CR MU7 PERIMETER ZONE BASELINE DATA

Well I.D.: Production Unit: Sample Date:	Number Of Samples		BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
Major Ions mg/l:							
CALCIUM (Ca)	172		9.60	40.50	24.15	8.84	0.10
MAGNESIUM (Mg)	172		1.70	8.70	4.14	1.96	1.00
SODIUM (Na)	172		150.00	247.00	202.32	27.10	0.10
POTASSIUM (K)	171		2.10	8.90	4.25	1.44	0.10
CARBONATE (CO3)	44		0.00	4.50	1.73	0.86	0.10
BICARBONATE (HC03)	44		78.00	123.00	98.20	8.75	0.10
SULFATE (SO4)	172		270.00	600.00	422.62	95.07	1.00
CHLORIDE (Cl)	342		1.00	8.40	5.83	1.23	1.00
AMMONIUM (NH4)	43		0.05	0.09	0.06	0.01	0.05
NITRITE (NO2) as (N)	44		0.10	0.10	0.10	0.00	0.10
NITRATE (NO3) as (N)	43		0.10	0.17	0.10	0.01	0.10
FLUORIDE (F)	43		0.14	0.22	0.19	0.03	0.10
SILICA (SiO2)	43		6.70	9.90	8.51	0.52	1.00
TDS	172		518.00	958.00	713.96	127.26	1.00
Cond. (umho/cm)	344		821.00	1380.00	1095.41	171.77	1.00
Alk. (as CaC03)	343		58.30	101.00	79.88	7.66	0.10
pH (units)	342		8.00	8.90	8.40	0.17	1-14
Trace Metals mg/l:							
ALUMINUM (Al)	44	<	0.10	0.10	0.10	0.00	0.1
ARSENIC (As)	168	<	0.0010	0.0080	0.0016	0.0011	0.001
BARIUM (Ba)	44	<	0.1000	0.1000	0.1000	0.0000	0.1
BORON (B)	44	<	0.1000	0.1000	0.1000	0.0000	0.1
CADMIUM (Cd)	44	<	0.0100	0.0100	0.0100	0.0000	0.01
CHROMIUM (Cr)	44	<	0.0500	0.0500	0.0500	0.0000	0.05
COPPER (Cu)	44	<	0.0100	0.0100	0.0100	0.0000	0.01
IRON (Fe)	44	<	0.0500	0.0500	0.0500	0.0000	0.05
LEAD (Pb)	44	<	0.0500	0.0500	0.0500	0.0000	0.05
MANGANESE (Mn)	44	<	0.0100	0.0200	0.0123	0.0042	0.01
MERCURY (Hg)	43	<	0.0010	0.0010	0.0010	0.0000	0.001
MOLYBDENUM (Mo)	42	<	0.0100	0.0500	0.0110	0.0062	0.1
NICKEL (Ni)	44	<	0.0500	0.0500	0.0500	0.0000	0.05
SELENIUM (Se)	167	<	0.0010	0.0030	0.0011	0.0003	0.001
VANADIUM (V)	44	<	0.1000	0.1000	0.1000	0.0000	0.1
ZINC (Zn)	44	<	0.01	0.01	0.01	0.00	0.01
Radiometric pCi/l:							
U (mg/l)	171	<	0.0002	0.1530	0.0073	0.0195	0.0003
Ra 226	167	<	0.02	21.70	3.93	4.90	0.2
Ra 226+/-	145		0.10	1.62	0.45	0.39	

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW1								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		6/12/97	6/24/97	7/7/97	7/24/97	6/12/97	6/25/97	7/8/97	7/25/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		37.00	39.50	37.20	39.60					4	37.00	39.60	38.33	1.42	0.10
MAGNESIUM (Mg)		8.10	8.30	7.90	8.20					4	7.90	8.30	8.13	0.17	0.00
SODIUM (Na)		232.00	232.00	231.00	242.00					4	231.00	242.00	234.25	5.19	0.10
POTASSIUM (K)		5.90	4.80	4.70	4.80					4	4.70	5.90	5.05	0.57	0.10
CARBONATE (CO3)		1.00								1	1.00	1.00	1.00		0.10
BICARBONATE (HC03)		84.00								1	84.00	84.00	84.00		0.10
SULFATE (SO4)		562.00	577.00	531.00	577.00					4	531.00	577.00	561.75	21.69	1.00
CHLORIDE (Cl)		4.40	4.40	4.10	4.90	5.10	5.10	4.90	5.20	8	4.10	5.20	4.76	0.41	1.00
AMMONIUM (NH4)		0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.14								1	0.14	0.14	0.14		0.10
SILICA (SiO2)		9.80								1	9.80	9.80	9.80		1.00
TDS		914.00	846.00	891.00	958.00					4	846.00	958.00	902.25	46.68	1.00
Cond. (umho/cm)		1300.00	1350.00	1340.00	1330.00	1338.00	1343.00	1342.00	1322.00	8	1300.00	1350.00	1333.13	15.87	1.00
Alk. (as CaC03)		69.70	74.50	72.50	73.00	64.10	66.90	66.30	69.70	8	64.10	74.50	69.59	3.63	0.10
pH (units)		8.33	8.44	8.41	8.43	8.50	8.40	8.30	8.20	8	8.20	8.50	8.38	0.09	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.005*					3	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)	<	0.0003	0.0010	< 0.0030	0.0020					4	0.0003	0.0030	0.0016	0.0012	0.0003
Ra 226		1.50	0.90	11.00	9.70					4	0.90	11.00	5.78	5.31	0.2
Ra 226+/-		0.20	0.20	0.10	0.90					4	0.10	0.90	0.35	0.37	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW2												Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI					CMI							Of				Deviation	Limit
Sample Date:		6/26/97		8/14/97		9/26/97		2/18/99		6/26/97		8/14/97	9/26/97	4/24/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:																			
CALCIUM (Ca)		37.00		36.70		34.30		38.20							4	34.30	38.20	36.55	1.63	0.10
MAGNESIUM (Mg)		7.80		7.90		7.50		8.70							4	7.50	8.70	7.98	0.51	0.00
SODIUM (Na)		241.00		244.00		229.00		247.00							4	229.00	247.00	240.25	7.89	0.10
POTASSIUM (K)		6.10		6.40		6.60		5.10							4	5.10	6.60	6.05	0.67	0.10
CARBONATE (CO3)		2.40													1	2.40	2.40	2.40		0.10
BICARBONATE (HC03)		84.00													1	84.00	84.00	84.00		0.10
SULFATE (SO4)		547.00		600.00		560.00		594.00							4	547.00	600.00	575.25	25.79	1.00
CHLORIDE (Cl)		4.60		5.00		3.70		3.60		15*		4.70	4.80	5.60	7	3.60	5.60	4.57	0.71	1.00
AMMONIUM (NH4)	<	0.05													1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10													1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10													1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.14													1	0.14	0.14	0.14		0.10
SILICA (SiO2)		9.00													1	9.00	9.00	9.00		1.00
TDS		831.00		868.00		884.00		823.00							4	823.00	884.00	851.50	29.22	1.00
Cond. (umho/cm)		1330.00		1330.00		1340.00		1360.00		1320.00		1309.00	1333.00	1297.00	8	1297.00	1360.00	1327.38	19.21	1.00
Alk. (as CaC03)		72.60		70.10		68.20		72.00		82.00		69.30	67.30	68.70	8	67.30	82.00	71.28	4.70	0.10
pH (units)		8.71		8.37		8.55		8.08		8.40		8.40	8.50	8.00	8	8.00	8.71	8.38	0.24	1-14
Trace Metals mg/l:																			
ALUMINUM (Al)	<	0.10													1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0020	<	0.0010	<	0.0010	<	0.0010							4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	<	0.10													1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10													1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01													1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05													1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01													1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05													1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05													1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.02													1	0.02	0.02	0.02		0.01
MERCURY (Hg)	<	0.001													1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01													1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05													1	0.05	0.05	0.05		0.05
SELENIUM (Se)		0.0020	<	0.0010	<	0.0010	<	0.0010							4	0.001	0.002	0.001	0.001	0.001
VANADIUM (V)	<	0.10													1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01													1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																			
U (mg/l)		0.0020		0.0020		0.0010		0.0014							4	0.0010	0.0020	0.0016	0.0005	0.0003
Ra 226		0.80		14.60		2.50		0.70							4	0.70	14.60	4.65	6.68	0.2
Ra 226+/-		0.20		1.10		0.30		0.20							4	0.20	1.10	0.45	0.44	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW3					CMI				Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI									Of				Deviation	Limit
