UNITED NUCLEAR CORPORATION

P.O. Box 3077
Gallup, New Mexico 87305-3077

Telephone: (505) 722-6651
Fax: (505) 722-6654

40-8907

CERTIFIED – RETURN RECEIPT REQUESTED

February 11, 2004

Mr. Gary Jonosko
U.S. Nuclear Regulatory Commission
Fuel Cycle Safety & Safeguards
Fuel Cycle Licensing Branch
Uranium Recovery Branch
Office of Nuclear Material Safety & Safeguards
11545 Rockville Pike
Rockville, Maryland 20852-2738

Dear Mr. Jonosko:

In Compliance with our Nuclear Regulatory Commission Radioactive Material License No. SUA-1475, Condition 30, the enclosed Semi-Annual Ground Water Monitoring Report of the entire period of July 01, 2003 through December 31, 2003 is being submitted.

Sincerely,

Larry Bush
Manager

LB:drb

Enclosure

Cc: Division of Radiation Safety, Region VI
Mark Purcell, USEPA
Mark Jancin, US FIlter
Roy Blickwedel, GE
Steve Hill, GE
Robin Brown, NMED
Diana Malone, NNEPA

NMSS01

SEMI-ANNUAL GROUND WATER MONITORING REPORT

SECOND HALF OF 2003 (JULY THRU DECEMBER)

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY AND OCTOBER OF 2003

FIELD DATA SHEET OF

THIRD AND FOURTH QUARTER

CONTROLS

SW ALLUVIUM

ZONE 1

ZONE 3

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE

July MONTH Third QUARTER, 20 03

SOUTHWEST ALLIVIUM

WELL NO.	DEPT REC./ SAMPLE DATE	DEPTH TO WATER (FT.)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (µs/cm)	FIELD pH (units)	FIELD TEMP. (°c)
509-D	7/07/03	70.63	6949.5	6878.87	5.870	6.20	14.9
624	7/08/03	48.87	6898.7	6849.83	5,590	6.36	16.6
627	7/08/03	55.72	6892.4	6836.68	5,680	6.82	18.5
632	7/07/03	41.45	6903.6	6862.15	7,310	6.19	15.9
801	7/07/03	47.97	6904.3	6856.33	6,770	6.20	18.0
802	7/07/03	44.35	6907.1	6862.75	7,960	6.27	16.5
803	7/07/03	58.57	6922.6	6864.03	6,770	6.22	16.4
808	7/07/03	45.73	6910.7	6864.97	7,050	6.24	16.8
GW-1	7/07/03	58.80	6916.5	6857.70	6,310	6.37	18.2
GW-2	7/07/03	52.97	6912.9	6859.93	6,110	6.12	18.0
GW-3	7/08/03	50.45	6910.0	6859.55	5,860	6.45	18.5
EPA-23	7/07/03	49.20	6926.5	6877.30	4,540	6.42	15.8
EPA-25	7/08/03	51.42	6903.4	6851.98	4,500	6.71	17.2
EPA-28	7/07/03	60.38	6917.9	6857.52	5,170	6.54	18.6
(QA/QC)624 DUP.	7/8/03	48.90	6898.7	6849.80	5,560	6.36	16.7
(QA/QC)							
805	7/17/03	50.14	6915.6	6865.46			
807	7/17/03	54.00	6923.4	6869.40			

COMMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE

JULY MONTH THIRD QUARTER, 2003

ZONE 1

WELL NO.	DEPT REC./ SAMPLE DATE	DEPTH TO WATER (FT.)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (µs/cm)	FIELD pH (units)	FIELD TEMP. (°c)
515-A	7/09/03	100.00	7008.8	6908.80	7,340	5.25	16.9
604	7/09/03	98.68	7006.0	6907.32	6,780	4.63	16.5
614	7/09/03	100.30	7012.0	6911.70	7,460	6.29	15.7
TWQ-142	7/15/03	201.55	6983.4	6781.85	1,683	7.63	26.4
EPA-2	7/14/03	170.40	7019.5	6849.10	3,020	6.50	17.4
EPA-4	7/15/03	202.66	7069.6	6867.14	4,660	6.44	16.0
EPA-5	7/09/03	121.43	7011.5	6890.07	5,170	5.69	16.8
EPA-7	7/9/03	110.98	7011.7	6900.72	7,330	6.61	17.4
(QA/QC)EPA-2 DUP.	7/14/03	171.00	7019.5	6848.50	3,090	6.46	17.2
(QA/QC) F.BLANK	7/09/03				23	7.65	34.0
TWQ-143	7/17/03	208.00	6989.6	6781.60			
EPA-8	7/15/03	214.20	7076.4	6862.20			
505-A	7/17/03	114.60	6963.1	6848.50			
502-A	7/17/03	193.70	7025.3	6831.60			
501-A	7/17/03	210.40	7048.0	6837.60			
504-A	7/17/03	202.10	7001.4	6799.30			
412	7/17/03	184.40	6979.4	6795.00			

MMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE

JULY MONTH THIRD QUARTER, 20 03

ZONE 3

WELL NO.	DEPT REC./ SAMPLE DATE	DEPTH TO WATER (FT.)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (µs/cm)	FIELD pH (units)	FIELD TEMP. (°c)
504-B	7/14/03	160.40	7001.8	6841.40	5,480	5.35	16.9
517	7/08/03	101.07	6971.75	6870.68	4,520	4.06	18.3
EPA-14	7/08/03	107.48	6965.8	6858.32	4,630	5.90	16.5
420	7/14/03	135.82	6982.6	6846.78	3,660	6.35	17.7
711	7/14/03	179.47	7042.75	6863.28	4,880	4.44	17.0
613	7/08/03	78.14	6961.3	6883.16	10,740	2.78	18.6
708	7/14/03	148.50	7012.0	6863.50	5,190	3.78	17.3
(QA/QC) 711 DUP.	7/14/03	180.10	7042.75	6862.65	4,900	4.58	16.5
(QA/QC) F.BLANK	7/15/03				22	7.87	30.3
NBL-1	7/14/03	169.88	6988.9	6819.02	3,500	6.29	16.5
EPA-9	7/15/03	169.84	7076.6	6906.76			
EPA-13	7/14/03	165.40	7032.9	6867.50	5,670	5.79	17.7
702	7/17/03	80.90	6974.2	6893.30			
710	7/17/03	157.95	7016.5	6858.55			
712	7/17/03	169.52	7022.2	6852.68			
713	7/17/03	164.00	7024.5	6860.50			
714	7/17/03	97.15	6962.9	6865.75			
701	7/17/03	82.53	6961.3	6878.77			
706	7/17/03	111.20	6972.5	6861.30			
707	7/17/03	148.70	7005.2	6856.50			
717	7/08/03	118.69	6972.3	6853.61	3,980	6.28	18.3
719	7/14/03	157.32	7002.0	6844.68	5,140	3.09	16.6
402	7/17/03	113.58	6968.2	6854.62			
446	7/17/03	156.80	6998.3	6841.50			
424	7/17/03	121.95	6973.1	6851.15			

COMMENTS:

QUARTERLY WATER LEVELS
3RD QUARTER 2003

SOUTHWEST ALLUVIUM

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
509-D	7-7-03	0900	70.63'	6949.5	6878.87
632	7-7-03	1145	41.45'	6903.6	6862.15
GW-1	7-7-03	1435	58.80'	6916.5	6857.70
GW-2	7-7-03	1400	52.97'	6912.9	6859.93
EPA-23	7-7-03	0935	49.20'	6926.5	6877.30
EPA-28	7-7-03	1510	60.38'	6917.9	6857.52
624	7-8-03	0900	48.87'	6898.7	6849.83
627	7-8-03	1135	55.72'	6892.4	6836.68
805	7-17-03	1130	50.14'	6915.6	6865.46
807	7-17-03	1125	54.00'	6923.4	6869.40
EPA-25	7-8-03	1050	51.42'	6903.4	6851.98
GW-3	7-8-03	1000	50.45'	6910.0	6859.55
801	7-7-03	1330	47.97'	6904.3	6856.33
802	7-7-03	1110	44.35'	6907.1	6862.75
803	7-7-03	1005	58.57'	6922.6	6864.03
808	7-7-03	1040	45.73'	6910.7	6864.97

QUARTERLY WATER LEVELS
3RD QUARTER 2003

ZONE - 1

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
515-A	7-9-03	0925	100.00'	7008.8	6908.80
604	7-9-03	0955	98.68'	7006.0	6907.32
614	7-9-03	0840	100.30'	7012.0	6911.70
EPA-2	7-14-03	1325	170.40'	7019.5	6849.10
EPA-4	7-15-03	0855	202.66'	7069.8	6867.14
EPA-5	7-9-03	1115	121.43'	7011.5	6890.07
EPA-7	7-9-03	1035	110.98'	7011.7	6900.72
EPA-8	7-15-03	0940	214.20'	7076.4	6862.20
TWQ-142	7-15-03	1000	201.55'	6983.4	6781.85
TWQ-143	7-17-03	0845	208.00'	6989.6	6781.60
505-A	7-17-03	0930	114.60'	6963.1	6848.50
502-A	7-17-03	0950	193.70'	7025.3	6831.60
501-A	7-17-03	1005	210.40'	7048.0	6837.60
504-A	7-17-03	1045	202.10'	7001.4	6799.30
412	7-17-03	0905	184.40'	6979.4	6795.00

QUARTERLY WATER LEVELS
3RD QUARTER 2003

ZONE - 3

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
420	7-14-03	1010	135.82'	6982.6	6846.78
711	7-14-03	1420	179.47'	7042.75	6863.28
504-B	7-14-03	0850	160.40'	7001.8	6841.40
EPA-9	7-15-03	0935	169.84'	7076.6	6906.76
EPA-13	7-14-03	1120	165.40'	7032.9	6867.50
EPA-14	7-8-03	1440	107.48'	6965.8	6858.32
702	7-17-03	1110	80.90'	6974.2	6893.30
710	7-17-03	1020	157.95'	7016.5	6858.55
712	7-17-03	1030	169.52'	7022.2	6852.68
713	7-17-03	1035	164.00'	7024.5	6860.50
714	7-17-03	0920	97.15'	6962.9	6865.75
613	7-8-03	1330	78.14'	6961.3	6883.16
701	7-17-03	0935	82.53'	6961.3	6878.77
706	7-17-03	0940	111.20'	6972.5	6861.30
707	7-17-03	1015	148.70'	7005.2	6856.50
717	7-8-03	1515	118.69'	6972.3	6853.61
719	7-14-03	0935	157.32'	7002.0	6844.68
402	7-17-03	0910	113.58'	6968.2	6854.62
424	7-17-03	0905	121.95'	6973.1	6851.15
446	7-17-03	1100	156.80'	6998.3	6841.50
517	7-8-03	1400	101.07'	6971.75	6870.68
708	7-14-03	1510	148.50'	7012.0	6863.50
NBL-1	7-14-03	1050	169.88'	6988.9	6819.02

