314	<1	24.0	10.0		<0.02	<0.01	
	13-Apr-90					279	31.2	13.7	64.1	6.4	303	<1	18.0	10.0		<0.02	<0.01	
	14-Apr-90	2.0	10.3	7.8														
	01-Jul-90	0.0	10.3	8.1														
	24-Jul-90					307	22.4	12.2	74.4	3.5	315	<1	5.0	25.0		<0.02	0.02	
	09-Oct-90		6.2	8.4	400													
	10-Oct-90					261	21.0	13.1	86.1	2.8	339	<1	15.0	10.0	<0.02		<0.01	
	20-Dec-90					247	29.3	11.1	73.6	2.9	297	<1	27.0	15.0	0.13		<0.01	
	11-Jan-91					247	29.3	11.1	73.6	2.9	297	<1	27.0	15.0	0.13		<0.01	
	12-Jan-91		7.7	8.2	300													
	14-Jan-91					288	30.5	20.0	76.9	12.2	346	<1	21.0	14.5		0.03	0.28	
	04-Apr-91	4.8	7.2	8.0	400	306	25.1	7.2	69.4	2.3	280	<1	18.0	25.0	<0.02	<0.02	<0.01	
	21-Jul-91					298	22.4	14.6	71.4	4.2	298	<1	14.0	15.0		0.02	<0.01	
	11-Oct-91		12.0	7.8	700	289	24.2	4.6	8.6	0.0	289	<1	23.0	15.0		0.07		
	10-Dec-91					265	21.8	15.1	68.8	6.8	316	0	21.0	10.0		0.00	0.00	
	08-Mar-92		12.2	7.9		326	27.2	12.4	96.5	3.8	334	0	27.0	10.0	0.00		0.00	
	24-Jun-92		12.2	8.0		288	26.9	9.2	84.8	5.0	287	0	28.0	15.0	0.00		0.00	
	22-Sep-92		12.2	7.6		372	27.9	17.1	51.7	61.8	281	0	60.0	45.0	0.00		0.02	
	08-Dec-92		13.1	7.3		252	10.9	1.4	88.0	2.1	291	0	27.0	15.0	0.08		0.00	
	04-Mar-93	1.1	12.8	7.5	532		18.9	14.5	71.4	3.4	285	0	21.0	0.1		6.80	0.47	
	15-Jun-93	6.0	14.6	7.3	561	333	20.2	14.9	68.3	2.4	284	0	20.0	26.3		0.05	<0.03	
	16-Sep-93	1.8	11.3	7.9	568	333	19.6	18.0	90.0	4.0	283	0	17.0	28.9	0.16	<0.05	<0.03	
	07-Dec-93	3.0	12.4	6.7	528	353	19.0	16.0	70.0	9.0	233	<1	20.0	31.0	0.02	<0.02	<0.1	
	02-Mar-94	0.4	56.0	6.7	554	292	27.0	10.0	78.0	4.0	284	0	19.0	15.0		0.08	< .02	
	06-Jun-94	2.3	56.3	6.7	785	290	25.0	17.0	69.0	0.4	299	0	21.0	10.0		< .5	< .02	
	28-Sep-94	0.6	58.7	6.3	920	315	18.0	14.0	80.0	16.0	291	0	19.0	26.0		0.09	< .02	
	20-Dec-94	0.5	56.2	7.0	860	300	18.0	13.0	75.0	4.0	262	0	18.0	14.0		<0.1	<0.1	
	29-Mar-95					230	24.0	20.0	69.0	4.0	275	<5	17.0	12.0		<0.1		<0.1
	07-Jun-95	0.5	12.0			290	20.0	16.0	73.0	4.0	260	15	18.0	14.0		<0.1		<0.1
	27-Sep-95	0.5	15.0	7.9	540	410	110.0	43.0	14.0	5.0	475	<5	26.0	7.0		<0.1		<0.1
	18-Dec-95	0.5	15.0	7.7	705	300	21.0	16.0	69.0	4.0	295	<5	17.0	13.0		<0.1		<0.1
	26-Mar-96					268	19.0	15.0	72.0	3.8	302	<2	37.0	13.0		< .03		< .04
	19-Jun-96	0.5	15.4	7.7	508	296	20.0	15.0	73.0	4.0	296	<5	18.0			<0.1		<0.1
	30-Sep-96					442	85.0	47.0	15.0	6.0	460	<5	39.0	13.0		0.10		<0.1
	30-Oct-96	0.4	14.5	8.1	498	298	20.0	14.0	72.0	4.0	308	<5	18.0	13.0		<0.1		<0.1
	03-Feb-97		12.7	8.0	500	244	19.0	16.0	73.0	4.0	293	<5	18.0	12.0	0.80	<0.1	<0.1	