Sample Date:		6/12/97	6/26/97	7/7/97	7/24/97	6/12/97	6/26/97	7/8/97	7/25/97		Samples	MIN	MAX	MEAN		
Major Ions mg/l:																
CALCIUM (Ca)		24.90	33.80	32.40	36						4	24.90	36.00	31.78	4.82	0.10
MAGNESIUM (Mg)		4.50	6.60	6.50	7.2						4	4.50	7.20	6.20	1.17	1.00
SODIUM (Na)		211.00	234.00	234.00	245						4	211.00	245.00	231.00	14.31	0.10
POTASSIUM (K)		8.50	8.30	7.60	7.4						4	7.40	8.50	7.95	0.53	0.10
CARBONATE (CO3)		1.20									1	1.20	1.20	1.20		0.10
BICARBONATE (HC03)		78.00									1	78.00	78.00	78.00		0.10
SULFATE (SO4)		485.00	577.00	550.00	582						4	485.00	582.00	548.50	44.61	1.00
CHLORIDE (Cl)		5.10	6.50	4.10	4.2	5.90	4.50	5.10	5.00		8	4.10	6.50	5.05	0.82	1.00
AMMONIUM (NH4)		0.09									1	0.09	0.09	0.09		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.16									1	0.16	0.16	0.16		0.10
SILICA (SiO2)		9.10									1	9.10	9.10	9.10		1.00
TDS		797.00	843.00	878.00	957						4	797.00	957.00	868.75	67.54	1.00
Cond. (umho/cm)		1160.00	1330.00	1340.00	1340	1195.00	1330.00	1340.00	1342.00		8	1160.00	1342.00	1297.13	74.57	1.00
Alk. (as CaC03)		66.00	64.20	66.20	67.9	60.80	58.30	61.70	63.80		8	58.30	67.90	63.61	3.18	0.10
pH (units)		8.43	8.58	8.55	8.53	8.70	8.20	8.50	8.30		8	8.20	8.70	8.47	0.16	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.10									1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	< 0.0010	< 0.0010	< 0.0010						4	0.00	0.00	0.00	0.00	0.001
BARIUM (Ba)	<	0.10									1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10									1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01									1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05									1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01									1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05									1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05									1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01									1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001									1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01									1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05									1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010						4	0.00	0.00	0.00	0.00	0.001
VANADIUM (V)	<	0.10									1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01									1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)	<	0.0003	< 0.0003	< 0.0003	< 0.0003						4	0.0003	0.0003	0.0003	0.0000	0.0003
Ra 226		2.70	1.00	1.10	1.20						4	1.00	2.70	1.50	0.80	0.2
Ra 226+/-		0.30	0.20	0.20	0.20						4	0.20	0.30	0.23	0.05	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW4					CMI				Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI									Of				Deviation	
Sample Date:		#######	11/20/97	12/23/97	10/9/98	8/12/97	11/21/97	12/23/97	10/9/98		Samples	MIN	MAX	MEAN		Limit
Major Ions mg/l:																
CALCIUM (Ca)		32.60	36.00	37.90	34.00						4	32.60	37.90	35.13	2.32	0.10
MAGNESIUM (Mg)		7.20	8.00	7.70	8.00						4	7.20	8.00	7.73	0.38	1.00
SODIUM (Na)		231.00	227.00	233.00	223.00						4	223.00	233.00	228.50	4.43	0.10
POTASSIUM (K)		6.20	5.00	4.80	4.00						4	4.00	6.20	5.00	0.91	0.10
CARBONATE (CO3)		1.10									1	1.10	1.10	1.10		0.10
BICARBONATE (HC03)		86.00									1	86.00	86.00	86.00		0.10
SULFATE (SO4)		539.00	533.00	505.00	500.00						4	500.00	539.00	519.25	19.60	1.00
CHLORIDE (Cl)		4.40	5.00	3.60	5.00	4.80	4.80	4.80	5.00		8	3.60	5.00	4.68	0.48	1.00
AMMONIUM (NH4)		0.07									1	0.07	0.07	0.07		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.15									1	0.15	0.15	0.15		0.10
SILICA (SiO2)		0.9*									0	0.00	0.00	#DIV/0!		1.00
TDS		863.00	876.00	840.00	861.00						4	840.00	876.00	860.00	14.90	1.00
Cond. (umho/cm)		1320.00	1290.00	1270.00	1320.00	1270.00	1305.00	1310.00	1250.00		8	1250.00	1320.00	1291.88	26.18	1.00
Alk. (as CaC03)		72.50	75.50	76.00	76.10	71.20	72.80	74.40	74.90		8	71.20	76.10	74.18	1.81	0.10
pH (units)		8.37	8.26	8.30	8.00	8.20	8.30	8.10	8.20		8	8.00	8.37	8.22	0.12	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.10									1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0010	0.0020	0.0010						4	0.0010	0.0020	0.0013	0.0005	0.001
BARIUM (Ba)	<	0.10									1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10									1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01									1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05									1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01									1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05									1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05									1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.02									1	0.02	0.02	0.02		0.01
MERCURY (Hg)	<	0.001									1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01									1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05									1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010						4	0.0010	0.0010	0.0010	0.0000	0.001
VANADIUM (V)	<	0.10									1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01									1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)		0.0030	0.0038	0.0043	0.0118						4	0.0030	0.0118	0.0057	0.00	0.0003
Ra 226		21.70	11.40	10.70	14.70						4	10.70	21.70	14.63	5.03	0.2
Ra 226+/-		1.40	1.00	0.60	1.30						4	0.60	1.40	1.08	0.36	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW5					CMI				Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI									Of				Deviation	Limit
Sample Date:		6/18/97	7/2/97	7/16/97	7/29/97	7/2/97	7/17/97	7/30/97	6/18/98		Samples	MIN	MAX	MEAN		
Major Ions mg/l:																
CALCIUM (Ca)		37.80	40.50	40.50	39.90						4	37.80	40.50	39.68	1.28	0.10
MAGNESIUM (Mg)		7.00	7.30	7.30	7.40						4	7.00	7.40	7.25	0.17	1.00
SODIUM (Na)		245.00	233.00	247.00	240.00						4	233.00	247.00	241.25	6.24	0.10
POTASSIUM (K)		4.00	4.10	4.30	4.10						4	4.00	4.30	4.13	0.13	0.10
CARBONATE (CO3)		0.00									1	0.00	0.00			0.10
BICARBONATE (HC03)		88.70									1	88.70	88.70	88.70		0.10
SULFATE (SO4)		575.00	557.00	573.00	544.00						4	544.00	575.00	562.25	14.59	1.00
CHLORIDE (Cl)		3.60	4.40	4.40	4.40	5.00	4.70	4.50	4.70		8	3.60	5.00	4.46	0.41	1.00
AMMONIUM (NH4)	<	0.05									1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.15									1	0.15	0.15	0.15		0.10
SILICA (SiO2)		9.90									1	9.90	9.90	9.90		1.00
TDS		914.00	907.00	920.00	912.00						4	907.00	920.00	913.25	5.38	1.00
Cond. (umho/cm)		1350.00	1341.00	1350.00	1370.00	1356.00	1346.00	1362.00	1366.00		8	1341.00	1370.00	1355.13	10.16	1.00
Alk. (as CaC03)		72.70	71.60	71.80	72.80	65.20	66.10	64.80	65.80		8	64.80	72.80	68.85	3.65	0.10