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE

October MONTH Fourth QUARTER, 2003

SOUTHWEST ALLIVIUM

WELL NO.	DEPT REC./ SAMPLE DATE	DEPTH TO WATER (FT.)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (µs/cm)	FIELD pH (units)	FIELD TEMP. (°c)
509-D	10/06/03	70.92	6949.5	6878.58	5,870	6.24	13.6
624	10/07/03	48.85	6898.7	6849.85	5,410	6.40	14.5
627	10/07/03	55.79	6892.4	6836.61	5,550	6.90	14.0
632	10/07/03	41.65	6903.6	6861.95	7,010	6.18	15.0
801	10/06/03	48.50	6904.3	6855.80	6,420	6.21	15.5
802	10/06/03	44.64	6907.1	6862.46	7,680	6.30	16.0
803	10/06/03	58.36	6922.6	6864.24	6,530	6.27	15.9
808	10/06/03	46.00	6910.7	6864.70	6,710	6.25	15.4
GW-1	10/06/03	59.12	6916.5	6857.38	6,230	6.39	14.7
GW-2	10/06/03	53.20	6912.9	6859.70	6,040	6.19	15.1
GW-3	10/07/03	50.51	6910.0	6859.49	5,580	6.46	14.4
EPA-23	10/06/03	49.40	6926.5	6877.10	4,400	6.46	14.4
EPA-25	10/07/03	51.38	6903.4	6852.02	4,410	6.77	13.1
EPA-28	10/07/03	60.76	6917.9	6857.14	5,010	6.54	16.4
(QA/QC) 624 DUP	10/7/03	48.80	6898.7	6849.90	5,480	6.41	15.0
(QA/QC)							
805	10/16/03	50.33	6915.6	6865.27			
807	10/16/03	54.20	6923.4	6869.20			

MMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE

October MONTH Fourth QUARTER, 2003

ZONE 1

WELL NO.	DEPT REC./ SAMPLE DATE	DEPTH TO WATER (FT.)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (µs/cm)	FIELD pH (units)	FIELD TEMP. (°c)
515-A	10/08/03	99.88	7008.8	6908.92	7,220	5.24	14.2
604	10/08/03	98.64	7006.0	6907.36	6,570	4.72	14.5
614	10/08/03	100.28	7012.0	6911.72	7,120	6.28	14.2
TWQ-142	10/13/03	201.26	6983.4	6782.14	1,632	7.85	14.7
EPA-2	10/14/03	170.69	7019.5	6848.81	2,860	6.67	14.4
EPA-4	10/14/03	202.84	7069.8	6866.96	4,440	6.49	14.6
EPA-5	10/14/03	121.37	7011.5	6890.13	4,920	5.72	15.9
EPA-7	10/14/03	111.05	7011.7	6900.65	6,970	5.87	15.0
(QA/QC) EPA-2 DUP	10/14/03	171.00	7019.5	6848.50	2,900	6.64	14.2
(QA/QC) F.Blank	10/8/03				26	6.81	24.2
TWQ-143	10/15/03	207.90	6989.6	6781.70			
EPA-8	10/14/03	214.18	7076.4	6862.22			
505-A	10/15/03	114.70	6963.1	6848.40			
502-A	10/16/03	193.70	7025.3	6831.60			
501-A	10/16/03	210.50	7048.0	6837.50			
504-A	10/16/03	201.99	7001.4	6799.41			
412	10/15/03	184.22	6979.4	6795.18			

MMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, PH, CONDUCTIVITY, AND TEMPERATURE

October MONTH Fourth QUARTER, 20 03

ZONE 3

WELL NO.	DEPT REC./ SAMPLE DATE	DEPTH TO WATER (FT.)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (µs/cm)	FIELD pH (units)	FIELD TEMP. (°c)
504-B	10/13/03	160.55	7001.8	6841.25	5,290	5.48	14.7
517	10/13/03	101.18	6971.75	6870.57	4,370	4.22	15.2
EPA-14	10/13/03	108.05	6965.8	6857.75	4,370	5.94	16.5
420	10/13/03	135.74	6982.6	6846.86	3,540	6.38	15.3
711	10/14/03	179.52	7042.75	6863.23	4,700	4.73	13.0
613	10/08/03	77.92	6961.3	6883.38	10,550	3.11	14.5
708	10/15/03	148.59	7012.0	6863.41	5,030	3.88	13.1
(QA/QC)711 DUP	10/14/03	180.10	7042.75	6862.65	4,660	4.76	13.0
(QA/QC)F.Blank	10/15/03				23	7.18	20.7
NBL-1	10/13/03	170.00	6988.9	6818.90	3,410	6.37	14.5
EPA-9	10/14/03	169.88	7076.6	6906.72			
EPA-13	10/14/03	165.44	7032.9	6867.46	5,540	5.90	13.0
702	10/16/03	80.90	6974.2	6893.30			
710	10/15/03	157.90	7016.5	6858.60			
712	10/16/03	169.60	7022.2	6852.60			
713	10/16/03	164.15	7024.5	6860.35			
714	10/15/03	97.40	6962.9	6865.50			
701	10/15/03	83.57	6961.3	6877.73			
706	10/15/03	111.30	6972.5	6861.20			
707	10/16/03	148.93	7005.2	6856.27			
717	10/13/03	119.08	6972.3	6853.22	3,880	6.37	15.6
719	10/13/03	157.58	7002.0	6844.42	4,870	3.09	14.7
402	10/15/03	114.05	6968.2	6854.15			
446	10/15/03	157.60	6998.3	6840.70			
424	10/15/03	122.30	6973.1	6850.80			

OMMENTS:

QUARTERLY WATER LEVELS
4TH QUARTER 2003

SOUTHWEST ALLUVIUM

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
509-D	10-6-03	0930	70.92'	6949.5	6878.58
632	10-7-03	1200	41.65'	6903.6	6861.95
GW-1	10-6-03	1440	59.12'	6916.5	6857.38
GW-2	10-6-03	1405	53.20'	6912.9	6859.70
EPA-23	10-6-03	1005	49.40'	6926.5	6877.10
EPA-28	10-7-03	1115	60.76'	6917.9	6857.14
624	10-7-03	1000	48.85'	6898.7	6849.85
627	10-7-03	1510	55.79'	6892.4	6836.61
805	10-16-03	1055	50.33'	6915.6	6865.27
807	10-16-03	1050	54.20'	6923.4	6869.20
EPA-25	10-7-03	1430	51.38'	6903.4	6852.02
GW-3	10-7-03	1345	50.51'	6910.0	6859.49
801	10-6-03	1330	48.50'	6904.3	6855.80
802	10-6-03	1140	44.64'	6907.1	6862.46
803	10-6-03	1035	58.36'	6922.6	6864.24
808	10-6-03	1110	46.00'	6910.7	6864.70

QUARTERLY WATER LEVELS
4TH QUARTER 2003

ZONE - 1

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
515-A	10-8-03	0945	99.88'	7008.8	6908.92
604	10-8-03	1025	98.64'	7006.0	6907.36
614	10-8-03	0900	100.28'	7012.0	6911.72
EPA-2	10-14-03	1025	170.69'	7019.5	6848.81
EPA-4	10-14-03	1300	202.84'	7069.8	6866.96
EPA-5	10-14-03	1345	121.37'	7011.5	6890.13
EPA-7	10-14-03	1425	111.05'	7011.7	6900.65
EPA-8	10-14-03	1338	214.18'	7076.4	6862.22
TWQ-142	10-13-03	0920	201.26'	6983.4	6782.14
TWQ-143	10-15-03	1505	207.90'	6989.6	6781.70
505-A	10-15-03	1535	114.70'	6963.1	6848.40
502-A	10-16-03	1000	193.70'	7025.3	6831.60
501-A	10-16-03	1010	210.50'	7048.0	6837.50
504-A	10-16-03	1015	201.99'	7001.4	6799.41
412	10-15-03	1515	184.22'	6979.4	6795.18

QUARTERLY WATER LEVELS
4TH QUARTER 2003

ZONE - 3

WELL NO.	DATE	TIME	DEPTH TO WATER	REFERENCE ELEVATION	TOP OF WATER ELEVATION
420	10-13-03	1320	135.74'	6982.6	6846.86
711	10-14-03	0845	179.52'	7042.75	6863.23
504-B	10-13-03	1040	160.55'	7001.8	6841.25
EPA-9	10-14-03	1334	169.88'	7076.6	6906.72
EPA-13	10-14-03	0940	165.44'	7032.9	6867.46
EPA-14	10-13-03	1430	108.05'	6965.8	6857.75
702	10-16-03	1035	80.90'	6974.2	6893.30
710	10-15-03	1545	157.90'	7016.5	6858.60
712	10-16-03	1025	169.60'	7022.2	6852.60
713	10-16-03	0915	164.15'	7024.5	6860.35
714	10-15-03	1530	97.40'	6962.9	6865.50
613	10-8-03	1105	77.92'	6961.3	6883.38
701	10-15-03	1535	83.57'	6961.3	6877.73
706	10-15-03	1540	111.30'	6972.5	6861.20
707	10-16-03	0950	148.93'	7005.2	6856.27
717	10-13-03	1355	119.08'	6972.3	6853.22
719	10-13-03	1115	157.58'	7002.0	6844.42
402	10-15-03	1525	114.05'	6968.2	6854.15
424	10-15-03	1520	122.30'	6973.1	6850.80
446	10-15-03	1510	157.60'	6998.3	6840.70
517	10-13-03	1510	101.18'	6971.75	6870.57
708	10-15-03	0905	148.59'	7012.0	6863.41
NBL-1	10-13-03	1000	170.00'	6988.9	6818.90

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY AND OCTOBER OF 2003

SOUTH WEST ALLUVIUM

*509-D

624

627

*632

801

802

803

808

*GW-1

*GW-2

*GW-3

*EPA-23

EPA-25

*EPA-28

LEVELS ONLY

805

807

*POINT OF COMPLIANCE WELLS

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	509-D	509-D	509-D	509-D
LABORATORY ID:	C03010389-001	C03040535-001	C03070473-001	C03100451-001
SAMPLE DATE/TIME:	01/06/2003 09:15	04/07/2003 9:00	07/07/2003 09:00	10/06/2003 09:30
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	840	887	816	901
Magnesium	EPA 200.7	mg/L	0.01	309	344	316	362
Sodium	EPA 200.7	mg/L	0.05	240	275	280	297
Potassium	EPA 200.7	mg/L	0.10	12.4	18.6	22.8	13.6
Bicarbonate	SM 2320-B	mg/L	0.10	2150	2160	2120	2160
Sulfate	EPA 200.7	mg/L	1.0	1640	1700	1670	1840
Chloride	EPA 200.7	mg/L	1.0	291	330	344	338
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.10	2.10	1.46	2.21
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	23.7	23.3	23.3	21.4
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5260	5320	5350	5360
pH	SM 4500-H-B	std. units	0.10	6.84	6.77	7.28	7.97
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	0.02	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	2.90	2.45	3.46	3.10
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.190	0.190	0.220	0.231
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	1.5	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				1.0	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		79.3	81.8	80.9	84.8
Cation	meq		78.7	85.7	80.2	88.8
SM A/C Balance	%	-5 - +5	-0.36	2.36	-0.44	2.31
Calc TDS	mg/L		4517	4743	4617	4932
TDS A/C Balance	dec. %	0.80 - 1.20	1.16	1.12	1.16	1.09