	22-May-97	0.4	10.4	7.8	504	280	19.0	13.0	66.0	3.0	299	<5	18.0	12.0	0.40	<0.4	<0.1	
	30-Dec-97	0.4	13.2	7.5	496	290	21.0	16.0	67.0	3.0	307	<5	18.0	7.0	<0.1	<0.1	<0.1	
	31-Mar-98	0.1	12.6	7.7	530	279	20.0	16.0	67.0	4.0	305	<5	15.0	12.0	<0.1	<0.1	<0.1	
	28-May-98	0.2	12.6	7.6	518	279	21.0	15.0	76.0	4.0	300	<5	15.0	11.0	2.10	<0.1	<0.1	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	24-Jun-99	little flow	12.5	7.9	490	258	22.0	15.0	73.0	5.0	303	<5	17.0	12.0	<0.1	<0.1	<0.1	
	15-Sep-99	not enough flow																
	07-Dec-99	not enough flow																
	30-Mar-00	0.30	13.4	8.3	491	298	22	17	74	4	297	<5	18	12	<0.1	<0.1		<0.1
	27-Jun-00	0.67	14.2	7.3	494	260	19	15	71	4	300	<5	18	11	<0.1	<0.1	<0.1	<0.1
	27-Sep-00	0.7	14.7	7.3	494	266	19	15	73	4	295	<5	19	13	0.4	<0.1	<0.1	<0.1
	14-Dec-00	0.5	13.4	8	545	285	18	14	68	4	303	<5	16	10	<0.1	<0.1	<0.1	<0.1
MW-2	21-Jun-89					614	121.2	67.6	22.4	0.7	368	<1	290.0	10.0		1.9	0.1	
	02-Oct-89					464	75.8	47.6	16.9	7.2	410	<1	80.0	10.0		1.1	0.1	
	30-Jan-90						852.0	146.3	22.6	27.7			16.50.0		44	30.7	0.6	
	30-Apr-90					990	463.2	77.9	13.9	41.6	510	<1	800.0	15.0		0.0	0.8	
	23-Jul-90	57.8 feet	10.0	7.8														
	24-Jul-90					254	118.3	47.4	18.8	7.4	448	<1	150.0	20.0		<0.02	0.1	
	09-Oct-90	54.0 feet	9.6	7.9	700													
	10-Oct-90					492	135.5	48.9	19.9	5.4	422	<1	200.0	20.0	2	1.4	0.1	
	12-Jan-91	72.2 feet	11.4	7.5	500													
	14-Jan-91					592	149.9	57.8	61.0	10.5	507	<1	180.0	125.0		2.1	0.2	
	04-Apr-91	52.6 feet	11.3	7.8	600	540	108.4	52.9	18.3	13.1	398	<1	170.0	45.0	1	0.0	0.1	
	21-Jul-91					388	73.5	31.7	11.9	7.2	402	<1	18.0	10.0		0.0	0.0	
	11-Oct-91	55.2 feet	11.0	7.2	800	389	89.3	40.0	13.7	0.0	425	<1	25.0	10.0		0.2		
	10-Dec-91					369	74.8	37.5	1.1	6.7	398	<1	23.0	15.0		1.9	0.0	
	08-Mar-92	56.0 feet	10.0	7.2	500	361	95.9	39.3	12.5	5.3	447	<1	17.0	15.0		0.0	0.0	
	02-Jun-92	56.6 feet	8.3	7.7		420	94.4	41.4	15.1	6.6	457	<1	60.0	20.0		0.3	0.0	
	15-Sep-92	53.5 feet	13.3	7.6		364	90.2	49.1	10.9	7.7	461	<1	27.0	15.0	5	4.9	0.0	
	16-Dec-92	53.3 feet	9.7	7.3	813	313	158.0	63.2	14.6	5.1	424	<1	310.0	10.0	4	4.2	0.1	
	04-Mar-93	53.5 feet	11.7	7.4	768	200	84.6	44.6	12.9	4.2	434	<1	70.0	0.1	41	37	0	
	15-Jun-93	53.9 feet	12.2	7.4	748		67.2	37.6	12.3	4.6	423	<1	32.0	4.8		0	<0.03	
	16-Sep-93	52.8 feet	11.0	7.4	754		76.3	16.0	85.0	4.0	446	<1	11.0	4.8	3	<0.05	<0.03	
	07-Dec-93	52.4 feet	11.4	7.2	672		77.0	45.0	14.0	6.0	355	<1	30.0	5.0	3	<0.02	<0.10	