pH (units)		8.26	8.25	8.54	8.27	8.20	8.10	8.10	8.20		8	8.10	8.54	8.24	0.14	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.1									1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.001	< 0.0010	< 0.0010	< 0.0010						4	0.0010	0.0010	0.0010	0.0000	0.001
BARIUM (Ba)	<	0.1									1	0.1000	0.1000	0.1000		0.1
BORON (B)	<	0.1									1	0.1000	0.1000	0.1000		0.1
CADMIUM (Cd)	<	0.01									1	0.0100	0.0100	0.0100		0.01
CHROMIUM (Cr)	<	0.05									1	0.0500	0.0500	0.0500		0.05
COPPER (Cu)	<	0.01									1	0.0100	0.0100	0.0100		0.01
IRON (Fe)	<	0.05									1	0.0500	0.0500	0.0500		0.05
LEAD (Pb)	<	0.05									1	0.0500	0.0500	0.0500		0.05
MANGANESE (Mn)		0.02									1	0.0200	0.0200	0.0200		0.01
MERCURY (Hg)	<	0.001									1	0.0010	0.0010	0.0010		0.001
MOLYBDENUM (Mo)	<	0.1*									0	0.0000	0.0000	#DIV/0!		0.1
NICKEL (Ni)	<	0.05									1	0.0500	0.0500	0.0500		0.05
SELENIUM (Se)	<	0.001	< 0.0010	< 0.0010	< 0.0010						4	0.0010	0.0010	0.0010	0.0000	0.001
VANADIUM (V)	<	0.1									1	0.1000	0.1000	0.1000		0.1
ZINC (Zn)	<	0.01									1	0.0100	0.0100	0.0100		0.01
Radiometric pCi/l:																
U (mg/l)	<	0.0003	0.0020	0.0002	< 0.0003						4	0.0002	0.0020	0.0008	0.0010	0.0003
Ra 226		2.7	0.50	1.80	0.90						4	0.50	2.70	1.48	0.98	0.2
Ra 226+/-		0.3	0.20	0.20	0.20						4	0.20	0.30	0.23	0.05	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW6															
Production Unit:		ELI					CMI							Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Sample Date:		8/14/97		8/28/97		9/26/97	3/4/98	8/14/97		8/29/97		9/26/97	3/5/98	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:																			
CALCIUM (Ca)		33.10		35.50		32.60	33.90							4	32.60	35.50	33.78	1.27	0.10
MAGNESIUM (Mg)		7.10		7.30		6.80	7.30							4	6.80	7.30	7.13	0.24	1.00
SODIUM (Na)		233.00		234.00		217.00	225.00							4	217.00	234.00	227.25	7.93	0.10
POTASSIUM (K)		7.10		6.00		5.40	4.70							4	4.70	7.10	5.80	1.02	0.10
CARBONATE (CO3)		1.10												1	1.10	1.10	1.10		0.10
BICARBONATE (HC03)		89.00												1	89.00	89.00	89.00		0.10
SULFATE (SO4)		562.00		526.00		529.00	507.00							4	507.00	562.00	531.00	22.85	1.00
CHLORIDE (Cl)		4.90		3.70		3.60	6.40	5.00		4.80		4.90	5.00	8	3.60	6.40	4.79	0.87	1.00
AMMONIUM (NH4)		0.05												1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10												1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10												1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.14												1	0.14	0.14	0.14		0.10
SILICA (SiO2)		8.40												1	8.40	8.40	8.40		1.00
TDS		786.00		850.00		828.00	843.00							4	786.00	850.00	826.75	28.67	1.00
Cond. (umho/cm)		1290.00		1340.00		1270.00	1280.00	1243.00		1263.00		1272.00	1196.00	8	1196.00	1340.00	1269.25	40.80	1.00
Alk. (as CaC03)		74.80		75.80		74.60	76.60	74.00		74.70		67.30	76.10	8	67.30	76.60	74.24	2.94	0.10
pH (units)		8.35		8.35		8.44	8.06	8.20		8.30		8.50	8.20	8	8.06	8.50	8.30	0.14	1-14
Trace Metals mg/l:																			
ALUMINUM (Al)	<	0.10												1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010		0.0010	<	0.0010	0.0020							4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	<	0.10												1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10												1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01												1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05												1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01												1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05												1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05												1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01												1	0.010	0.010	0.010		0.01
MERCURY (Hg)	<	0.00												1	0.00	0.00	0.00		0.001
MOLYBDENUM (Mo)	<	0.1*												0	0.00	0.00	#DIV/0!		0.1
NICKEL (Ni)	<	0.05												1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	<	0.0010	<	0.0010	0.0020							4	0.001	0.002	0.001	0.001	0.001
VANADIUM (V)	<	0.10												1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01												1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																			
U (mg/l)		0.0050		0.0020		0.0020	0.0031							4	0.0020	0.0050	0.0030	0.0014	0.0003
Ra 226		17.50		21.70		23.6*	24.7*							2	17.50	21.70	19.60	2.97	0.2
Ra 226+/-		1.30		1.40		1.50	1.40							4	1.30	1.50	1.40	0.08	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW7								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	6/12/97	7/2/97	7/16/97	7/29/97	6/13/97	7/2/97	7/17/97	7/30/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	16.60	17.30	15.40	15.10					4	15.10	17.30	16.10	1.03	0.10
MAGNESIUM (Mg)	2.00	2.30	2.30	2.40					4	2.00	2.40	2.25	0.17	1.00
SODIUM (Na)	175.00	174.00	183.00	177.00					4	174.00	183.00	177.25	4.03	0.10
POTASSIUM (K)	5.80	4.90	5.70	4.90					4	4.90	5.80	5.33	0.49	0.10
CARBONATE (CO3)	4.50								1	4.50	4.50	4.50		0.10
BICARBONATE (HC03)	101.00								1	101.00	101.00	101.00		0.10
SULFATE (SO4)	348.00	345.00	346.00	326.00					4	326.00	348.00	341.25	10.24	1.00
CHLORIDE (Cl)	6.70	6.40	6.50	6.80	7.30	7.80	7.10	7.10	8	6.40	7.80	6.96	0.46	1.00
AMMONIUM (NH4)	0.08								1	0.08	0.08	0.08		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.20								1	0.20	0.20	0.20		0.10
SILICA (SiO2)	8.90								1	8.90	8.90	8.90		1.00
TDS	613.00	588.00	606.00	607.00					4	588.00	613.00	603.50	10.79	1.00
Cond. (umho/cm)	940.00	940.00	934.00	957.00	927.00	948.00	943.00	948.00	8	927.00	957.00	942.13	9.22	1.00
Alk. (as CaC03)	89.10	87.50	85.40	87.60	82.40	82.40	81.60	79.70	8	79.70	89.10	84.46	3.40	0.10
pH (units)	8.90	8.62	8.60	8.58	8.80	8.60	8.60	8.50	8	8.50	8.90	8.65	0.13	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0020	0.0010	< 0.0010	0.0010					4	0.0010	0.0020	0.0013	0.0005	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.05								1	0.05	0.05	0.05		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	0.0030	< 0.0010	< 0.0010	0.0010					4	0.0010	0.0030	0.0015	0.0010	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0008	0.0008	< 0.0003	< 0.0003					4	0.0003	0.0008	0.0006	0.0003	0.0003
Ra 226	2.40	< 0.20	3.50	0.60					4	0.20	3.50	1.68	1.55	0.2
Ra 226+/-	0.30		0.30	0.20					3	0.20	0.30	0.27	0.06	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW8								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		8/13/97	8/28/97	9/26/97	3/4/97	8/14/97	8/29/97	9/26/97	3/5/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		27.60	33.10	28.80	27.70					4	27.60	33.10	29.30	2.59	0.10
MAGNESIUM (Mg)		4.30	5.70	5.30	5.30					4	4.30	5.70	5.15	0.60	1.00
SODIUM (Na)		217.00	234.00	222.00	228.00					4	217.00	234.00	225.25	7.37	0.10
POTASSIUM (K)		6.10	6.90	7.70	8.40					4	6.10	8.40	7.28	0.99	0.10
CARBONATE (CO3)		2.10								1	2.10	2.10	2.10		0.10
BICARBONATE (HC03)		96.00								1	96.00	96.00	96.00		0.10