criss: r:\reports\clients2003\unc_mining\1_alluvium\509-d\c03100451-1.xls

TRACKING NO. PAGE NO.
100451R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	624	624	624	624
LABORATORY ID:	C03010389-010	C03040535-011	C03070473-011	C03100451-009
SAMPLE DATE/TIME:	01/07/2003 08:50	04/08/2003 8:50	07/08/2003 09:00	10/07/2003 10:00
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	733	685	646	725
Magnesium	EPA 200.7	mg/L	0.01	480	422	413	469
Sodium	EPA 200.7	mg/L	0.05	242	230	198	239
Potassium	EPA 200.7	mg/L	0.10	7.4	8.3	8.5	6.4
Bicarbonate	SM 2320-B	mg/L	0.10	1490	1450	1480	1430
Sulfate	EPA 200.7	mg/L	1.0	2250	1900	2040	2240
Chloride	EPA 200.7	mg/L	1.0	175	184	158	178
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.19	0.11	0.07	0.20
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	92.0	102	100	90.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5210	5250	4540	5260
pH	SM 4500-H-B	std. units	0.10	7.21	6.85	7.41	7.76
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.04	0.04	0.05	0.05
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0348	0.0336	0.0289	0.0333
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	0.5	< 0.2	< 0.2
Radium Error Estimate ±				-	0.2	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		82.8	75.8	78.4	81.6
Cation	meq		87.4	79.6	75.6	85.9
SM A/C Balance	%	-5 - +5	2.69	2.46	-1.82	2.60
Calc TDS	mg/L		5040	4606	4647	4971
TDS A/C Balance	dec. %	0.80 - 1.20	1.03	1.14	0.98	1.06

criss: r:\reports\clients2003\unc_mining\1_alluvium\624\c03100451-9.xls

TRACKING NO. PAGE NO
100451R000

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	627	627	627	627
LABORATORY ID:	C03010389-015	C03040535-015	C03070473-015	C03100451-015
SAMPLE DATE/TIME:	01/07/2003 13:10	04/08/2003 11:40	07/08/2003 11:35	10/07/2003 15:10
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	586	555	534	613
Magnesium	EPA 200.7	mg/L	0.01	315	277	282	321
Sodium	EPA 200.7	mg/L	0.05	556	496	455	531
Potassium	EPA 200.7	mg/L	0.10	4.6	7.9	6.0	5.0
Bicarbonate	SM 2320-B	mg/L	0.10	614	603	317	625
Sulfate	EPA 200.7	mg/L	1.0	2710	2280	2530	2700
Chloride	EPA 200.7	mg/L	1.0	71.9	58.1	48.7	56.7
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.17	0.11	0.09	0.13
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	128	147	142	134
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5190	5220	5190	5310
pH	SM 4500-H-B	std. units	0.10	7.78	7.50	7.70	7.74
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.10	0.08	0.09	0.06
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0291	0.0278	0.0241	0.0279
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		77.7	69.5	69.4	77.7
Cation	meq		79.9	72.6	70.1	80.6
SM A/C Balance	%	-5 - +5	1.38	2.18	0.52	1.87
Calc TDS	mg/L		5118	4627	4643	5133
TDS A/C Balance	dec. %	0.80 - 1.20	1.01	1.13	1.12	1.03

criss: r:\reports\clients2003\unc_mining\1_alluvium\627\c03100451-15.xls

TRACKING NO. PAGE NO.
100451R0015

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	632	632	632	632
LABORATORY ID:	C03010389-009	C03040535-006	C0370473-006	C03100451-012
SAMPLE DATE/TIME:	01/06/2003 14:35	04/07/2003 11:35	07/07/2003 11:45	10/07/2003 12:00
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	637	607	593	644
Magnesium	EPA 200.7	mg/L	0.01	798	744	726	812
Sodium	EPA 200.7	mg/L	0.05	424	388	340	394
Potassium	EPA 200.7	mg/L	0.10	9.70	12.6	12.2	9.40
Bicarbonate	SM 2320-B	mg/L	0.10	1660	1670	1700	1690
Sulfate	EPA 200.7	mg/L	1.0	3620	3070	3330	3610
Chloride	EPA 200.7	mg/L	1.0	232	242	217	250
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.44	0.40	0.42	0.44
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	45.2	48.0	49.2	49.5
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7170	7210	5700	7310
pH	SM 4500-H-B	std. units	0.10	7.52	7.15	6.74	7.70
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.04	1.22	1.27	1.24
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0636	0.0646	0.0593	0.0700
Radium 226	EPA 903.0	pCi/L	0.2	1.0	0.8	0.8	0.5
Radium Error Estimate ±				0.3	0.3	0.2	0.3
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	1.8	< 1.0	2.0	1.6
G. Alpha Error Estimate ±				1.0	-	1.0	1.0
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	2.2	2.4	0.2	2.4
Quality Assurance Data			**Target Range**				
Anion		meq		112	102	107	113
Cation		meq		117	110	105	117
SM A/C Balance		%	-5 - +5	2.06	3.81	-0.72	1.67
Calc TDS		mg/L		6753	6113	6288	6785
TDS A/C Balance		dec. %	0.80 - 1.20	1.06	1.18	0.91	1.08

criss: r:\reports\clients2003\unc_mining\1_alluvium\632\c03100451-12.xls

TRACKING NO. PAGE NO.
100451R0012

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	801	801	801	801
LABORATORY ID:	C03010389-006	C03040535-007	C03070473-007	C03100451-006
SAMPLE DATE/TIME:	01/06/2003 13:00	04/07/2003 13:15	07/07/2003 13:30	10/06/2003 13:30
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	561	542	517	585
Magnesium	EPA 200.7	mg/L	0.01	785	731	694	764
Sodium	EPA 200.7	mg/L	0.05	380	358	316	364
Potassium	EPA 200.7	mg/L	0.10	14.1	17.4	15.4	12.7
Bicarbonate	SM 2320-B	mg/L	0.10	1520	1520	1550	1520
Sulfate	EPA 200.7	mg/L	1.0	3600	3170	3350	3640
Chloride	EPA 200.7	mg/L	1.0	193	226	200	219
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	6.00	5.60	5.30	5.20
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	1.50	2.80	1.20	1.20
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6860	6910	6880	6730
pH	SM 4500-H-B	std. units	0.10	7.41	7.31	7.18	7.54
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	5.61	5.08	5.25	4.65
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0404	0.0416	0.0385	0.0453
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	0.6	0.4	0.6
Radium Error Estimate ±				-	0.2	0.3	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	1.4	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				1.0	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	3.1	3.1	3.7	2.9

Quality Assurance Data		Target Range				
Anion	meq		105	98	101	107
Cation	meq		111	105	98	110
SM A/C Balance	%	-5 - +5	2.60	3.55	-1.22	1.24
Calc TDS	mg/L		6313	5829	5885	6361
TDS A/C Balance	dec. %	0.80 - 1.20	1.09	1.19	1.17	1.06

TRACKING NO. PAGE NO.
100451R0006

criss: r:\reports\clients2003\unc_mining\1_alluvium\801\c03100451-6.xls

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	802	802	802	802
LABORATORY ID:	C03010389-005	C03040535-005	C03070473-005	C03100451-005
SAMPLE DATE/TIME:	01/06/2003 11:15	04/07/2003 11:05	07/07/2003 11:10	10/06/2003 11:40
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	843	759	712	765
Magnesium	EPA 200.7	mg/L	0.01	873	810	792	927
Sodium	EPA 200.7	mg/L	0.05	393	335	327	376
Potassium	EPA 200.7	mg/L	0.10	12.5	9.20	9.40	7.10
Bicarbonate	SM 2320-B	mg/L	0.10	2310	2300	2300	2440
Sulfate	EPA 200.7	mg/L	1.0	3620	3050	3260	3710
Chloride	EPA 200.7	mg/L	1.0	228	210	195	211
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.16	0.14	0.11	0.24
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	88.0	103	97.0	88.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7840	7890	8150	8140
pH	SM 4500-H-B	std. units	0.10	7.52	7.34	7.90	7.45
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.64	0.63	0.70	0.77
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.218	0.240	0.223	0.254
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	0.4	< 0.2	0.4
Radium Error Estimate ±				-	0.2	-	0.2
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	4.1	5.0	6.6	6.2

Quality Assurance Data		Target Range				
Anion	meq		126	115	118	130
Cation	meq		132	120	116	132
SM A/C Balance	%	-5 - +5	2.46	2.46	-0.83	0.98
Calc TDS	mg/L		7515	6780	6876	7607
TDS A/C Balance	dec. %	0.80 - 1.20	1.04	1.16	1.19	1.07

TRACKING NO. PAGE NO.
100451R0005

criss: r:\reports\clients2003\unc_mining\1_alluvium\802\c03100451-5.xls

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	803	803	803	803
LABORATORY ID:	C03010389-003	C03040535-003	C03070473-003	C03100451-003
SAMPLE DATE/TIME:	01/06/2003 10:20	04/07/2003 10:10	07/07/2003 10:05	10/06/2003 10:35
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	Novemeber 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	630	693	653	724
Magnesium	EPA 200.7	mg/L	0.01	668	732	670	776
Sodium	EPA 200.7	mg/L	0.05	261	269	246	287
Potassium	EPA 200.7	mg/L	0.10	13.3	15.3	12.2	11.5
Bicarbonate	SM 2320-B	mg/L	0.10	1870	1860	1850	1870
Sulfate	EPA 200.7	mg/L	1.0	2920	2940	2980	3370
Chloride	EPA 200.7	mg/L	1.0	143	174	148	165
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.87	0.74	0.93	1.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	54.0	51.0	52.0	49.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6900	7000	6940	6860
pH	SM 4500-H-B	std. units	0.10	7.27	7.13	7.37	7.96
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.94	1.98	1.91	2.34
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.161	0.126	0.138	0.164
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	0.5	0.3	< 0.2
Radium Error Estimate ±				-	0.2	0.3	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	1.2	1.4	1.2

Quality Assurance Data		Target Range				
Anion	meq		99	100	100	109
Cation	meq		99	108	100	114
SM A/C Balance	%	-5 - +5	-0.18	3.66	-0.32	2.17
Calc TDS	mg/L		5813	5982	5868	6489
TDS A/C Balance	dec. %	0.80 - 1.20	1.19	1.17	1.18	1.06

criss: r:\reports\clients2003\unc_mining\1_alluvium\803\c03100451-3.xls

TRACKING NO. PAGE NO.
100451R0003

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	808	808	808	808
LABORATORY ID:	C03010389-004	C03040535-004	C03070473-004	C03100451-004
SAMPLE DATE/TIME:	01/06/2003 10:50	04/07/2003 10:40	07/07/2003 10:40	10/06/2003 11:10
DATE/TIME RECEIVED:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	655	753	720	784
Magnesium	EPA 200.7	mg/L	1.0	609	657	640	719
Sodium	EPA 200.7	mg/L	1.0	283	308	267	326
Potassium	EPA 200.7	mg/L	1.0	9.7	7.9	7.9	5.2
Bicarbonate	SM 2320-B	mg/L	0.10	1910	1910	1900	1880
Sulfate	EPA 200.7	mg/L	1.0	2510	2600	2740	3030
Chloride	EPA 200.7	mg/L	1.0	144	194	170	180
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.12	0.13	0.30	0.16
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	131	125	122	127
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6900	6870	7130	7000
pH	SM 4500-H-B	std. units	0.10	7.32	6.71	7.61	7.52
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.65	0.68	0.60	0.74
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.138	0.126	0.115	0.150
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 624	µg/L	1.0	5.0	5.1	6.8	6.3
Quality Assurance Data			**Target Range**				
Anion		meq		97	100	102	108
Cation		meq		96	106	101	113
SM A/C Balance		%	-5 - +5	-0.48	3.00	-0.26	2.43
Calc TDS		mg/L		5747	6029	6036	6548
TDS A/C Balance		dec. %	0.80 - 1.20	1.20	1.14	1.18	1.07