	02-Mar-94	52.3 feet	53.0	7.4	694	416	81.0	45.0	15.0	5.0	476	<5	31.0	5.2		1	<0.02	
	06-Jun-94	52.0 feet	53.7	6.4	910	390	33.0	74.0	15.0	5.6	468	<5	30.0	3.1		3	0	
	28-Sep-94	51.6 feet	54.0	7.0	724	413	79.0	45.0	14.0	5.9	442	<5	47.0	3.7		2	0	
	20-Dec-94	51.7 feet	55.0	7.0	810	420	80.0	44.0	15.0	6.0	418	<5	30.0	5.0		<.1	<0.1	
	29-Mar-95					370	89.0	46.0	14.0	5.0	425	<5	26.0	6.0		0	<0.1	
	27-Jun-95		12.0			430	73.0	45.0	15.0	5.0	460	<5	21.0	7.0		<0.1	<0.1	
	27-Sep-95		12.9	7.6	782	410	110.0	43.0	14.0	5.0	475	<5	26.0	7.0		<0.1	<0.1	
	18-Dec-95	51.2 feet	12.5	7.3	1178	470	78.0	43.0	19.0	5.0	450	<5	41.0	6.0		<0.1	<0.1	
	03-Feb-97		10.9	7.3	731	413	74.0	41.0	14.0	5.0	450	<5	39.0	5.0	5	<0.1	<0.1	
	22-May-97	49.4 feet	11.6	7.1	706	430	77.0	42.0	12.0	4.0	455	<5	51.0	7.0	2	<0.1	<0.1	
	21-Aug-97	51.6 feet	11.9	6.5	713	390	88.0	47.0	19.0	6.0	427	<5	59.0	6.0	2	<0.1	<0.1	
	30-Dec-97	flooded																
	31-Mar-98	flooded																
	28-May-98	flooded																
	18-Mar-99	flooded																
	24-Jun-99	flooded																
	15-Sep-99	flooded																
	07-Dec-99	flooded																
	30-Mar-00	flooded																
	27-Jun-00	flooded																
	27-Sep-00	flooded																
	14-Dec-00	flooded																
MW-3	21-Jun-89					572	74.0	48.4	24.3	6.8	349	<1	110.0	15.0		3.13	0.23	
	02-Oct-89					797	150.0	73.6	30.7	13.5	394	<1	410.0	20.0		<0.02	0.13	
	18-Mar-99	Inaccessible																
MW-4	04-Mar-93	dry																
	15-Jun-93	dry																
	16-Sep-93	dry																
	17-Feb-93	dry																
	02-Mar-94	dry																
	06-Jun-94	dry																
	28-Sep-94	dry																
	20-Dec-94	dry																
	29-Mar-95	dry																
	27-Jun-95	dry																
	27-Sep-95	dry																
	18-Mar-99	Inaccessible																
MW-5	22-Sep-92	dry																
	08-Dec-92	dry																
	04-Mar-93	dry																
	15-Jun-93					1352	850.0	356.0	18.2	9.7				3.3	26.6		0.91	
	16-Sep-93	109 ft	12.5	7.5	104	759	157.0	90.0	8.7	8.0	411	<5	250.0	12.1	1.0		0.14	
	07-Dec-93	108.8 ft	12.1	7.2	953	650	51.0	120.0	8.0	11.0	320	<1	250.0	8.0	8.0		0.30	
	02-Mar-94	111.0 ft	12.3	7.1	920	653	120.0	69.0	9.2	8.0	400	<5	245.0	5.2				
	06-Jun-94	111.0 ft	11.9	6.2	1063	655	34.0	114.0	9.9	20.0	394	<5	267.0	16.0		5.5	0.24	
	28-Sep-94	dry																
	20-Dec-94	51.5 ft	13.3	7.5	890	740	505.0	224.0	9.0	9.0	577	<5	130.0	12.0		<0.1	0.60	