SULFATE (SO4)		494.00	522.00	525.00	501.00					4	494.00	525.00	510.50	15.33	1.00
CHLORIDE (Cl)		5.80	4.00	3.50	4.90	5.50	4.90	4.70	5.00	8	3.50	5.80	4.79	0.75	1.00
AMMONIUM (NH4)		0.06								1	0.06	0.06	0.06		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.17								1	0.17	0.17	0.17		0.10
SILICA (SiO2)		7.90								1	7.90	7.90	7.90		1.00
TDS		693.00	834.00	824.00	828.00					4	693.00	834.00	794.75	67.96	1.00
Cond. (umho/cm)		1160.00	1300.00	1280.00	1270.00	1116.00	1264.00	1262.00	1177.00	8	1116.00	1300.00	1228.63	67.47	1.00
Alk. (as CaC03)		82.00	75.40	71.40	70.30	80.20	74.70	69.90	70.30	8	69.90	82.00	74.28	4.71	0.10
pH (units)		8.58	8.55	8.66	8.21	8.50	8.50	8.60	8.50	8	8.21	8.66	8.51	0.13	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0010	< 0.0010	0.0020					4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0180	0.0520	0.0130	0.0079					4	0.0079	0.0520	0.0227	0.0199	0.0003
Ra 226		0.90	2.60	1.30	1.20					4	0.90	2.60	1.50	0.75	0.2
Ra 226+/-		0.20	0.30	0.20	0.20					4	0.20	0.30	0.23	0.05	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW9								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of					
Sample Date:	6/19/97	7/1/97	7/16/97	7/29/97	6/19/97	7/2/97	7/17/97	7/30/97	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:														
CALCIUM (Ca)	17.10	16.20	16.10	15.40					4	15.40	17.10	16.20	0.70	0.10
MAGNESIUM (Mg)	2.50	2.40	2.60	2.60					4	2.40	2.60	2.53	0.10	1.00
SODIUM (Na)	176.00	171.00	180.00	176.00					4	171.00	180.00	175.75	3.69	0.10
POTASSIUM (K)	3.20	3.80	4.00	3.80					4	3.20	4.00	3.70	0.35	0.10
CARBONATE (CO3)	2.30								1	2.30	2.30	2.30		0.10
BICARBONATE (HC03)	102.00								1	102.00	102.00	102.00		0.10
SULFATE (SO4)	342.00	334.00	341.00	327.00					4	327.00	342.00	336.00	6.98	1.00
CHLORIDE (Cl)	7.10	6.50	6.30	6.70	7.70	7.30	7.00	7.00	8	6.30	7.70	6.95	0.45	1.00
AMMONIUM (NH4)	0.6*								0	0.00	0.00	#DIV/0!		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)	8.60								1	8.60	8.60	8.60		1.00
TDS	594.00	584.00	586.00	602.00					4	584.00	602.00	591.50	8.23	1.00
Cond. (umho/cm)	938.00	933.00	933.00	953.00	947.00	930.00	934.00	940.00	8	930.00	953.00	938.50	7.91	1.00
Alk. (as CaC03)	87.30	86.40	85.80	87.00	81.00	80.60	81.00	79.30	8	79.30	87.30	83.55	3.36	0.10
pH (units)	8.60	8.64	8.66	8.51	8.60	8.60	8.50	8.50	8	8.50	8.66	8.58	0.06	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	0.0010	< 0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.010								1	0.010	0.010	0.010		0.01
MERCURY (Hg)	< 0.01*								0	0.00	0.00	#DIV/0!		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0020	0.0008	< 0.0003	< 0.0003					4	0.00	0.00	0.00	0.00	0.0003
Ra 226	3.20	< 0.20	< 0.20	1.20					4	0.20	3.20	1.20	1.41	0.2
Ra 226+/-	0.30			0.20					2	0.20	0.30	0.25		0.2

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW10								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	8/13/97	8/29/97	9/26/97	12/4/97	8/14/97	8/29/97	9/26/97	3/6/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	29.40	29.20	18.50	20.00					4	18.50	29.40	24.28	5.84	0.10
MAGNESIUM (Mg)	4.80	5.10	3.50	5.70					4	3.50	5.70	4.78	0.93	1.00
SODIUM (Na)	225.00	220.00	206.00	181.00					4	181.00	225.00	208.00	19.71	0.10
POTASSIUM (K)	5.70	6.90	8.70	3.00					4	3.00	8.70	6.08	2.39	0.10
CARBONATE (CO3)	1.30								1	1.30	1.30	1.30		0.10
BICARBONATE (HC03)	98.00								1	98.00	98.00	98.00		0.10
SULFATE (SO4)	511.00	489.00	439.00	323.00					4	323.00	511.00	440.50	83.93	1.00
CHLORIDE (Cl)	6.80	5.10	4.70	8.00	5.60	5.10	5.80	5.30	8	4.70	8.00	5.80	1.09	1.00
AMMONIUM (NH4)	0.06								1	0.06	0.06	0.06		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.18								1	0.18	0.18	0.18		0.10
SILICA (SiO2)	8.50								1	8.50	8.50	8.50		1.00
TDS	702.00	825.00	700.00	586.00					4	586.00	825.00	703.25	97.61	1.00
Cond. (umho/cm)	1170.00	1230.00	1120.00	896.00	1123.00	1221.00	1109.00	1129.00	8	896.00	1230.00	1124.75	103.52	1.00
Alk. (as CaC03)	82.60	74.70	74.80	93.00	82.50	74.30	73.10	69.20	8	69.20	93.00	78.03	7.58	0.10
pH (units)	8.36	8.50	8.75	8.76	8.30	8.50	8.60	8.50	8	8.30	8.76	8.53	0.17	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	0.0080					4	0.001	0.008	0.003	0.004	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0040	0.0040	0.0030	0.0005					4	0.0005	0.0040	0.0029	0.0017	0.0003
Ra 226	0.60	1.80	1.40	0.50					4	0.50	1.80	1.08	0.63	0.2
Ra 226+/-	0.20	0.30	0.20	0.20					4	0.20	0.30	0.23	0.05	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW11								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	7/1/97	7/17/97	7/29/97	8/11/97	7/2/97	7/17/97	7/30/97	8/12/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	34.20	14.10	13.20	14.90					4	13.20	34.20	19.10	10.09	0.10
MAGNESIUM (Mg)	5.50	2.10	2.00	2.30					4	2.00	5.50	2.98	1.69	1.00
SODIUM (Na)	239.00	179.00	174.00	174.00					4	174.00	239.00	191.50	31.75	0.10
POTASSIUM (K)	6.50	4.40	4.40	3.70					4	3.70	6.50	4.75	1.21	0.10
CARBONATE (CO3)	3.30								1	3.30	3.30	3.30		0.10
BICARBONATE (HC03)	91.00								1	91.00	91.00	91.00		0.10
SULFATE (SO4)	535.00	331.00	312.00	331.00					4	312.00	535.00	377.25	105.55	1.00
CHLORIDE (Cl)	4.40	6.80	6.70	7.00	7.70	7.10	7.10	7.30	8	4.40	7.70	6.76	1.00	1.00
AMMONIUM (NH4)	0.06								1	0.06	0.06	0.06		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.20								1	0.20	0.20	0.20		0.10
SILICA (SiO2)	9.00								1	9.00	9.00	9.00		1.00
TDS	862.00	605.00	582.00	593.00					4	582.00	862.00	660.50	134.66	1.00
Cond. (umho/cm)	897.00	949.00	929.00	937.00	897.00	919.00	922.00	903.00	8	897.00	949.00	919.13	19.11	1.00
Alk. (as CaC03)	79.70	86.10	88.20	87.10	75.00	81.30	80.10	86.30	8	75.00	88.20	82.98	4.64	0.10
pH (units)	8.80	8.70	8.62	8.53	8.9*	8.60	8.60	8.40	7	8.40	8.80	8.61	0.13	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0030	< 0.0010	0.0020	< 0.0010					4	0.001	0.003	0.002	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0010	0.0005	0.0020	0.0008					4	0.0005	0.0020	0.0011	0.0007	0.0003
Ra 226	20.10	< 0.20	3.90	3.80					4	0.20	20.10	7.00	8.90	0.2
Ra 226+/-	1.40		0.30	0.30					3	0.30	1.40	0.67	0.64	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW12								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		8/13/97	9/11/97	9/25/97	3/19/97	8/14/97	9/12/97	9/26/97	3/20/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		33.20	30.60	31.00	27.00					4	27.00	33.20	30.45	2.57	0.10
MAGNESIUM (Mg)		5.10	4.90	5.20	4.90					4	4.90	5.20	5.03	0.15	1.00
SODIUM (Na)		226.00	224.00	220.00	223.00					4	220.00	226.00	223.25	2.50	0.10
POTASSIUM (K)		6.20	6.40	5.00	8.90					4	5.00	8.90	6.63	1.64	0.10
CARBONATE (CO3)		1.40								1	1.40	1.40	1.40		0.10
BICARBONATE (HC03)		100.00								1	100.00	100.00	100.00		0.10
SULFATE (SO4)		539.00	477.00	502.00	474.00					4	474.00	539.00	498.00	30.08	1.00