criss: r:\reports\clients2003\unc_mining\1_alluvium\808\c03100451-4.xls

TRACKING NO. PAGE NO.
100451R0004

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	GW-1	GW-1	GW-1	GW-1
LABORATORY ID:	C03010389-008	C03040535-009	C03070473-009	C03100451-008
SAMPLE DATE/TIME:	01/06/2003 14:00	04/07/2003 14:20	07/07/2003 14:35	10/06/2003 14:40
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	768	704	678	743
Magnesium	EPA 200.7	mg/L	0.01	544	504	514	583
Sodium	EPA 200.7	mg/L	0.05	302	288	261	319
Potassium	EPA 200.7	mg/L	0.10	6.7	5.9	7.0	4.7
Bicarbonate	SM 2320-B	mg/L	0.10	1390	1360	1380	1520
Sulfate	EPA 200.7	mg/L	1.0	2620	2280	2550	2740
Chloride	EPA 200.7	mg/L	1.0	166	209	192	223
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.94	0.41	0.39	0.59
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	119	124	129	102
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5980	6050	5400	6150
pH	SM 4500-H-B	std. units	0.10	7.61	7.27	7.28	7.74
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.05	0.05	0.05	0.05
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.116	0.0963	0.0885	0.105
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		90.5	84.5	90.4	95.6
Cation	meq		97.1	89.9	88.3	99.8
SM A/C Balance	%	-5 - +5	3.50	3.08	-1.16	2.15
Calc TDS	mg/L		5630	5221	5464	5825
TDS A/C Balance	dec. %	0.80 - 1.20	1.06	1.16	0.99	1.06

criss: r:\reports\clients2003\unc_mining\1_alluvium\gw-1\c03100451-8.xls

TRACKING NO. PAGE N
100451R000

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	GW-2	GW-2	GW-2	GW-2
LABORATORY ID:	C03010389-007	C03040535-008	C03070473-008	C03100451-007
SAMPLE DATE/TIME:	01/06/2003 13:30	04/07/2003 13:45	07/07/2003 14:00	10/06/2003 14:05
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	705	678	658	760
Magnesium	EPA 200.7	mg/L	0.01	571	518	505	586
Sodium	EPA 200.7	mg/L	0.05	276	267	246	305
Potassium	EPA 200.7	mg/L	0.10	8.60	14.3	12.4	24.8
Bicarbonate	SM 2320-B	mg/L	0.10	1750	1810	1970	2080
Sulfate	EPA 200.7	mg/L	1.0	2580	2210	2360	2630
Chloride	EPA 200.7	mg/L	1.0	196	214	189	233
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.18	0.12	0.11	0.20
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	27.5	26.7	26.3	24.8
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5640	5760	5110	5980
pH	SM 4500-H-B	std. units	0.10	7.52	7.12	7.14	8.00
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.56	0.47	0.55	0.63
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0829	0.0886	0.0808	0.104
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	0.7	< 0.2	< 0.2
Radium Error Estimate ±				-	0.2	-	-
Radium 228	EPA 904.0	pCi/L	1.0	4.2	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				1.0	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		89.9	83.6	88.7	97.2
Cation		meq		95.1	89.1	86.0	100.8
SM A/C Balance		%	-5 - +5	2.80	3.14	-1.51	1.79
Calc TDS		mg/L		5334	4925	5073	5690
TDS A/C Balance		dec. %	0.80 - 1.20	1.06	1.17	1.01	1.05

criss: r:\reports\clients2003\unc_mining\1_alluvium\gw-2\c03100451-7.xls

TRACKING NO. PAGE NO.
100451R0007

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	GW-3	GW-3	GW-3	GW-3
LABORATORY ID:	C03010389-013	C03040535-013	C03070473-013	C03100451-013
SAMPLE DATE/TIME:	01/07/2003 10:30	04/08/2003 10:10	07/08/2003 10:00	10/07/2003 13:45
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	981	940	866	988
Magnesium	EPA 200.7	mg/L	0.01	312	282	276	327
Sodium	EPA 200.7	mg/L	0.05	274	256	234	280
Potassium	EPA 200.7	mg/L	0.10	9.6	10.9	9.9	8.6
Bicarbonate	SM 2320-B	mg/L	0.10	1710	1680	1700	1740
Sulfate	EPA 200.7	mg/L	1.0	2210	1900	2000	2220
Chloride	EPA 200.7	mg/L	1.0	154	165	143	171
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.24	0.23	0.21	0.19
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	86.0	98.0	94.0	89.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5530	5540	5480	5490
pH	SM 4500-H-B	std. units	0.10	7.39	7.30	7.46	7.30
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	0.02	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	2.05	2.01	1.93	1.87
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.111	0.106	0.0866	0.104
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	0.4	< 0.2	< 0.2
Radium Error Estimate ±				-	0.2	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	4.0	< 1.0	< 1.0
Radium Error Estimate ±				-	1.0	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		84.6	78.8	80.3	85.9
Cation	meq		87.3	82.0	76.8	89.2
SM A/C Balance	%	-5 - +5	1.62	2.03	-2.18	1.83
Calc TDS	mg/L		5179	4830	4798	5261
TDS A/C Balance	dec. %	0.80 - 1.20	1.07	1.15	1.14	1.1[illegible]

criss: r:\reports\clients2003\unc_mining\1_alluvium\gw-3\c03100451-13.xls

TRACKING NO. PAGE NO.
100451R0013

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	EPA-23	EPA-23	EPA-23	EPA-23
LABORATORY ID:	C03010389-002	C03040535-002	C03070473-002	C03100451-002
SAMPLE DATE/TIME:	01/06/2003 09:50	04/07/2003 9:40	07/07/2003 09:35	10/06/2003 10:05
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	602	635	623	693
Magnesium	EPA 200.7	mg/L	0.01	369	365	360	416
Sodium	EPA 200.7	mg/L	0.05	116	122	119	137
Potassium	EPA 200.7	mg/L	0.10	10.3	13.4	11.0	10.3
Bicarbonate	SM 2320-B	mg/L	0.10	1060	1080	1070	1090
Sulfate	EPA 200.7	mg/L	1.0	2180	2100	2160	2500
Chloride	EPA 200.7	mg/L	1.0	83.4	86.2	71.9	73.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.50	1.20	1.37	1.57
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	0.90	1.30	0.90	0.60
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4510	4490	4660	4550
pH	SM 4500-H-B	std. units	0.10	7.23	7.31	7.61	7.41
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	0.02	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	5.04	4.80	5.28	5.58
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0240	0.0232	0.0248	0.0302
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-			
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		65.2	64.0	64.6	72.1
Cation		meq		66.5	68.2	67.0	76.0
SM A/C Balance		%	-5 - +5	1.01	3.17	1.79	2.63
Calc TDS		mg/L		3902	3874	3891	4385
TDS A/C Balance		dec. %	0.80 - 1.20	1.16	1.16	1.20	1.04

criss: r:\reports\clients2003\unc_mining\l_alluvium\epa-23\c03100451-2.xls

TRACKING NO. PAGE NO.
100451R0002

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	EPA-25	EPA-25	EPA-25	EPA-25
LABORATORY ID:	C03010389-014	C03040535-014	C03070473-014	C03100451-014
SAMPLE DATE/TIME:	01/07/2003 11:15	04/08/2003 10:55	07/08/2003 10:50	10/07/2003 14:30
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	699	679	650	748
Magnesium	EPA 200.7	mg/L	0.01	230	207	209	245
Sodium	EPA 200.7	mg/L	0.05	168	169	157	177
Potassium	EPA 200.7	mg/L	0.10	7.5	10.2	8.8	8.4
Bicarbonate	SM 2320-B	mg/L	0.10	819	802	825	836
Sulfate	EPA 200.7	mg/L	1.0	1770	1570	1710	1880
Chloride	EPA 200.7	mg/L	1.0	87.6	86.9	74.3	89.5
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.27	0.25	0.23	0.27
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	88.0	105	99.0	93.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4030	4060	4270	4190
pH	SM 4500-H-B	std. units	0.10	7.67	7.52	7.72	7.66
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.74	1.72	2.00	2.06
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.1080	0.1080	0.0807	0.100
Radium 226	EPA 903.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		59.1	55.8	58.3	62.0
Cation		meq		61.7	58.9	57.1	65.9
SM A/C Balance		%	-5 - +5	2.21	2.72	-1.06	2.99
Calc TDS		mg/L		3764	3590	3662	3980
TDS A/C Balance		dec. %	0.80 - 1.20	1.07	1.13	1.17	1.05

criss· r:\reports\clients2003\unc_mining\1_alluvium\epa-25\c03100451-14.xls

TRACKING NO. PAGE NO.
100451R0014

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYSIS REPORT
UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: SOUTHWEST ALLUVIUM MONITOR WELLS

WELL ID:	EPA-28	EPA-28	EPA-28	EPA-28
LABORATORY ID:	C03010389-012	C03040535-012	C03070473-010	C03100451-011
SAMPLE DATE/TIME:	01/07/2003 09:45	04/08/2003 09:20	07/07/2003 15:10	10/07/2003 11:15
RECEIVED DATE/TIME:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 3, 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	0.05	554	529	493	698
Magnesium	EPA 200.7	mg/L	0.01	536	480	471	544
Sodium	EPA 200.7	mg/L	0.05	218	205	193	222
Potassium	EPA 200.7	mg/L	0.10	9.9	15.5	13.5	12.6
Bicarbonate	SM 2320-B	mg/L	0.10	694	695	689	677
Sulfate	EPA 200.7	mg/L	1.0	2900	2500	2690	3730
Chloride	EPA 200.7	mg/L	1.0	135	131	121	127
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.12	0.08	0.10	0.27
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	41.8	46.0	42.0	38.8
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5130	5230	5090	5270
pH	SM 4500-H-B	std. units	0.10	7.46	7.02	7.53	7.87
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	0.50	0.48	0.49	0.47
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-B	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium, dissolved	EPA 200.8	mg/L	0.0003	0.0503	0.0464	0.0401	0.0386
Radium 226	EPA 903.0	pCi/L	0.2	0.8	< 0.2	< 0.2	0.3
Radium Error Estimate ±				0.3	-	-	0.3
Radium 228	EPA 904.0	pCi/L	1.0	3.7	5.3	< 1.0	< 1.0
Radium Error Estimate ±				1.0	1.7	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn&U	EPA 900.1	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
G. Alpha Error Estimate ±				-	-	-	-
Trace Organics							
Chloroform	EPA 8260	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		78.6	70.5	73.7	95.2
Cation		meq		82.1	75.8	72.7	90.3
SM A/C Balance		%	-5 - +5	2.21	3.65	-0.73	-2.64
Calc TDS		mg/L		4886	4412	4513	5845
TDS A/C Balance		dec. %	0.80 - 1.20	1.05	1.19	1.13	0.90