	Date	flow	T	pH	Cond.	TDS	Ca2+	Mg2+	Na+	K+	HCO3-	CO3-	SO42-	Cl-	Fe(T)	Fe(d)	Mn(T)	Mn(d)
		gpm	°C		µS/cm2	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
	18-Dec-95	108.2 ft	13.2	7.4	1132	650	108.0	58.0	7.0	5.0	520	<5	214.0	7.0		<0.1	0.10	
	18-Mar-99	destroyed																
MW-6a	06-May-97		14.2	8.2	544	320	46.0	32.0	22.0	12.0	243	<5	61.0	17.0	0.8	<0.1	0.40	
	28-May-98		12.5	7.1	524	330	63.0	36.0	13.0	5.0	310	<5	33.0	9.0	1.8	<0.1	0.20	
	18-Mar-99	1.8 feet	13.1	7.7	519	317	41.0	35.0	11.0	5.0	311	<5	5.0	6.0	0.5	<0.1	<0.1	
	24-Jun-99	inaccessible																
	15-Sep-99	2.3 feet																
	07-Dec-99	4.5 feet	12.5	8.1	526	294	62.0	39.0	15.0	4.0	343	<5	32.0	3.0	0.4	<0.1	<0.1	
	30-Mar-00	2 feet	12.5	7.9	526	303	53	38	13	4	340	<5	34	3	0.2	<0.1		<0.1
	27-Jun-00	0.8 feet	13.3	8.00	480	263	48	31	8	3	305	<5	28	4	3.6	<0.1	<0.1	0.1
	27-Sep-00	0.8 feet	13.3	8.00	480	265	46	32	9	4	294	<5	34	5	0.6	<0.1	<0.1	<0.1
	14-Dec-00	1.5 feet	12.9	8.2	489	270	45	30	9	3	300	<5	14	2	0.6	<0.1	<0.1	<0.1
MW-8	05-Jun-97	dry	14.1	7.8	547	340	64.0	37.0	17.0	6.0	317	<5	40.0	8.0	3.7	<0.1	<0.1	
	21-Aug-97	51.6 feet	14.3	7.2	507	280	60.0	35.0	13.0	4.0	308	<5	36.0	4.0	3.2	<0.1	0.10	
	30-Dec-97	2.1 feet	12.7	6.5	504	260	53.0	35.0	13.0	4.0	306	<5	39.0	2.0	5.2	<0.1	<0.1	
	31-Mar-98	2.2 feet	13.4	7.7	52	284	57.0	34.0	12.0	5.0	327	<5	33.0	5.0	2.1	<0.1	<0.1	
	28-May-98		12.9	7.8	506	274	53.0	35.0	13.0	4.0	311	<5	29.0	4.0	2.8	<0.1	<0.1	
	18-Mar-99	2.3 feet	13.3	7.7	512	348	52.0	35.0	13.0	4.0	309	<5	35.0	33.0	2.2	<0.1	<0.1	
	24-Jun-99	2.2 feet	11.7	7.4	511	267	64.0	38.0	13.0		328	<5	40.0	3.0	3.8	<0.1	<0.1	
	15-Sep-99	2.5 feet																
	07-Dec-99	4.5 feet	13.0	7.6	524	305	53.0	37.0	13.0	4.0	332	<5	38.0	4.0	0.7	<0.1	<0.1	
	30-Mar-00	2.2 feet	13	7.5	519	310	67	42	13	4	304	<5	41	3	1.3	<0.1		<0.1
	27-Jun-00	2.2 feet	13.6	7.1	515	275	48	33	12	4	320	<5	38	3	0.7	<0.1	<0.1	<0.1
	27-Sep-00	2.2 feet	13.6	7.1	515	257	47	33	13	4	309	<5	40	3	0.6	<0.1	<0.1	<0.1