CHLORIDE (Cl)		5.30	2.80	3.70	4.00	5.40	5.30	5.30	5.40	8	2.80	5.40	4.65	1.01	1.00
AMMONIUM (NH4)		0.07								1	0.07	0.07	0.07		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.16								1	0.16	0.16	0.16		0.10
SILICA (SiO2)		8.30								1	8.30	8.30	8.30		1.00
TDS		760.00	795.00	810.00	834.00					4	760.00	834.00	799.75	30.99	1.00
Cond. (umho/cm)		1230.00	1260.00	1240.00	1250.00	1189.00	1210.00	1223.00	1182.00	8	1182.00	1260.00	1223.00	27.88	1.00
Alk. (as CaC03)		84.00	79.20	79.70	75.20	82.60	76.30	78.50	71.30	8	71.30	84.00	78.35	4.08	0.10
pH (units)		8.41	8.57	8.44	8.28	8.30	8.40	8.40	8.40	8	8.28	8.57	8.40	0.09	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	< 0.0010	< 0.0010	0.0020					4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.005*					3	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0050	0.0030	0.0030	0.0041					4	0.0030	0.0050	0.0038	0.0010	0.0003
Ra 226		3.00	5.60	7.30	1.20					4	1.20	7.30	4.28	2.71	0.2
Ra 226+/-		0.50	0.40	0.40	0.20					4	0.20	0.50	0.38	0.13	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW13								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of					
Sample Date:	7/11/97	7/24/97	8/7/97	9/11/97	7/11/97	7/25/97	8/8/97	9/12/97	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:														
CALCIUM (Ca)	14.70	16.70	14.20	13.30					4	13.30	16.70	14.73	1.44	0.10
MAGNESIUM (Mg)	1.80	2.50	2.30	2.10					4	1.80	2.50	2.18	0.30	1.00
SODIUM (Na)	169.00	180.00	172.00	177.00					4	169.00	180.00	174.50	4.93	0.10
POTASSIUM (K)	4.10	4.30	4.40	4.70					4	4.10	4.70	4.38	0.25	0.10
CARBONATE (CO3)	2.60								1	2.60	2.60	2.60		0.10
BICARBONATE (HC03)	103.00								1	103.00	103.00	103.00		0.10
SULFATE (SO4)	312.00	352.00	314.00	319.00					4	312.00	352.00	324.25	18.73	1.00
CHLORIDE (Cl)	7.30	6.30	6.50	4.70	7.30	7.10	6.90	7.20	8	4.70	7.30	6.66	0.87	1.00
AMMONIUM (NH4)	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.20								1	0.20	0.20	0.20		0.10
SILICA (SiO2)	8.60								1	8.60	8.60	8.60		1.00
TDS	558.00	617.00	559.00	571.00					4	558.00	617.00	576.25	27.80	1.00
Cond. (umho/cm)	904.00	905.00	927.00	931.00	911.00	911.00	904.00	906.00	8	904.00	931.00	912.38	10.69	1.00
Alk. (as CaC03)	88.10	89.80	88.70	91.20	83.00	82.40	85.00	82.90	8	82.40	91.20	86.39	3.48	0.10
pH (units)	8.66	8.63	8.72	8.59	8.60	8.40	8.20	8.50	8	8.20	8.72	8.54	0.17	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.00	0.00	0.00	0.00	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	< 0.0003	< 0.0003	< 0.0003	0.0010					4	0.0003	0.0010	0.0005	0.0004	0.0003
Ra 226	1.30	< 0.20	< 0.20	0.90					4	0.20	1.30	0.65	0.54	0.2
Ra 226+/-	0.20			0.20					2	0.20	0.20	0.20	0.00	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW14								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		8/21/97	9/11/97	9/24/97	3/5/97	8/22/97	9/12/97	9/25/97	3/6/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		34.70	34.30	34.70	36.00					4	34.30	36.00	34.93	0.74	0.10
MAGNESIUM (Mg)		5.70	5.50	5.70	6.20					4	5.50	6.20	5.78	0.30	1.00
SODIUM (Na)		239.00	232.00	225.00	234.00					4	225.00	239.00	232.50	5.80	0.10
POTASSIUM (K)		4.20	4.20	4.50	3.90					4	3.90	4.50	4.20	0.24	0.10
CARBONATE (CO3)		1.20								1	1.20	1.20	1.20		0.10
BICARBONATE (HC03)		92.00								1	92.00	92.00	92.00		0.10
SULFATE (SO4)		503.00	503.00	505.00	518.00					4	503.00	518.00	507.25	7.23	1.00
CHLORIDE (Cl)		3.70	2.70	3.90	4.00	5.50	5.20	5.20	4.70	8	2.70	5.50	4.36	0.95	1.00
AMMONIUM (NH4)		0.06								1	0.06	0.06	0.06		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)		0.17								1	0.17	0.17	0.17		0.10
FLUORIDE (F)		0.16								1	0.16	0.16	0.16		0.10
SILICA (SiO2)		8.80								1	8.80	8.80	8.80		1.00
TDS		840.00	831.00	838.00	883.00					4	831.00	883.00	848.00	23.65	1.00
Cond. (umho/cm)		1260.00	1290.00	1220.00	1330.00	1249.00	1256.00	1261.00	1245.00	8	1220.00	1330.00	1263.88	33.04	1.00
Alk. (as CaC03)		76.80	76.30	78.30	78.40	77.00	74.30	74.50	71.10	8	71.10	78.40	75.84	2.44	0.10
pH (units)		8.37	8.32	8.24	8.04	8.30	8.20	8.20	8.10	8	8.04	8.37	8.22	0.11	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	< 0.0010	< 0.0010	0.0020					4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.02								1	0.02	0.02	0.02		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	0.0030	0.0020					4	0.001	0.003	0.002	0.001	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0040	0.0020	0.0040	0.0032					4	0.0020	0.0040	0.0033	0.0009	0.0003
Ra 226		2.20	2.00	0.90	0.80					4	0.80	2.20	1.48	0.73	0.2
Ra 226+/-		0.30	0.30	0.20	0.20					4	0.20	0.30	0.25	0.06	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW15								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of					
Sample Date:	7/11/97	7/24/97	8/7/97	9/11/97	7/11/97	7/25/97	8/8/97	9/12/97	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:														
CALCIUM (Ca)	15.80	15.50	14.80	14.20					4	14.20	15.80	15.08	0.72	0.10
MAGNESIUM (Mg)	2.10	2.30	2.30	2.20					4	2.10	2.30	2.23	0.10	1.00
SODIUM (Na)	170.00	174.00	168.00	171.00					4	168.00	174.00	170.75	2.50	0.10
POTASSIUM (K)	2.70	2.60	2.60	2.70					4	2.60	2.70	2.65	0.06	0.10
CARBONATE (CO3)	1.90								1	1.90	1.90	1.90		0.10
BICARBONATE (HC03)	104.00								1	104.00	104.00	104.00		0.10
SULFATE (SO4)	316.00	329.00	310.00	311.00					4	310.00	329.00	316.50	8.74	1.00
CHLORIDE (Cl)	7.80	7.00	6.70	4.30	6.50	7.10	7.20	7.30	8	4.30	7.80	6.74	1.06	1.00
AMMONIUM (NH4)	0.07								1	0.07	0.07	0.07		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)	8.60								1	8.60	8.60	8.60		1.00
TDS	550.00	600.00	539.00	561.00					4	539.00	600.00	562.50	26.56	1.00
Cond. (umho/cm)	878.00	890.00	907.00	911.00	890.00	882.00	885.00	886.00	8	878.00	911.00	891.13	11.76	1.00
Alk. (as CaC03)	88.10	88.40	88.00	86.20	81.90	80.00	83.40	83.10	8	80.00	88.40	84.89	3.21	0.10
pH (units)	8.51	8.46	8.50	8.45	8.50	8.20	8.40	8.40	8	8.20	8.51	8.43	0.10	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	0.0020	< 0.0010					4	0.001	0.002	0.001	0.001	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	< 0.0003	0.0008	0.0009	0.0020					4	0.0003	0.0020	0.0010	0.0007	0.0003
Ra 226	1.00	< 0.20	0.50	2.30					4	0.20	2.30	1.00	0.93	0.2
Ra 226+/-	0.20		0.20	0.30					3	0.20	0.30	0.23	0.06	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW16								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		11/6/97	11/29/97	12/18/97	2/26/97	7/11/97	7/25/97	8/8/97	9/12/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		39.00	35.00	34.00	30.00					4	30.00	39.00	34.50	3.70	0.10
MAGNESIUM (Mg)		6.10	6.00	5.30	4.80					4	4.80	6.10	5.55	0.61	1.00
SODIUM (Na)		230.00	233.00	232.00	223.00					4	223.00	233.00	229.50	4.51	0.10
POTASSIUM (K)		4.80	5.00	5.60	6.50					4	4.80	6.50	5.48	0.76	0.10
CARBONATE (CO3)		1.10								1	1.10	1.10	1.10		0.10