criss: r:\reports\clients2003\unc_mining\1_alluvium\epa-28\c03100451-11.xls

TRACKING NO. PAGE NO.
100451R0011

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY AND OCTOBER OF 2003

ZONE 1

515-A

*604

*614

TWQ-142

EPA-2

*EPA-4

*EPA-5

*EPA-7

LEVELS ONLY

TWQ-143

EPA-8

505-A

502-A

501-A

504-A

412

*POINT OF COMPLIANCE WELLS

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	515-A	515-A	515-A	515-A
LABORATORY ID:	C03010390-002	C03040537-002	C03070475-002	C03100452-002
SAMPLE DATE/TIME:	01/08/2003 09:25	04/09/2003 9:45	07/09/2003 09:25	10/08/2003 09:45
DATE RECEIVED:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	385	443	450	453
Magnesium	EPA 200.7	mg/L	1.0	720	816	814	843
Sodium	EPA 200.7	mg/L	1.0	392	402	450	427
Potassium	EPA 200.7	mg/L	1.0	13.1	18.9	14.5	12.4
Bicarbonate	SM 2320-B	mg/L	0.10	209	198	203	190
Sulfate	EPA 200.7	mg/L	1.0	3810	4050	4500	4470
Chloride	EPA 200.7	mg/L	1.0	223	270	246	232
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	3.16	2.81	3.11	2.98
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	57.0	58.0	61.0	59.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7640	7680	6250	7800
pH	SM 4500-H-B	std. units	0.10	6.74	6.37	6.41	6.20
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	2.40	2.40	2.60	2.60
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.09	0.09	0.09	0.09
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	14.8	13.8	15.7	14.8
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.21	0.22	0.26	0.25
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0012	0.0011	0.0008	0.0014
Radium 226	EPA 903.0	pCi/L	0.2	4.0	3.3	2.4	2.2
Radium Error Estimate ±				0.1	0.9	0.5	0.4
Radium 228	EPA 904.0	pCi/L	1.0	5.4	7.0	6.3	2.5
Radium Error Estimate ±				1.0	2.0	1.6	1.4
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Ra & U	EPA 900.0	pCi/L	1.0	5.0	3.5	3.9	5.3
G. Alpha Error Estimate ±				1.0	1.0	1.0	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	162	166	237	148

Quality Assurance Data		Target Range				
Anion	meq		93	99	108	107
Cation	meq		98	109	111	113
SM A/C Balance	%	-5 - +5	2.36	4.65	1.36	2.65
Calc TDS	mg/L		5919	6373	6866	6812
TDS A/C Balance	dec. %	0.80 - 1.20	1.29	1.21	0.91	1.14

criss: r:\reports\clients2003\unc_mining\2_zone_1\515-a\c03100452-2.xls

TRACKING NO. PAGE NO.
100452R0002

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	604	604	604	604
LABORATORY ID:	C03010390-003	C03040793-001	C03070475-003	C03100452-003
SAMPLE DATE/TIME:	01/08/2003 10:00	04/14/2003 09:00	07/09/2003 09:55	10/08/2003 10:25
DATE RECEIVED:	01/13/2003 10:00	04/18/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 12, 2003	August 15, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-4-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	423	454	440	427
Magnesium	EPA 200.7	mg/L	1.0	783	860	794	714
Sodium	EPA 200.7	mg/L	1.0	230	293	261	268
Potassium	EPA 200.7	mg/L	1.0	10.7	15.3	13.3	10.6
Bicarbonate	SM 2320-B	mg/L	0.10	6.7	6.7	6.7	8.5
Sulfate	EPA 200.7	mg/L	1.0	4250	4690	4500	4320
Chloride	EPA 200.7	mg/L	1.0	48.4	55.8	57.7	50.5
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.88	0.78	1.08	0.74
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	61.0	71.0	66.0	68.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7440	7360	7470	7450
pH	SM 4500-H-B	std. units	0.10	4.76	4.64	4.75	4.79
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	12.9	11.8	11.7	13.7
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	0.006	< 0.005	0.006	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.29	0.26	0.29	0.31
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	10.9	9.91	11.9	11.3
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.32	0.28	0.32	0.34
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0019	0.0019	0.0008	0.0023
Radium 226	EPA 903.0	pCi/L	0.2	3.6	2.8	1.8	1.4
Radium Error Estimate ±				0.5	0.4	0.4	0.3
Radium 228	EPA 904.0	pCi/L	1.0	6.8	15.3	8.2	3.5
Radium Error Estimate ±				1.1	2.2	1.7	1.5
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	4.7	8.4	4.0	5.8
G. Alpha Error Estimate ±				1.0	1.6	1.0	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	3.8	< 1.0	2.4	2.8

Quality Assurance Data		Target Range				
Anion	meq		94	104	100	96
Cation	meq		97	108	101	93
SM A/C Balance	%	-5 - +5	1.54	1.71	0.19	-1.57
Calc TDS	mg/L		6031	6697	6375	6108
TDS A/C Balance	dec. %	0.80 - 1.20	1.23	1.10	1.17	1.22

crisc: r:\reports\clients2003\unc_mining\2_zone_1\604\c03100452-3.xls

TRACKING NO. PAGE NO.
100452R0003

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	614	614	614	614
LABORATORY ID:	C03010390-001	C03040537-001	C03070475-001	C03100452-001
SAMPLE DATE/TIME:	01/08/2003 08:40	04/09/2003 9:00	07/09/2003 08:40	10/08/2003 09:00
DATE RECEIVED:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/10/2003 10:00
REPORT DATE:	February 4, 2003	May 1, 2003	August 15, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	519	559	559	579
Magnesium	EPA 200.7	mg/L	1.0	598	640	609	576
Sodium	EPA 200.7	mg/L	1.0	465	434	467	460
Potassium	EPA 200.7	mg/L	1.0	12.1	16.5	12.0	9.80
Bicarbonate	SM 2320-B	mg/L	0.10	1470	1450	1430	1330
Sulfate	EPA 200.7	mg/L	1.0	3020	2918	3060	3060
Chloride	EPA 200.7	mg/L	1.0	247	334	314	312
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	81.0	76.0	58.0	50.0
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	74.0	72.0	73.0	71.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6680	6840	6430	6670
pH	SM 4500-H-B	std. units	0.10	7.60	7.13	7.38	7.32
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.25	0.22	0.25	0.24
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0573	0.0536	0.0403	0.0468
Radium 226	EPA 903.0	pCi/L	0.2	1.2	< 0.2	0.5	0.6
Radium Error Estimate ±				0.2	-	0.3	0.3
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	4.0	< 1.0	2.9
Radium Error Estimate ±				-	2.0	-	1.4
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	2.1	1.6	< 1.0	2.0
G. Alpha Error Estimate ±				1.0	1.0	-	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	222	248	285	192
Quality Assurance Data			**Target Range**				
Anion		meq		99	99	101	99
Cation		meq		102	106	103	101
SM A/C Balance		%	-5 - +5	1.42	3.37	1.08	0.69
Calc TDS		mg/L		6029	6044	6134	6041
TDS A/C Balance		dec. %	0.80 - 1.20	1.11	1.13	1.05	1.10

criss: r:\reports\clients2003\unc_mining\2_zone_1\614\c03100452-1.xls

TRACKING NO. PAGE NO.
100452R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	TWQ-142	TWQ-142	TWQ-142	TWQ-142
LABORATORY ID:	C03010599-001	C03040793-005	C03070772-004	C03100682-001
SAMPLE DATE/TIME:	01/13/2003 14:26	04/14/2003 13:30	07/15/2003 10:00	10/13/2003 09:20
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	24.1	22.5	23.1	24.5
Magnesium	EPA 200.7	mg/L	1.0	8.60	8.70	8.70	10.0
Sodium	EPA 200.7	mg/L	1.0	313	315	315	319
Potassium	EPA 200.7	mg/L	1.0	3.3	5.6	4.3	3.1
Bicarbonate	SM 2320-B	mg/L	0.10	255	245	245	235
Sulfate	EPA 200.7	mg/L	1.0	526	555	517	553
Chloride	EPA 200.7	mg/L	1.0	21.3	18.4	20.8	21.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	< 0.05	0.17	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	0.20	0.20	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	1060	1080	1100	1070
pH	SM 4500-H-B	std. units	0.10	7.93	7.76	7.99	8.04
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	1.10	< 0.10	0.40	0.40
Arsenic III	SM 3114-C	mg/L	0.001	0.003	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	0.03	0.02	0.05	0.09
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0004	0.0003	< 0.0003	0.0061
Radium 226	EPA 903.0	pCi/L	0.2	1.0	< 0.2	0.3	< 0.2
Radium Error Estimate ±				0.2	-	0.2	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	1.9	1.1	< 1.0	< 1.0
G. Alpha Error Estimate ±				1.0	1.0	-	-
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		15.7	16.1	15.4	16.0
Cation	meq		15.6	15.7	15.7	16.0
SM A/C Balance	%	-5 - +5	-0.40	-1.31	1.01	0.08
Calc TDS	mg/L		1024	1049	1013	1049
TDS A/C Balance	dec. %	0.80 - 1.20	1.03	1.03	1.09	1.02

criss: r:\reports\clients2003\unc_mining\2_zone_1\twq-142\c03100682-1.xls

TRACKING NO. PAGE NO.
100682R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	EPA-2	EPA-2	EPA-2	EPA-2
LABORATORY ID:	C03010599-002	C03040793-006	C03070772-001	C03100682-002
SAMPLE DATE/TIME:	01/14/2003 08:50	04/14/2003 09:50	07/14/2003 13:25	10/14/2003 10:25
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	345	328	352	390
Magnesium	EPA 200.7	mg/L	1.0	154	141	156	172
Sodium	EPA 200.7	mg/L	1.0	172	194	183	194
Potassium	EPA 200.7	mg/L	1.0	6.4	9.0	7.1	6.0
Bicarbonate	SM 2320-B	mg/L	0.10	409	448	436	438
Sulfate	EPA 200.7	mg/L	1.0	1410	1550	1460	1620
Chloride	EPA 200.7	mg/L	1.0	19.6	23.7	25.2	19.4
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.59	0.60	0.50	0.48
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	2700	2740	2750	2710
pH	SM 4500-H-B	std. units	0.10	7.62	7.51	7.62	7.44
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	0.002	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	1.23	1.28	1.26	1.30
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0014	0.0010	0.0004	0.0013
Radium 226	EPA 903.0	pCi/L	0.2	3.0	1.8	1.6	0.8
Radium Error Estimate ±				0.4	0.3	0.4	0.4
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	10.1	8.7	8.7
Radium Error Estimate ±				-	2.1	1.3	4.1
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	2.2	2.1	< 1.0	1.4
G. Alpha Error Estimate ±				1.0	1.0	-	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		36.6	40.3	38.3	41.5
Cation		meq		37.8	36.9	38.8	42.5
SM A/C Balance		%	-5 - +5	1.61	-4.38	0.73	1.24
Calc TDS		mg/L		2314	2472	2404	2623
TDS A/C Balance		dec. %	0.80 - 1.20	1.17	1.11	1.14	1.03