	14-Dec-00	2.1 feet	13.3	8	518	275	46	32	12	4	312	<5	34	2	0.8	<0.1	<0.1	<0.1
MW-6	05-Jun-97		13.3	12.6	6170	1390	742.0	5.0	62.0	24.0	<5	128	48.0	40.7	1.60	<0.1	0.20	
	22-Aug-97	3.3 feet	13.8	10.8	960	280	60.0	4.0	49.0	6.0	<5	35	27.0	8.0	0.70	<0.1	<0.1	
	30-Dec-97	0.8 feet	11.9	10.1	635	1030	69.0	6.0	48.0	7.0	<5	24	15.0	4.0	2.80	<0.1	<0.1	
	31-Mar-98	0.1 feet	13.5	11.8	488	1009	450.0	2.0	31.0	9.0	<5	56	20.0	13.0	0.60	<0.1	1.00	
	28-May-98		12.4	11.5	461	985	304.0	1.0	29.0	9.0	<5	233	23.0	16.7	0.60	<0.1	<0.1	
	16-Sep-98		12.9	11.8	6075	1344	397.0	<1	29.0	9.0	<5	35	12.0	2.0	0.20	<0.1	<0.1	
	18-Mar-99	0.0 feet	13.3	12.3	6780	1404	626.0	2.0	31.0	9.0	<5	39	10.0	5.0	0.2	<0.1	<0.1	
	15-Sep-99	—	13.5	12.2	6290	1241	600.0	10.0	26.0	9.0	<5	57	11.0	8.0	0.3	<0.1	<0.1	
	07-Dec-99	0.0 feet	12.5	12.1	6640	1345	604.0	4.0	28.0	8.0	<5	86	14.0	7.0	0.3	<0.1	<0.1	
	27-Jun-00	0.0 feet	13.8	12.2	6190	1223	546	<1	25	7	<5	40	18	8	0.1	<0.1	<0.1	<0.1
	27-Sep-00	0.0 feet	13.8	12.27	6190	866	343	<1	22	6	31	<5	36	6	0.1	<0.1	<0.1	<0.1
	14-Dec-00	0.0 feet	13	12.5	4090	808	270	<1	21	6	<5	38	16	7	<0.1	<0.1	<0.1	<0.1
MW-7	05-Jun-97		12.1	7.7	511	310	62.0	<0.1	4.0	2.0	319	<5	33.0	6.2	0	<0.1	32.00	<0.1
	21-Aug-97	0.2	11.0	6.7	496	270	63.0	33.0	5.0	2.0	314	<5	30.0	5.0	0	<0.1	<0.1	
	11-Feb-98		20.1	7.4	520	3	58.0	31.0	3.0	2.0	323	<5	31.0	5.0	0	<0.1	<0.1	<0.1
	28-May-98	0.1	10.7	6.9	514	301	60.0	34.0	5.0	2.0	312	<5	83.0	10.0	0	<0.1	<0.1	
	16-Sep-98	0.1	11.2	7.3	577	35	61.0	32.0	4.0	2.0	324	<5	33.0	4.0	0	<0.1	<0.1	
	25-May-99		10.9	8.0	578	323							61.0	6.0				
	07-Dec-99	0.1	10.5	7.0	517	281	61.0	32.0	4.0	3.0	327	<5	29.0	4.0		<0.1	<0.1	
	30-Mar-00	0.11	10.5	7.5	503	200	63	35	4	2	313	<5	34	4	1.3	<0.1		<0.1
	27-Jun-00	0.12	11	7.6	500	263	58	32	4	2	321	<5	32	3	0.2	<0.1	<0.1	<0.1
	27-Sep-00	0.1	11	7.6	500	283	57	32	5	2	313	<5	34	4	3.1	<0.1	<0.1	<0.1
	14-Dec-00	0.1	11.1	7.8	512	288	56	30	4	2	316	<5	29	3	0.2	<0.1	<0.1	<0.1