BICARBONATE (HC03)		96.00								1	96.00	96.00	96.00		0.10
SULFATE (SO4)		531.00	498.00	476.00	508.00					4	476.00	531.00	503.25	22.82	1.00
CHLORIDE (Cl)		5.10	5.00	4.30	4.10	8.40	7.10	6.90	7.30	8	4.10	8.40	6.03	1.59	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.18								1	0.18	0.18	0.18		0.10
SILICA (SiO2)		9.10								1	9.10	9.10	9.10		1.00
TDS		831.00	847.00	838.00	826.00					4	826.00	847.00	835.50	9.11	1.00
Cond. (umho/cm)		1260.00	1260.00	1270.00	1230.00	887.00	891.00	892.00	898.00	8	887.00	1270.00	1073.50	194.39	1.00
Alk. (as CaC03)		80.30	78.70	76.70	75.20	82.10	78.20	84.50	84.40	8	75.20	84.50	80.01	3.44	0.10
pH (units)		8.32	8.41	8.36	8.25	8.30	8.20	8.40	8.30	8	8.20	8.41	8.32	0.07	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0010	0.0020	0.0010	0.0020					4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.02								1	0.02	0.02	0.02		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0040	0.0032	0.0034	0.0025					4	0.0025	0.0040	0.0033	0.0006	0.0003
Ra 226		4.20	2.80	2.20	1.90					4	1.90	4.20	2.78	1.02	0.2
Ra 226+/-		0.40	0.30	0.30	0.20					4	0.20	0.40	0.30	0.08	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW17								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	7/11/97	7/24/97	8/7/97	9/11/97	7/11/97	7/25/97	8/8/97	9/12/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	15.40	15.40	14.90	15.40					4	14.90	15.40	15.28	0.25	0.10
MAGNESIUM (Mg)	2.10	2.20	2.20	2.20					4	2.10	2.20	2.18	0.05	1.00
SODIUM (Na)	172.00	173.00	169.00	174.00					4	169.00	174.00	172.00	2.16	0.10
POTASSIUM (K)	2.50	2.60	2.60	2.40					4	2.40	2.60	2.53	0.10	0.10
CARBONATE (CO3)	1.50								1	1.50	1.50	1.50		0.10
BICARBONATE (HC03)	105.00								1	105.00	105.00	105.00		0.10
SULFATE (SO4)	317.00	328.00	312.00	318.00					4	312.00	328.00	318.75	6.70	1.00
CHLORIDE (Cl)	7.30	6.90	6.90	4.40	8.40	7.10	6.90	7.30	8	4.40	8.40	6.90	1.13	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.20								1	0.20	0.20	0.20		0.10
SILICA (SiO2)	8.60								1	8.60	8.60	8.60		1.00
TDS	558.00	600.00	546.00	567.00					4	546.00	600.00	567.75	23.16	1.00
Cond. (umho/cm)	869.00	887.00	908.00	921.00	887.00	891.00	892.00	898.00	8	869.00	921.00	894.13	15.48	1.00
Alk. (as CaC03)	87.90	88.80	87.40	92.10	82.10	78.20	84.50	84.40	8	78.20	92.10	85.68	4.32	0.10
pH (units)	8.40	8.41	8.45	8.41	8.30	8.20	8.40	8.30	8	8.20	8.45	8.36	0.08	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.02								1	0.02	0.02	0.02		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0003	0.0006	< 0.0003	0.0020					4	0.0003	0.0020	0.0008	0.0008	0.0003
Ra 226	< 0.20	< 0.20	1.00	0.60					4	0.20	1.00	0.50	0.38	0.2
Ra 226+/-			0.20	0.20					2	0.20	0.20	0.20	0.00	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW18								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	11/5/97	11/26/97	12/18/97	2/26/98	11/5/97	11/26/97	12/16/97	2/27/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	31.50	30.00	29.20	11.80					4	11.80	31.50	25.63	9.27	0.10
MAGNESIUM (Mg)	4.60	5.00	5.00	2.20					4	2.20	5.00	4.20	1.35	1.00
SODIUM (Na)	218.00	229.00	228.00	213.00					4	213.00	229.00	222.00	7.79	0.10
POTASSIUM (K)	5.70	7.00	6.80	13.3*					3	5.70	7.00	6.50	0.70	0.10
CARBONATE (CO3)	1.70								1	1.70	1.70	1.70		0.10
BICARBONATE (HC03)	94.00								1	94.00	94.00	94.00		0.10
SULFATE (SO4)	485.00	481.00	456.00	447.00					4	447.00	485.00	467.25	18.63	1.00
CHLORIDE (Cl)	4.60	5.00	3.90	5.30	5.30	4.80	4.80	5.40	8	3.90	5.40	4.89	0.49	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.17								1	0.17	0.17	0.17		0.10
SILICA (SiO2)	8.30								1	8.30	8.30	8.30		1.00
TDS	762.00	830.00	803.00	737.00					4	737.00	830.00	783.00	41.50	1.00
Cond. (umho/cm)	1190.00	1240.00	1260.00	1140.00	1201.00	1251.00	1269.00	1139.00	8	1139.00	1269.00	1211.25	52.06	1.00
Alk. (as CaC03)	79.50	75.10	74.70	68.00	78.10	73.20	73.30	64.50	8	64.50	79.50	73.30	4.96	0.10
pH (units)	8.50	8.54	8.44	8.85	8.30	8.50	8.50	9*	7	8.30	8.85	8.52	0.17	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	0.0020	0.0020	0.0020					4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.00								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0090	0.0093	0.0104	0.0065					4	0.0065	0.0104	0.0088	0.0016	0.0003
Ra 226	1.70	4.50	5.80	1.40					4	1.40	5.80	3.35	2.15	0.2
Ra 226+/-	0.20	0.40	0.40	0.20					4	0.20	0.40	0.30	0.12	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW19								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		7/17/97	8/11/97	9/11/97	9/25/97	7/17/97	8/12/97	9/12/97	9/25/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		34.90	37.20	32.90	34.60					4	32.90	37.20	34.90	1.77	0.10
MAGNESIUM (Mg)		5.90	6.40	5.60	6.00					4	5.60	6.40	5.98	0.33	1.00
SODIUM (Na)		244.00	246.00	242.00	237.00					4	237.00	246.00	242.25	3.86	0.10
POTASSIUM (K)		4.70	4.80	4.90	5.10					4	4.70	5.10	4.88	0.17	0.10
CARBONATE (CO3)		1.20								1	1.20	1.20	1.20		0.10
BICARBONATE (HC03)		80.00								1	80.00	80.00	80.00		0.10
SULFATE (SO4)		541.00	583.00	534.00	546.00					4	534.00	583.00	551.00	21.89	1.00
CHLORIDE (Cl)		4.20	5.20	2.60	3.30	5.00	5.30	5.20	5.00	8	2.60	5.30	4.48	1.02	1.00
AMMONIUM (NH4)		0.06								1	0.06	0.06	0.06		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.14								1	0.14	0.14	0.14		0.10
SILICA (SiO2)		9.00								1	9.00	9.00	9.00		1.00
TDS		903.00	917.00	878.00	873.00					4	873.00	917.00	892.75	20.82	1.00
Cond. (umho/cm)		1350.00	1380.00	1350.00	1280.00	1349.00	1330.00	1314.00	1325.00	8	1280.00	1380.00	1334.75	29.91	1.00
Alk. (as CaC03)		67.00	67.80	63.00	67.40	61.60	67.10	60.70	65.30	8	60.70	67.80	64.99	2.83	0.10
pH (units)		8.41	8.41	8.45	8.24	8.40	8.10	8.50	8.40	8	8.10	8.50	8.36	0.13	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0050	0.0010	< 0.0010	< 0.0010					4	0.001	0.005	0.002	0.002	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.005*					3	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0030	0.0030	0.0040	0.0040					4	0.0030	0.0040	0.0035	0.0006	0.0003
Ra 226		3.10	3.50	16.10	7.70					4	3.10	16.10	7.60	6.04	0.2
Ra 226+/-		0.30	0.30	1.20	0.50					4	0.30	1.20	0.58	0.43	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW20								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	
Sample Date:	10/31/97	12/1/97	12/18/97	3/4/98	10/30/97	12/2/97	12/18/97	3/5/98	Samples	MIN	MAX	MEAN		Limit
Major Ions mg/l:														
CALCIUM (Ca)	25.70	28.00	32.10	26.20					4	25.70	32.10	28.00	2.91	0.10
MAGNESIUM (Mg)	3.90	5.00	5.00	4.30					4	3.90	5.00	4.55	0.54	1.00
SODIUM (Na)	202.00	216.00	223.00	204.00					4	202.00	223.00	211.25	9.98	0.10
POTASSIUM (K)	3.40	4.00	3.90	3.40					4	3.40	4.00	3.68	0.32	0.10
CARBONATE (CO3)	1.40								1	1.40	1.40	1.40		0.10