criss: r:\reports\clients2003\unc_mining\2_zone_1\epa-2\c03100682-2.xls

TRACKING NO. PAGE NO.
100682R0002

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	EPA-4	EPA-4	EPA-4	EPA-4
LABORATORY ID:	C03010599-006	C03040793-004	C03070772-003	C03100682-004
SAMPLE DATE/TIME:	01/14/2003 11:30	04/14/2003 11:25	07/15/2003 08:55	10/14/2003 13:00
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	461	538	552	626
Magnesium	EPA 200.7	mg/L	1.0	319	386	374	416
Sodium	EPA 200.7	mg/L	1.0	154	201	186	189
Potassium	EPA 200.7	mg/L	1.0	9.6	12.5	9.3	8.6
Bicarbonate	SM 2320-B	mg/L	0.10	164	162	168	158
Sulfate	EPA 200.7	mg/L	1.0	2420	2940	2880	3140
Chloride	EPA 200.7	mg/L	1.0	30.5	37.9	35.0	38.9
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.21	1.17	1.15	0.91
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4720	4770	4820	4760
pH	SM 4500-H-B	std. units	0.10	7.13	7.07	7.30	7.42
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	0.20
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	3.29	3.33	3.35	3.32
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0005	0.0004	< 0.0003	0.0004
Radium 226	EPA 903.0	pCi/L	0.2	1.9	1.7	1.5	0.5
Radium Error Estimate ±				0.3	0.3	0.4	0.4
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	7.9	3.1	5.6
Radium Error Estimate ±				-	2.0	1.4	1.0
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	2.0	3.0	< 1.0	1.5
G. Alpha Error Estimate ±				1.0	1.0	-	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		54.0	65.0	63.7	69.1
Cation	meq		56.8	68.4	67.4	74.7
SM A/C Balance	%	-5 - +5	2.59	2.56	2.75	3.85
Calc TDS	mg/L		3481	4202	4126	4502
TDS A/C Balance	dec. %	0.80 - 1.20	1.36	1.14	1.17	1.06

criss: r:\reports\clients2003\unc_mining\2_zone_1\epa-4'c03100682-4.xls

TRACKING NO. PAGE NO
100682R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	EPA-5	EPA-5	EPA-5	EPA-5
LABORATORY ID:	C03010599-005	C03040793-003	C03070475-005	C03100682-005
SAMPLE DATE/TIME:	01/14/2003 10:45	04/14/2003 10:40	07/09/2003 11:15	10/14/2003 13:45
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/11/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 15, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-5-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	429	455	486	523
Magnesium	EPA 200.7	mg/L	1.0	524	569	580	528
Sodium	EPA 200.7	mg/L	1.0	145	160	139	144
Potassium	EPA 200.7	mg/L	1.0	15.1	15.8	12.6	11.3
Bicarbonate	SM 2320-B	mg/L	0.10	160	146	138	132
Sulfate	EPA 200.7	mg/L	1.0	2930	3210	3420	3390
Chloride	EPA 200.7	mg/L	1.0	67.9	80.2	72.4	75.8
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	13.9	12.6	13.2	11.6
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	28.9	29.8	25.9	25.9
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5320	5350	5340	5310
pH	SM 4500-H-B	std. units	0.10	6.75	6.75	6.99	7.02
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	0.40
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.10	0.11	0.10	0.10
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	1.22	1.41	1.29	1.28
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.09	0.09	0.07	0.08
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0030	0.0020	0.0006	0.0019
Radium 226	EPA 903.0	pCi/L	0.2	1.1	1.5	1.6	0.8
Radium Error Estimate ±				0.2	0.3	0.4	0.4
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	3.5	< 1.0	3.5
Radium Error Estimate ±				-	1.9	-	1.0
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	2.3	3.2	< 1.0	2.1
G. Alpha Error Estimate ±				1.0	1.1	-	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		67.6	73.7	77.4	76.8
Cation	meq		72.9	78.5	80.0	77.6
SM A/C Balance	%	-5 - +5	3.72	3.19	1.66	0.53
Calc TDS	mg/L		4338	4713	4912	4869
TDS A/C Balance	dec. %	0.80 - 1.20	1.23	1.14	1.09	1.09

criss: r:\reports\clients2003\unc_mining\2_zone_1\epa-5\c03100682-5.xls

TRACKING NO. PAGE NO.
100682R0005

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 1 MONITOR WELLS

WELL ID:	EPA-7	EPA-7	EPA-7	EPA-7
LABORATORY ID:	C03010599-004	C03040793-002	C03070475-004	C03100682-006
SAMPLE DATE/TIME:	01/14/2003 10:15	04/14/2003 10:00	07/09/2003 10:35	10/14/2003 14:25
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/11/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 15, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-5-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	435	476	491	548
Magnesium	EPA 200.7	mg/L	1.0	792	892	863	933
Sodium	EPA 200.7	mg/L	1.0	404	325	294	314
Potassium	EPA 200.7	mg/L	1.0	12.3	12.5	9.2	7.8
Bicarbonate	SM 2320-B	mg/L	0.10	545	542	547	551
Sulfate	EPA 200.7	mg/L	1.0	3620	4110	4150	4270
Chloride	EPA 200.7	mg/L	1.0	170	196	178	196
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.99	0.68	0.74	0.52
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	128	132	125	131
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	7630	7520	6030	7660
pH	SM 4500-H-B	std. units	0.10	7.03	6.76	7.09	6.90
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	1.60	1.70	0.90	0.80
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.04	0.04	0.04	0.03
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	4.94	4.94	4.64	4.62
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.06	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0025	0.0022	0.0013	0.0023
Radium 226	EPA 903.0	pCi/L	0.2	0.8	1.3	0.9	< 0.2
Radium Error Estimate ±				0.2	0.3	0.3	-
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	2.5	2.8	< 1.0	< 1.0
G. Alpha Error Estimate ±				1.0	1.0	-	-
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	1.3	1.3 < 1.0 (12-24-03)

Quality Assurance Data		Target Range				
Anion	meq		98	109	109	113
Cation	meq		106	113	110	119
SM A/C Balance	%	-5 - +5	3.76	1.55	0.19	2.77
Calc TDS	mg/L		6279	6873	6818	7130
TDS A/C Balance	dec. %	0.80 - 1.20	1.22	1.09	0.88	1.07

criss: r:\reports\clients2003\unc_mining\2_zone_1\epa-7\c03100682-6.xls

TRACKING NO. PAGE NO.
100682R0006

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JULY AND OCTOBER OF 2003

ZONE 3

504-B

*517

EPA-14

420

*711

*613

*708

NBL-1

EPA-13

717

719

LEVELS ONLY

EPA-9

702

710

712

713

714

701

706

707

402

446

424

*POINT OF COMPLIANCE WELLS

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	504-B	504-B	504-B	504-B
LABORATORY ID:	C03010598-001	C03040794-002	C03070768-001	C03100680-002
SAMPLE DATE/TIME:	01/13/2003 09:00	04/14/2003 15:00	07/14/2003 08:50	10/13/2003 10:40
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	531	626	474	512
Magnesium	EPA 200.7	mg/L	1.0	710	873	633	699
Sodium	EPA 200.7	mg/L	1.0	137	158	158	152
Potassium	EPA 200.7	mg/L	1.0	11.8	15.2	12.4	12.6
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	4140	5300	3750	4260
Chloride	EPA 200.7	mg/L	1.0	15.6	30.2	28.3	30.4
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.27	1.30	1.10	1.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5980	6140	6230	6100
pH	SM 4500-H-B	std. units	0.10	4.47	3.27	3.34	3.36
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	0.20	< 0.10	0.20	0.30
Arsenic III	SM 3114-C	mg/L	0.001	0.025	0.012	0.017	0.023
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.27	0.29	0.27	0.25
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	6.57	7.52	7.03	6.27
Molybdenum	EPA 200.7	mg/L	0.10	7.40	6.10	5.80	4.50
Nickel	EPA 200.7	mg/L	0.05	0.32	0.35	0.34	0.32
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0288	0.0243	0.0254	0.0251
Radium 226	EPA 903.0	pCi/L	0.2	17.3	16.9	14.9	11.8
Radium Error Estimate ±				16.0	0.9	1.1	1.1
Radium 228	EPA 904.0	pCi/L	1.0	4.0	17.4	13.0	13.9
Radium Error Estimate ±				1.2	2.2	1.7	1.5
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.1	pCi/L	1.0	21.6	31.2	11.4	27.8
G. Alpha Error Estimate ±				2.2	2.9	1.5	1.5
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		86.7	111.3	78.9	89.6
Cation	meq		92.4	111.8	84.1	91.2
SM A/C Balance	%	-5 - +5	3.20	0.24	3.17	0.88
Calc TDS	mg/L		5554	7012	5065	5674
TDS A/C Balance	dec. %	0.80 - 1.20	1.08	0.88	1.23	1.08

criss: r:\reports\clients2003\unc_mining\3_zone_3\504-b\c03100680-2.xls

TRACKING NO. PAGE NI

100680R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	517	517	517	517
LABORATORY ID:	C03010393-002	C03040536-002	C03070474-002	C03100680-007
SAMPLE DATE/TIME:	01/07/2003 14:35	04/08/2003 13:55	07/08/2003 14:00	10/13/2003 15:10
DATE RECEIVED:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 5, 2003	May 1, 2003	August 27, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	504	468	476	505
Magnesium	EPA 200.7	mg/L	1.0	457	395	411	454
Sodium	EPA 200.7	mg/L	1.0	107	149	147	141
Potassium	EPA 200.7	mg/L	1.0	6.00	11.2	9.80	9.20
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	3140	2926	2990	3290
Chloride	EPA 200.7	mg/L	1.0	34.4	49.4	46.2	48.8
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	10.3	10.1	10.4	10.3
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	2.50	2.70	1.90	1.50
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4690	4720	4730	4780
pH	SM 4500-H-B	std. units	0.10	4.04	3.70	3.87	3.89
Trace Metals							
Aluminum	EPA 200.8	mg/L	0.10	10.7	10.2	8.30	8.80
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	0.006	0.007	0.008	0.008
Cobalt	EPA 200.7	mg/L	0.01	0.61	0.54	0.60	0.64
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	6.58	6.33	6.65	6.55
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.50	0.53	0.52	0.56
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium	EPA 200.8	mg/L	0.0003	0.0752	0.0790	0.0544	0.0677
Radium 226	EPA 903.0	pCi/L	0.2	8.6	10.1	7.3	6.0
Radium Error Estimate ±				0.6	1.3	0.8	0.9
Radium 228	EPA 904.0	pCi/L	1.0	6.6	12.1	10.6	5.3
Radium Error Estimate ±				1.2	2.2	1.8	1.2
Thorium 230	EPA 907.0	pCi/L	0.2	1.2	0.6	1.1	0.4
Thorium Error Estimate ±				0.6	0.6	0.5	0.3
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.1	pCi/L	1.0	20.5	34.1	9.2	24.0
G. Alpha Error Estimate ±				3.2	3.6	1.6	1.3
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	5.6	5.0	5.9	4.6

Quality Assurance Data		Target Range				
Anion	meq		66.6	62.5	63.7	70.0
Cation	meq		70.4	65.3	66.7	71.5
SM A/C Balance	%	-5 - +5	2.79	2.16	2.31	1.07
Calc TDS	mg/L		4291	4041	4117	4484
TDS A/C Balance	dec. %	0.80 - 1.20	1.09	1.17	1.15	1.07