Table 3 GENWAL UPDES Chemistry and discharge

Genwal Mine Discharge 002 chemistry for report xls 30 Mar 2000

Date	Monitored	Flow (gpm)	T (°C)	pH (S.U.)	Cond (µs/cm)	TDS (mg/l)	TSS (mg/l)	Fe(d) (mg/l)	Fe(T) (mg/l)	Set Sol (mg/l)	DO (mg/l)	O&G (mg/l)
Mine discharge (UPDES 002)												
01-Jan-96	yes	101		8.14	624	367	<5					<2
01-Feb-96	yes	92		8.23	650	361	10	0.3	<0.1			<2
01-Mar-96	yes	66	12.3	7.46	657	432	<5		0.02			5
01-Apr-96	yes	69		7.81		370	14	0.5	0.05			7
01-May-96	yes	66		8.33	633	380	<5		0.03			4
01-Jun-96	yes	176	14.8	7.62	622	433	<5		0.02			4
01-Jul-96	yes	397	12.2	7.3	2410	216	<5		<0.1			
01-Aug-96	yes	342		8.45								
01-Sep-96	yes	322		7.43	712	439	<5	<0.1	<0.1			<2
01-Oct-96	yes	269		7.4		422	<5		<0.1			
01-Nov-96	yes	206		7.6		422	10		2			
01-Dec-96	yes	333		7.7		457	8		0.2			
01-Jan-97	yes	396	11.6	7.5	816	460	<5	<0.1	0.2			<2
01-Feb-97	yes	316	12.1	7.7	808	490	<5	<0.1	0.2			<2
01-Mar-97	yes	325	12.5	7.8	779	460	<5	<0.1	0.2			<2
01-Apr-97	yes	254	11.7	7.6	773	470	<5	<0.1	0.3			
01-May-97	yes	240	12.3	7.4	855	480	<5	<0.1	0.2			<2
01-Jun-97	yes	238	12.2	6.7	726	490	<5	<0.1	0.2			<2
01-Jul-97	yes	278	13	6.7	731	470	<5	<0.1	<0.1			
01-Aug-97	yes	198	12.4	6.75	728	470	<5	<0.1	0.2			
01-Sep-97	yes	269	13.3	6.8	728	490	<5	<0.1	0.2			<2
01-Oct-97	yes	378	11.6	7	721	440	<5	<0.1	0.3			
01-Nov-97	yes	404										
01-Dec-97	yes	397	11.8	6.6	741	450	<5	<0.1	0.2			
01-Jan-98	yes	384	13.3	7	740	450	<5	<0.1	0.2			
01-Feb-98	yes	349	11.7	7.65	762	460	4	<0.1	0.1			
01-Mar-98	yes	326	10.4	7.05	783	472	<5	<0.1	0.2			
01-Apr-98	yes	316	12.1	7.7	795	433	4	<0.1	0.2			
01-May-98	yes	527	12.3	7.4	855	480	<5	<0.1	0.2			<2
01-Jun-98	yes	615	13.5	7.6	726	477	8	<0.1	0.2			
01-Jul-98	yes	688	13.4	7.85	666	427	<5	<0.1	<0.1			
01-Aug-98	yes	637										
01-Sep-98	yes	665	13.2	7.55	690	467	<5	<0.1	<0.1			<2
01-Oct-98	yes	689	12.2	7.1	653	449	23	<0.1	0.3			
01-Nov-98	yes	598	11.6	7.8	646	420	<5	<0.1	<0.1			<2
01-Dec-98	yes	578	10.9	7.7	660	411	<5	<0.1	<0.1			
01-Jan-99	yes	569	10.1	7.6	640	400	<5	<0.1	<0.1			<2
01-Feb-99	yes	607	10.4	7.4	722	445	<5	<0.1	<0.1			
01-Mar-99	yes	580	11.2	7.6	639	418	<5	<0.1	<0.1			<2
01-Apr-99	yes	565	11.2	7.7	664	335	<5	<0.1	<0.1		4.1	
01-May-99	yes	556	9	7.8	667	384	<5	<0.1	<0.1			
01-Jun-99	yes	622	12.8	7.8	685	397	<5	<0.1	<0.1		7.3	<2
01-Jul-99	yes	214	14.4	7.42	699	427	<5	<0.1	0.3		4.3	
01-Aug-99	yes	220	14.3	7.3	721	430	<5	<0.1	<0.1		2.3	
01-Sep-99	yes	208	11.9	7.4	730	428	<5	<0.1	<0.1			<2
01-Oct-99	yes	357	12.3	7.8	734	448	<5	<0.1	<0.1			
01-Nov-99	yes	875	11.4	7.8	692	413	<5	<0.1	<0.1			<2
01-Dec-99	yes	839	12.3	6.8	684	412	<5	<0.1	<0.1		10.4	<2
24-Jan-00	yes	760	11.5	8.0	666	405	<5	<0.1	<0.1		5.7	
14-Feb-00	yes	654	11.5	7.8	675	402	<5	<0.1	0.1		4.1	
30-Mar-00	yes	665	11.5	7.4	681	395	<5	<0.1	<0.1			<2
25-Apr-00	yes	703	11.7	8.2	704	431	<5	<0.1	<0.1			
30-May-00	yes	655	13.3	8.1	714	456	6				5.1	<2
27-Jun-00	yes	772	11.9	7.1	715	420	<5	<0.1	<0.1		8.8	
31-Jul-00	yes	766	16.6	7.7	731	457	<5	<0.1	<0.1		7.8	<2
29-Aug-00	yes	687	16.9	6.9	724	443	<5	<0.1	0.2		6.8	<2
27-Sep-00	yes	623	11.9	7.1	715	407	<5	<0.1	<0.1		8.8	<2
25-Oct-00	yes	705	12.8	7.7	676	413	6	<0.1	<0.1		10.2	
27-Nov-00	yes	675	12.1	7.5	675	401	<5	<0.1	<0.1		9.1	
07-Dec-00	yes	754	12.1	7.3	691	442	<5	<0.1	<0.1		7.8	4
Sed Pond Discharge (UPDES 001)												
Jan-99	yes	no discharge										
Feb-99	yes	no discharge										
Mar-99	yes	no discharge										
Apr-99	yes	no discharge										
May-99	yes	no discharge										
Jun-99	yes	no discharge										
Jul-99	yes	no discharge										
Aug-99	yes	no discharge										
Sep-99	yes	no discharge										
Oct-99	yes	no discharge										
Nov-99	yes	no discharge										
Dec-99	yes	no discharge										
Jan-00	yes	no discharge										
Feb-00	yes	no discharge										
Mar-00	yes	no discharge										
Apr-00	yes	no discharge										
May-00	yes	no discharge										
Jun-00	yes	no discharge										
Jul-00	yes	no discharge										
Aug-00	yes	no discharge										
Sep-00	yes	no discharge										
Oct-00	yes	no discharge										
Nov-00	yes	no discharge										
Dec-00	yes	no discharge										