BICARBONATE (HC03)	106.00								1	106.00	106.00	106.00		0.10
SULFATE (SO4)	409.00	437.00	440.00	421.00					4	409.00	440.00	426.75	14.48	1.00
CHLORIDE (Cl)	5.30	5.00	3.80	4.20	5.90	5.10	4.90	6.00	8	3.80	6.00	5.03	0.76	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.19								1	0.19	0.19	0.19		0.10
SILICA (SiO2)	7.90								1	7.90	7.90	7.90		1.00
TDS	727.00	752.00	792.00	757.00					4	727.00	792.00	757.00	26.77	1.00
Cond. (umho/cm)	1100.00	1170.00	1240.00	1150.00	1102.00	1189.00	1233.00	1059.00	8	1059.00	1240.00	1155.38	65.21	1.00
Alk. (as CaC03)	88.40	92.50	85.00	82.60	86.90	81.30	83.70	82.80	8	81.30	92.50	85.40	3.71	0.10
pH (units)	8.36	8.26	8.27	8.13	8.20	8.30	8.30	8.30	8	8.13	8.36	8.27	0.07	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	0.0020	0.0020	0.0020					4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	0.0020					4	0.001	0.002	0.001	0.001	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.1530	0.1240	0.1390	0.0735					4	0.0735	0.1530	0.1224	0.0347	0.0003
Ra 226	6.30	9.40	10.70	7.50					4	6.30	10.70	8.48	1.96	0.2
Ra 226+/-	0.40	0.60	1.00	0.40					4	0.40	1.00	0.60	0.28	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW21								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		10/31/97	11/19/97	12/18/97	2/12/98	10/30/97	11/18/97	12/18/97	2/13/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		20.10	22.00	19.00	15.80					4	15.80	22.00	19.23	2.60	0.10
MAGNESIUM (Mg)		3.30	4.00	3.40	3.00					4	3.00	4.00	3.43	0.42	1.00
SODIUM (Na)		202.00	196.00	203.00	191.00					4	191.00	203.00	198.00	5.60	0.10
POTASSIUM (K)		3.70	4.00	3.90	3.50					4	3.50	4.00	3.78	0.22	0.10
CARBONATE (CO3)		1.40								1	1.40	1.40	1.40		0.10
BICARBONATE (HC03)		93.00								1	93.00	93.00	93.00		0.10
SULFATE (SO4)		409.00	420.00	372.00	381.00					4	372.00	420.00	395.50	22.69	1.00
CHLORIDE (Cl)		5.40	6.00	4.30	6.50	6.30	6.40	6.40	6.80	8	4.30	6.80	6.01	0.81	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)		7.80								1	7.80	7.80	7.80		1.00
TDS		713.00	713.00	708.00	702.00					4	702.00	713.00	709.00	5.23	1.00
Cond. (umho/cm)		1080.00	1080.00	1090.00	1090.00	1083.00	1085.00	1085.00	1008.00	8	1008.00	1090.00	1075.13	27.39	1.00
Alk. (as CaC03)		78.20	78.60	75.60	104.0*	76.70	82.80	82.80	74.30	7	74.30	82.80	78.43	3.33	0.10
pH (units)		8.42	8.44	8.46	8.23	8.40	8.40	8.40	8.70	8	8.23	8.70	8.43	0.13	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0010	0.0020	0.0010					4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0070	0.0076	0.0072	0.0086					4	0.0070	0.0086	0.0076	0.0007	0.0003
Ra 226		8.10	2.00	3.30	0.70					4	0.70	8.10	3.53	3.23	0.2
Ra 226+/-		0.50	0.10	0.30	0.20					4	0.10	0.50	0.28	0.17	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW22								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	8/8/97	9/11/97	11/19/97	2/12/98	8/8/97	9/12/97	11/19/97	2/13/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	30.60	28.20	28.00	29.10					4	28.00	30.60	28.98	1.18	0.10
MAGNESIUM (Mg)	4.90	4.50	5.00	4.90					4	4.50	5.00	4.83	0.22	1.00
SODIUM (Na)	217.00	217.00	212.00	215.00					4	212.00	217.00	215.25	2.36	0.10
POTASSIUM (K)	4.10	4.50	5.00	4.30					4	4.10	5.00	4.48	0.39	0.10
CARBONATE (CO3)	1.30								1	1.30	1.30	1.30		0.10
BICARBONATE (HC03)	103.00								1	103.00	103.00	103.00		0.10
SULFATE (SO4)	477.00	446.00	465.00	482.00					4	446.00	482.00	467.50	16.01	1.00
CHLORIDE (Cl)	4.10	3.40	5.00	5.40	4.90	5.70	5.80	5.40	8	3.40	5.80	4.96	0.83	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.18								1	0.18	0.18	0.18		0.10
SILICA (SiO2)	8.80								1	8.80	8.80	8.80		1.00
TDS	757.00	761.00	784.00	781.00					4	757.00	784.00	770.75	13.72	1.00
Cond. (umho/cm)	1190.00	1210.00	1170.00	1180.00	1168.00	1169.00	1185.00	1259.00	8	1168.00	1259.00	1191.38	30.70	1.00
Alk. (as CaC03)	86.40	83.20	82.30	83.70	83.70	81.00	82.90	82.70	8	81.00	86.40	83.24	1.55	0.10
pH (units)	8.36	8.40	8.27	8.12	8.30	8.20	8.10	8.30	8	8.10	8.40	8.26	0.11	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0010	< 0.0010	0.0020	0.0020					4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	0.004*	< 0.0010	< 0.0010	< 0.0010					3	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0070	0.0040	0.0064	0.0062					4	0.0040	0.0070	0.0059	0.0013	0.0003
Ra 226	13.80	16.10	11.70	14.00					4	11.70	16.10	13.90	1.80	0.2
Ra 226+/-	1.10	1.20	1.10	1.10					4	1.10	1.20	1.13	0.05	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW23								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		8/8/97	8/22/97	11/19/97	2/12/98	8/8/97	8/22/97	11/19/97	2/13/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		31.10	32.30	33.00	31.70					4	31.10	33.00	32.03	0.81	0.10
MAGNESIUM (Mg)		4.90	5.10	5.00	5.20					4	4.90	5.20	5.05	0.13	1.00
SODIUM (Na)		218.00	215.00	217.00	215.00					4	215.00	218.00	216.25	1.50	0.10
POTASSIUM (K)		4.00	4.20	4.00	3.40					4	3.40	4.20	3.90	0.35	0.10
CARBONATE (CO3)		1.50								1	1.50	1.50	1.50		0.10
BICARBONATE (HC03)		96.00								1	96.00	96.00	96.00		0.10
SULFATE (SO4)		482.00	488.00	489.00	491.00					4	482.00	491.00	487.50	3.87	1.00
CHLORIDE (Cl)		4.60	4.50	4.00	4.50	4.90	5.00	5.30	5.10	8	4.00	5.30	4.74	0.42	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.18								1	0.18	0.18	0.18		0.10
SILICA (SiO2)		8.40								1	8.40	8.40	8.40		1.00
TDS		789.00	795.00	830.00	819.00					4	789.00	830.00	808.25	19.45	1.00
Cond. (umho/cm)		1220.00	1210.00	1210.00	1230.00	1199.00	1199.00	1238.00	1241.00	8	1199.00	1241.00	1218.38	16.59	1.00
Alk. (as CaC03)		80.80	83.20	82.50	82.00	78.90	82.50	80.30	78.60	8	78.60	83.20	81.10	1.73	0.10
pH (units)		8.43	8.33	8.24	8.11	8.60	8.30	8.00	8.30	8	8.00	8.60	8.29	0.18	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0040	0.0030	0.0020	0.0020					4	0.002	0.004	0.003	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)		0.005*	0.0010	< 0.0010	< 0.0010					3	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0080	0.0060	0.0056	0.0053					4	0.01	0.01	0.01	0.00	0.0003
Ra 226		2.70	5.10	4.50	4.70					4	2.70	5.10	4.25	1.06	0.2
Ra 226+/-		0.30	0.30	0.40	0.40					4	0.30	0.40	0.35	0.06	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW24						CMI				Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI										Of				Deviation	Limit
Sample Date:		8/15/97		11/19/97		12/18/97		2/12/98		8/15/97		11/19/97		12/18/97		2/13/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:																						
CALCIUM (Ca)		31.20		32.00		30.10		29.90									4	29.90	32.00	30.80	0.98	0.10
MAGNESIUM (Mg)		4.50		5.00		4.70		4.70									4	4.50	5.00	4.73	0.21	1.00
SODIUM (Na)		226.00		220.00		227.00		218.00									4	218.00	227.00	222.75	4.43	0.10
POTASSIUM (K)		4.70		4.00		4.20		3.90									4	3.90	4.70	4.20	0.36	0.10
CARBONATE (CO3)		2.20															1	2.20	2.20	2.20		0.10