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	EPA-14	EPA-14	EPA-14	EPA-14
LABORATORY ID:	C03010393-003	C03040536-003	C03070474-003	C03100680-006
SAMPLE DATE/TIME:	01/07/2002 15:05	04/08/2003 14:25	07/08/2003 14:40	10/13/203 14:30
DATE RECEIVED:	01/13/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 5, 2003	May 1, 2003	August 27, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	452	516	575	556
Magnesium	EPA 200.7	mg/L	1.0	347	397	401	434
Sodium	EPA 200.7	mg/L	1.0	147	184	172	174
Potassium	EPA 200.7	mg/L	1.0	8.8	12.4	10.8	10.1
Bicarbonate	SM 2320-B	mg/L	0.10	140	132	113	104
Sulfate	EPA 200.7	mg/L	1.0	2410	3020	3000	3150
Chloride	EPA 200.7	mg/L	1.0	41.9	55.1	54.5	52.9
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	3.25	2.65	4.50	3.17
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	14.9	14.1	14.1	15.7
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	4730	4800	4840	4740
pH	SM 4500-H-B	std. units	0.10	6.88	6.79	6.82	7.07
Trace Metals							
Aluminum	EPA 200.7	mg/L	0.10	26.0	19.4	< 0.10	54.4
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	0.02	0.01	< 0.01	0.07
Cadmium	EPA 200.8	mg/L	0.005	0.001	0.008	0.007	0.015
Cobalt	EPA 200.7	mg/L	0.01	0.19	0.19	0.20	0.22
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	5.40	5.26	5.43	5.72
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.21	0.21	0.25	0.24
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics							
Uranium	EPA 200.8	mg/L	0.0003	0.0599	0.0490	2.31	0.275
Radium 226	EPA 903.0	pCi/L	0.2	4.6	4.6	55.5	144
Radium Error Estimate ±				0.4	1.0	0.9	8.5
Radium 228	EPA 904.0	pCi/L	1.0	5.5	7.5	7.7	8.2
Radium Error Estimate ±				1.2	2.1	2.4	1.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.1	pCi/L	1.0	9.2	10.1	90.2	99.5
G. Alpha Error Estimate ±				1.2	2.0	7.1	7.2
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		54.7	67.6	66.9	69.9
Cation		meq		58.7	67.7	70.5	72.3
SM A/C Balance		%	-5 - +5	3.45	0.03	2.65	1.68
Calc TDS		mg/L		3552	4322	4343	4508
TDS A/C Balance		dec. %	0.80 - 1.20	1.33	1.11	1.11	1.05

criss: r:\reports\clients2003\unc_mining\3_zone_3\epa-14\c03100680-6.xls

TRACKING NO. PAGE NO

100680R0006

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	420	420	420	420
LABORATORY ID:	C03010598-003	C03040794-004	C03070768-003	C03100680-004
SAMPLE DATE/TIME:	01/13/2003 10:10	04/15/2003 09:15	07/14/2003 10:10	10/13/2003 13:20
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	671	657	653	712
Magnesium	EPA 200.7	mg/L	1.0	146	152	140	158
Sodium	EPA 200.7	mg/L	1.0	124	144	133	138
Potassium	EPA 200.7	mg/L	1.0	6.30	8.60	7.10	6.80
Bicarbonate	SM 2320-B	mg/L	0.10	562	566	556	576
Sulfate	EPA 200.7	mg/L	1.0	1700	1790	1630	1880
Chloride	EPA 200.7	mg/L	1.0	44.8	63.6	57.7	62.9
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.27	0.28	0.30	0.23
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	14.4	13.7	13.4	13.0
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	3410	3440	3490	3440
pH	SM 4500-H-B	std. units	0.10	7.22	7.41	7.64	7.39
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	0.40
Arsenic III	SM 3114-C	mg/L	0.001	0.003	0.002	0.002	0.002
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	1.97	2.26	1.90	2.00
Molybdenum	EPA 200.7	mg/L	0.10	0.20	0.20	0.20	0.20
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0903	0.0882	0.0839	0.105
Radium 226	EPA 903.0	pCi/L	0.2	3.1	3.4	2.9	2.5
Radium Error Estimate ±			-	0.4	0.4	0.5	0.6
Radium 228	EPA 904.0	pCi/L	1.0	7.8	5.3	< 1.0	< 1.0
Radium Error Estimate ±				1.3	1.8	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.1	pCi/L	1.0	3.5	4.0	2.9	4.5
G. Alpha Error Estimate ±				1.0	1.1	1.0	1.3
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		46.9	49.3	45.7	51.3
Cation		meq		51.4	52.1	50.4	55.1
SM A/C Balance		%	-5 - +5	4.6	2.8	4.9	3.5
Calc TDS		mg/L		3039	3162	2960	3306
TDS A/C Balance		dec. %	0.80 - 1.20	1.12	1.09	1.18	1.04

criss: r:\reports\clients2003\unc_mining\3_zone_3\420\c03100680-4.xls

TRACKING NO. PAGE NO.
100680R0004

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	711	711	711	711
LABORATORY ID:	C03010598-005	C03040794-005	C03070768-006	C03100680-008
SAMPLE DATE/TIME:	01/13/2003 11:15	04/15/2003 12:40	07/14/2003 14:20	10/14/2003 08:45
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	509	482	496	519
Magnesium	EPA 200.7	mg/L	1.0	558	532	515	556
Sodium	EPA 200.7	mg/L	1.0	72.7	110	99.2	100
Potassium	EPA 200.7	mg/L	1.0	8.40	13.8	12.0	11.0
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	3300	3540	3380	3750
Chloride	EPA 200.7	mg/L	1.0	7.9	17.5	20.6	23.1
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	1.40	1.40	1.08	1.43
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	0.20	0.20	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5300	5430	5450	5370
pH	SM 4500-H-B	std. units	0.10	3.00	2.85	3.00	3.07
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	1.10	1.00	0.90	1.00
Arsenic III	SM 3114-C	mg/L	0.001	0.027	0.025	0.019	0.019
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	0.44	0.48	0.43	0.44
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	7.50	8.56	7.85	7.58
Molybdenum	EPA 200.8	mg/L	0.10	0.10	0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	0.36	0.42	0.35	0.38
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0450	0.0420	0.0349	0.0433
Radium 226	EPA 903.0	pCi/L	0.2	8.8	11.2	9.2	6.8
Radium Error Estimate ±				0.6	0.8	0.9	0.9
Radium 228	EPA 904.0	pCi/L	1.0	7.4	12.9	5.4	3.6
Radium Error Estimate ±				1.3	2.1	1.5	1.1
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	10.4	18.0	6.5	17.4
G. Alpha Error Estimate ±				1.0	1.2	1.2	1.2
Trace Organics							
Chloroform	EPA 624	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		*Target Range*				
Anion	meq		69.0	74.3	71.0	78.8
Cation	meq		75.8	74.1	72.8	77.4
SM A/C Balance	%	-5 - +5	4.73	-0.08	1.27	-0.87
Calc TDS	mg/L		4466	4707	4533	4969
TDS A/C Balance	dec. %	0.80 - 1.20	1.19	1.15	1.20	1.08

criss: r:\reports\clients2003\unc_mining\3_zone_3\711\c03100680-8.xls

TRACKING NO. PAGE NO.
100680R0008

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	613	613	613	613
LABORATORY ID:	C03010393-001	C03040536-001	C03070474-001	C03100454-001
SAMPLE DATE/TIME:	01/07/2003 13:55	04/08/2003 13:20	07/08/2003 13:30	10/08/2003 11:05
DATE RECEIVED:	01/13/2003 10:00	04/11/2003 10:00	07/11/203 10:00	10/10/2003 10:00
REPORT DATE:	February 5, 2003	May 1, 2003	August 27, 2003	October 30, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-1-1-2003	TE-3-4-2003	TE-5-7-2003	TE-7-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	377	398	438	429
Magnesium	EPA 200.7	mg/L	1.0	611	649	684	705
Sodium	EPA 200.7	mg/L	1.0	264	290	292	297
Potassium	EPA 200.7	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	7870	8020	8910	9510
Chloride	EPA 200.7	mg/L	1.0	158	148	172	175
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	341	341	327	321
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	12.6	13.8	13.0	12.5
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	13100	13200	12100	13200
pH	SM 4500-H-B	std. units	0.10	3.02	3.05	2.98	3.04
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	475	473	726	810
Arsenic III	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	0.13	0.16	0.17	0.18
Cadmium	EPA 200.8	mg/L	0.005	0.031	0.038	0.030	0.032
Cobalt	EPA 200.8	mg/L	0.01	1.66	1.37	1.71	1.86
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	49.6	41.9	53.0	44.3
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	1.63	1.62	1.76	1.74
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	2.40	2.00	2.20	2.50
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	1.96	1.91	1.51	1.73
Radium 226	EPA 903.0	pCi/L	0.2	17.6	12.0	15.4	6.9
Radium Error Estimate ±				1.6	1.7	1.2	0.4
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.2	568	588	389	400
Thorium Error Estimate ±				10.0	12.7	10.9	8.5
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.1	pCi/L	1.0	69.9	52.4	29.5	34.3
G. Alpha Error Estimate ±				5.6	4.4	2.8	2.8
Trace Organics							
Chloroform	EPA 624	µg/L	1.0	137	142	134	138

Quality Assurance Data		Target Range				
Anion	meq		169	172	191	204
Cation	meq		161	166	199	208
SM A/C Balance	%	-5 - +5	-2.48	-1.90	1.83	1.10
Calc TDS	mg/L		9826	10049	11029	11631
TDS A/C Balance	dec. %	0.80 - 1.20	1.33	1.31	1.10	1.13

criss: r:\reports\clients2003\unc_mining\3_zone_3\613\c03100454-1.xls

TRACKING NO. PAGE NO.
100454R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	708	708	708	708
LABORATORY ID:	C03010598-008	C03040794-008	C03070768-008	C03100680-011
SAMPLE DATE/TIME:	01/13/2003 13:45	04/15/2003 14:10	07/14/2003 15:10	10/15/2003 09:05
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	529	460	448	486
Magnesium	EPA 200.7	mg/L	1.0	632	574	529	597
Sodium	EPA 200.7	mg/L	1.0	98.0	113	111	116
Potassium	EPA 200.7	mg/L	1.0	9.60	13.5	12.3	12.2
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	4020	3800	3500	4030
Chloride	EPA 200.7	mg/L	1.0	14.9	30.0	22.0	28.8
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	2.03	2.17	1.65	2.18
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5740	5860	5910	5570
pH	SM 4500-H-B	std. units	0.10	2.98	2.92	2.99	3.60
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	1.00	1.00	1.10	1.30
Arsenic III	SM 3114-C	mg/L	0.001	0.003	< 0.001	0.002	0.002
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	0.31	0.29	0.32	0.31
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	8.21	8.34	8.58	8.47
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	0.24	0.22	0.26	0.25
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0120	0.0158	0.0108	0.0145
Radium 226	EPA 903.0	pCi/L	0.2	7.1	9.0	7.6	6.1
Radium Error Estimate ±				0.5	0.7	0.8	0.8
Radium 228	EPA 904.0	pCi/L	1.0	4.3	10.3	4.4	6.9
Radium Error Estimate ±				1.3	1.9	1.4	1.2
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha	EPA 900.1	pCi/L	1.0	10.1	13.4	5.9	12.7
G. Alpha Error Estimate ±				1.5	1.0	1.1	1.0
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		84.2	80.0	73.5	84.8
Cation	meq		84.2	76.7	72.2	80.0
SM A/C Balance	%	-5 - +5	0.02	-2.12	-0.91	-2.88
Calc TDS	mg/L		5315	5002	4634	5282
TDS A/C Balance	dec. %	0.80 - 1.20	1.08	1.17	1.28	1.05

criss: r:\reports\clients2003\unc_mining\3_zone_3\708\c03100680-11.xls

TRACKING NO. PAGE NO.