Other Technical Data

No equipment or machinery was abandoned underground in 2000.

No known hazardous substances or waste oil in reportable quantities were left underground in 2000.

The Mine Map shows no locations of the above items due to their absence.

APPENDIX C

Legal, Financial, Compliance and Related Information

Annual Report of Officers
as submitted to the Utah Department of Commerce

and other changes in ownership and control information
as required under R645-301-110.

Department of Commerce Annual Report

business entity search

Utah Department of Commerce

return to business entity search

Name	Type	City	S
GENWAL RESOURCES, INC.	Corporation	SALT LAKE CITY UT	

Principal Information

Position	Name	Address		
Director	PETER B GREEN	45 W 10000 S STE 401	SANDY	UT 84070
Director	DOUGLAS H SMITH	45 W 10000 S STE 401	SANDY	UT 84070
Director	RONALD C BEEDIE	45 W 10000 S STE 401	SANDY	UT 84070
President	DOUGLAS H SMITH	45 W 10000 S STE 401	SANDY	UT 84070
Registered Agent	JOHN S KIRKHAM	201 S MAIN STE 1100	SALT LAKE CITY	UT 841114904
Secretary	C JOHN BRADSHAW	45 W 10000 S STE 401	SANDY	UT 84070
Treasurer	C JOHN BRADSHAW	45 W 10000 S STE 401	SANDY	UT 84070
Vice President	SAMUEL C QUIGLEY	45 W 10000 S STE 401	SANDY	UT 84070

Cancel | Do Another

Name	Type	City	S
GENWAL RESOURCES, INC.	Corporation	SALT LAKE CITY UT	

Business Name: GENWAL RESOURCES, INC.
License Number: 1208426-0142
Registration Date: 12/12/1994
State of Origin: UT

Address

201 S MAIN STE 1100

SALT LAKE CITY UT 841114904

Status

Status: Active
Status Description: Good Standing
This Status Date:
Last Renewed: 12/13/2000
License Type: Corporation - Domestic - Profit
Expiration Date: 12/12/2001

Registered Agent

Registered Agent: JOHN S KIRKHAM
Address Line 1:201 S MAIN STE 1100
Address Line 2:
City:SALT LAKE CITY
State:UT
Zip:841114904

Additional Information

SIC Code:	9999
SIC Title:	9999-NONCLASSIFIABLE ESTABLISHMENTS
Stock Class 1 Amount:	0000001000
Stock Class 1 Type:	COMMON

If you would like to purchase a Certificate of Existence for this business entity, select the button

Select the Principals button to ge information on the principal

APPENDIX D

Mine Maps

as required under R645-301-525.270.

Mine Map with Production Areas

APPENDIX E

Other Information

in accordance with the requirements of R645-301 and R645-302.

None