100680R0011

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	NBL-1	NBL-1	NBL-1	NBL-1
LABORATORY ID:	C03010598-009	C03040794-001	C03070768-004	C03100680-001
SAMPLE DATE/TIME:	01/15/2003 10:00	04/14/2003 14:30	07/14/2003 10:50	10/13/2003 10:00
DATE/TIME RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	620	566	598	567
Magnesium	EPA 200.7	mg/L	1.0	178	168	170	170
Sodium	EPA 200.7	mg/L	1.0	101	125	119	128
Potassium	EPA 200.7	mg/L	1.0	5.1	7.6	7.5	6.7
Bicarbonate	SM 2320-B	mg/L	0.10	335	338	334	332
Sulfate	EPA 200.7	mg/L	1.0	1930	1960	1880	1940
Chloride	EPA 200.7	mg/L	1.0	20.1	35.0	32.2	27.7
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.47	0.48	0.45	0.42
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	3290	3360	3460	3480
pH	SM 4500-H-B	std. units	0.10	7.29	7.14	7.40	7.21
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	0.30
Arsenic III	SM 3114-C	mg/L	0.001	0.955	0.688	0.538	1.01
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	0.07	0.07	0.06	0.06
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	2.04	2.21	2.11	2.13
Molybdenum	EPA 200.8	mg/L	0.10	2.50	2.40	2.10	2.10
Nickel	EPA 200.8	mg/L	0.05	0.10	0.10	0.09	0.09
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.256	0.210	0.186	0.209
Radium 226	EPA 903.0	pCi/L	0.2	6.9	6.7	7.0	6.9
Radium Error Estimate ±				0.5	0.6	0.8	0.9
Radium 228	EPA 904.0	pCi/L	1.0	5.4	< 1.0	4.0	3.1
Radium Error Estimate ±				1.3	-	1.4	1.1
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	7.9	9.4	5.0	6.5
G. Alpha Error Estimate ±				1.3	1.7	1.1	1.5
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Quality Assurance Data			**Target Range**				
Anion		meq		46.3	47.4	45.6	46.6
Cation		meq		50.5	48.1	49.6	48.4
SM A/C Balance		%	-5 - +5	4.4	0.8	4.2	1.8
Calc TDS		mg/L		3025	3034	2977	3009
TDS A/C Balance		dec. %	0.80 - 1.20	1.09	1.11	1.16	1.16

criss r:\reports\clients2003\unc_mining\3_zone_3\nbl-1\c03100680-1.xls

TRACKING NO. PAGE NO.
100680R0001

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	EPA-13	EPA-13	EPA-13	EPA-13
LABORATORY ID:	C03010598-007	C03040794-007	C03070768-005	C03100680-010
SAMPLE DATE/TIME:	01/13/2003 13:10	04/15/2003 13:30	07/14/2003 11:20	10/14/2003 09:40
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/21/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	626	449	443	480
Magnesium	EPA 200.7	mg/L	1.0	973	784	725	808
Sodium	EPA 200.7	mg/L	1.0	121	142	136	140
Potassium	EPA 200.7	mg/L	1.0	10.5	14.2	12.4	11.6
Bicarbonate	SM 2320-B	mg/L	0.10	78.7	84.2	78.1	83.0
Sulfate	EPA 200.7	mg/L	1.0	5220	4210	3850	4440
Chloride	EPA 200.7	mg/L	1.0	26.7	39.9	38.8	40.2
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.86	1.03	0.85	0.78
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	6190	6360	6430	6270
pH	SM 4500-H-B	std. units	0.10	6.66	6.62	6.70	6.87
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic III	SM 3114-C	mg/L	0.001	0.345	0.310	0.454	0.300
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	0.06	0.05	0.06	0.06
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.8	mg/L	0.01	6.07	6.60	6.26	6.06
Molybdenum	EPA 200.8	mg/L	0.10	0.30	0.30	0.30	0.30
Nickel	EPA 200.8	mg/L	0.05	0.14	0.13	0.12	0.14
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0167	0.0161	0.0127	0.0157
Radium 226	EPA 903.0	pCi/L	0.2	5.8	5.7	5.0	4.5
Radium Error Estimate ±				0.5	0.5	0.7	0.7
Radium 228	EPA 904.0	pCi/L	1.0	3.9	13.6	< 1.0	2.3
Radium Error Estimate ±				1.2	2.0	-	1.1
Thorium 230	EPA 907.0	pCi/L	0.2	2.2	0.5	< 0.2	< 0.2
Thorium Error Estimate ±				1.3	0.5	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	5.8	8.2	4.3	7.8
G. Alpha Error Estimate ±				1.1	1.5	1.0	1.5
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		110.8	90.2	82.6	95.0
Cation	meq		118	95	89	98
SM A/C Balance	%	-5 - +5	3.28	2.45	3.85	1.61
Calc TDS	mg/L		7025	5690	5253	5970
TDS A/C Balance	dec. %	0.80 - 1.20	0.88	1.12	1.22	1.05

criss: r:\reports\clients2003\unc_mining\3_zone_3\epa-13\c03100680-10.xls

TRACKING NO. PAGE NI

100680R001(

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	717	717	717	717
LABORATORY ID:	C03010598-004	C03040536-004	C03070474-004	C03100680-005
SAMPLE DATE/TIME:	01/13/2003 10:40	04/08/2003 14:55	07/08/2003 15:15	10/13/2003 13:55
DATE RECEIVED:	01/20/2003 10:00	04/11/2003 10:00	07/11/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 1, 2003	August 27, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-3-4-2003	TE-5-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	621	697	735	765
Magnesium	EPA 200.7	mg/L	1.0	130	147	175	206
Sodium	EPA 200.7	mg/L	1.0	104	143	128	135
Potassium	EPA 200.7	mg/L	1.0	6.20	9.90	7.70	7.20
Bicarbonate	SM 2320-B	mg/L	0.10	731	705	737	705
Sulfate	EPA 200.7	mg/L	1.0	1440	1615	1880	2080
Chloride	EPA 200.7	mg/L	1.0	47.2	71.2	60.9	75.3
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.24	0.27	0.29	0.37
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	21.5	22.9	23.0	25.1
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	3530	3620	3790	3840
pH	SM 4500-H-B	std. units	0.10	7.05	7.19	7.47	7.43
Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	0.30
Arsenic III	SM 3114-C	mg/L	0.001	0.002	< 0.001	< 0.001	< 0.001
Beryllium	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	0.02	< 0.01
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	1.96	1.85	2.50	2.54
Molybdenum	EPA 200.7	mg/L	0.10	0.20	0.20	0.20	0.20
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.120	0.133	0.0994	0.107
Radium 226	EPA 903.0	pCi/L	0.2	5.4	2.8	3.3	2.3
Radium Error Estimate ±				0.5	0.8	0.5	0.5
Radium 228	EPA 904.0	pCi/L	1.0	8.6	11	3.4	4.1
Radium Error Estimate ±				1.4	2.0	1.5	1.1
Thorium 230	EPA 907.0	pCi/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thorium Error Estimate ±				-	-	-	-
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	4.9	8.1	3.0	5.4
G. Alpha Error Estimate ±				1.1	1.8	1.0	1.3
Trace Organics							
Chloroform	EPA 601	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		44.8	48.8	54.6	58.8
Cation	meq		46.7	53.7	57.3	61.6
SM A/C Balance	%	-5 - +5	2.0	4.7	2.4	2.4
Calc TDS	mg/L		2811	3139	3460	3735
TDS A/C Balance	dec. %	0.80 - 1.20	1.26	1.15	1.10	1.03

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

UNC MINING AND MILLING: CHURCHROCK OPERATIONS
GROUNDWATER MONITORING PROGRAM: ZONE 3 MONITOR WELLS

WELL ID:	719	719	719	719
LABORATORY ID:	C03010598-002	C03040794-003	C03070768-002	C03100680-003
SAMPLE DATE/TIME:	01/13/2003 09:40	04/15/2003 08:45	07/14/2003 09:35	10/13/2003 11:15
DATE RECEIVED:	01/20/2003 10:00	04/18/2003 10:00	07/24/2003 10:00	10/17/2003 10:00
REPORT DATE:	February 11, 2003	May 12, 2003	August 26, 2003	November 11, 2003
QUARTER REPRESENTED:	First 2003	Second 2003	Third 2003	Fourth 2003
UNC SUBMITTAL #:	TE-2-1-2003	TE-4-4-2003	TE-6-7-2003	TE-8-10-2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	531	477	490	526
Magnesium	EPA 200.7	mg/L	1.0	509	477	456	506
Sodium	EPA 200.7	mg/L	1.0	120	149	141	143
Potassium	EPA 200.7	mg/L	1.0	11.0	15.7	13.5	12.7
Bicarbonate	SM 2320-B	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sulfate	EPA 200.7	mg/L	1.0	3610	3460	3240	3720
Chloride	EPA 200.7	mg/L	1.0	25.2	38.8	36.3	35.2
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	3.40	3.60	3.10	3.56
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Non-Metals							
Total Dissolved Solids	SM 2540-C	mg/L	1.0	5340	5350	5330	5340
pH	SM 4500-H-B	std. units	0.10	3.05	2.88	2.97	3.03
Trace Metals, dissolved							
Aluminum	EPA 200.7	mg/L	0.10	26.9	25.8	21.4	20.7
Arsenic III	SM 3114-C	mg/L	0.001	0.004	0.002	< 0.001	< 0.001
Beryllium	EPA 200.7	mg/L	0.01	0.04	0.04	0.04	0.04
Cadmium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cobalt	EPA 200.7	mg/L	0.01	0.66	0.72	0.61	0.55
Lead	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Manganese	EPA 200.7	mg/L	0.01	7.67	8.54	7.48	7.13
Molybdenum	EPA 200.7	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.7	mg/L	0.05	0.84	0.96	0.83	0.72
Selenium IV	SM 3114-C	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vanadium	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Radiometrics, dissolved							
Uranium	EPA 200.8	mg/L	0.0003	0.0691	0.0604	0.0552	0.0665
Radium 226	EPA 903.0	pCi/L	0.2	7.6	8.3	6.5	5.1
Radium Error Estimate ±				0.6	0.6	1.0	0.8
Radium 228	EPA 904.0	pCi/L	1.0	< 1.0	9.7	< 1.0	7.7
Radium Error Estimate ±				-	2.0	-	1.3
Thorium 230	EPA 907.0	pCi/L	0.2	1.2	0.7	0.4	0.8
Thorium Error Estimate ±				0.6	0.6	0.3	0.4
Lead 210	NERHL-65-4	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead Error Estimate ±				-	-	-	-
Gross Alpha-Rn & U	EPA 900.0	pCi/L	1.0	10.0	23.3	6.4	16.4
G. Alpha Error Estimate ±				1.5	1.3	1.2	1.1
Trace Organics							
Chloroform	EPA 624	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Quality Assurance Data		Target Range				
Anion	meq		75.9	73.2	68.5	78.5
Cation	meq		78.1	74.1	72.0	78.0
SM A/C Balance	%	-5 - +5	1.44	0.62	2.48	-0.33
Calc TDS	mg/L		4819	4631	4389	4955
TDS A/C Balance	dec. %	0.80 - 1.20	1.11	1.16	1.21	1.08

criss: r:\reports\clients2003\unc_mining\3_zone_3\719\c03100680-3.xls

TRACKING NO. PAGE NO.

100680R0003