BICARBONATE (HC03)		95.00															1	95.00	95.00	95.00		0.10
SULFATE (SO4)		502.00		493.00		452.00		515.00									4	452.00	515.00	490.50	27.21	1.00
CHLORIDE (Cl)		5.00		5.00		4.00		5.20		5.00		5.20		5.10		5.20	8	4.00	5.20	4.96	0.40	1.00
AMMONIUM (NH4)	<	0.05															1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10															1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10															1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.15															1	0.15	0.15	0.15		0.10
SILICA (SiO2)		8.40															1	8.40	8.40	8.40		1.00
TDS		784.00		837.00		806.00		814.00									4	784.00	837.00	810.25	21.88	1.00
Cond. (umho/cm)		1230.00		1210.00		1240.00		1220.00		1195.00		1245.00		1242.00		1237.00	8	1195.00	1245.00	1227.38	17.68	1.00
Alk. (as CaC03)		81.20		79.70		76.00		73.40		81.70		77.60		74.20		69.50	8	69.50	81.70	76.66	4.22	0.10
pH (units)		8.62		8.30		8.32		8.21		8.70		8.10		8.40		8.60	8	8.10	8.70	8.41	0.21	1-14
Trace Metals mg/l:																						
ALUMINUM (Al)	<	0.10															1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010		0.0010		0.0010		0.0010									4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	<	0.10															1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10															1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01															1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05															1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01															1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05															1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05															1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01															1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001															1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01															1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05															1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	<	0.0010	<	0.0010	<	0.0010									4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10															1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01															1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																						
U (mg/l)		0.0050		0.0048		0.0050		0.0042									4	0.0042	0.0050	0.0048	0.0004	0.0003
Ra 226		15.10		4.00		2.90		2.30									4	2.30	15.10	6.08	6.06	0.2
Ra 226+/-		1.20		0.40		0.30		0.30									4	0.30	1.20	0.55	0.44	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW25					CMI				Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI														
Sample Date:		8/22/97	11/19/97	12/18/97	2/12/98	8/22/97	11/19/97	12/18/97	2/12/97		Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:																
CALCIUM (Ca)		28.70	31.00	24.90	21.80						4	21.80	31.00	26.60	4.07	0.10
MAGNESIUM (Mg)		4.60	5.00	4.00	3.50						4	3.50	5.00	4.28	0.66	1.00
SODIUM (Na)		221.00	211.00	208.00	192.00						4	192.00	221.00	208.00	12.03	0.10
POTASSIUM (K)		3.90	4.00	3.30	2.80						4	2.80	4.00	3.50	0.56	0.10
CARBONATE (CO3)		2.70									1	2.70	2.70	2.70		0.10
BICARBONATE (HC03)		93.00									1	93.00	93.00	93.00		0.10
SULFATE (SO4)		442.00	469.00	388.00	427.00						4	388.00	469.00	431.50	33.81	1.00
CHLORIDE (Cl)		3.90	5.00	4.40	6.00	5.30	5.60	5.80	6.30		8	3.90	6.30	5.29	0.82	1.00
AMMONIUM (NH4)		0.08									1	0.08	0.08	0.08		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.17									1	0.17	0.17	0.17		0.10
SILICA (SiO2)		8.40									1	8.40	8.40	8.40		1.00
TDS		751.00	805.00	722.00	702.00						4	702.00	805.00	745.00	44.77	1.00
Cond. (umho/cm)		1160.00	1160.00	1130.00	1090.00	1144.00	1206.00	1134.00	1134.00		8	1090.00	1206.00	1144.75	33.09	1.00
Alk. (as CaC03)		80.50	80.50	80.40	81.50	79.80	78.40	78.10	79.00		8	78.10	81.50	79.78	1.18	0.10
pH (units)		8.71	8.31	8.85	8.24	8.60	8.10	8.40	8.40		8	8.10	8.85	8.45	0.25	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.10									1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0010	0.0020	0.0020						4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	<	0.10									1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10									1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01									1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05									1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01									1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05									1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05									1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01									1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001									1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01									1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05									1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010						4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10									1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01									1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)		0.0040	0.0043	0.0049	0.0040						4	0.0040	0.0049	0.0043	0.0004	0.0003
Ra 226		2.40	2.20	9.70	1.00						4	1.00	9.70	3.83	3.97	0.2
Ra 226+/-		0.30	0.10	0.50	0.20						4	0.10	0.50	0.28	0.17	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW26					CMI				Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI														
Sample Date:		10/7/97	11/19/97	12/18/97	2/5/98	10/7/97	11/18/97	12/18/97	2/6/98		Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:																
CALCIUM (Ca)		20.40	21.00	17.70	17.20						4	17.20	21.00	19.08	1.90	0.10
MAGNESIUM (Mg)		3.10	3.00	2.60	2.60						4	2.60	3.10	2.83	0.26	1.00
SODIUM (Na)		195.00	193.00	190.00	187.00						4	187.00	195.00	191.25	3.50	0.10
POTASSIUM (K)		3.00	3.00	2.80	2.70						4	2.70	3.00	2.88	0.15	0.10
CARBONATE (CO3)		1.60									1	1.60	1.60	1.60		0.10
BICARBONATE (HC03)		101.00									1	101.00	101.00	101.00		0.10
SULFATE (SO4)		393.00	402.00	335.00	362.00						4	335.00	402.00	373.00	30.58	1.00
CHLORIDE (Cl)		5.40	5.00	5.50	8.30	6.60	6.50	6.60	6.80		8	5.00	8.30	6.34	1.04	1.00
AMMONIUM (NH4)	<	0.05									1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.17									1	0.17	0.17	0.17		0.10
SILICA (SiO2)		8.30									1	8.30	8.30	8.30		1.00
TDS		682.00	710.00	629.00	615.00						4	615.00	710.00	659.00	44.59	1.00
Cond. (umho/cm)		1040.00	1030.00	1010.00	955.00	1030.00	1061.00	1013.00	1000.00		8	955.00	1061.00	1017.38	31.62	1.00
Alk. (as CaC03)		85.60	82.70	85.40	85.60	85.00	87.90	85.10	80.10		8	80.10	87.90	84.68	2.32	0.10
pH (units)		8.45	8.38	8.34	8.10	8.30	8.40	8.40	8.10		8	8.10	8.45	8.31	0.14	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.10									1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0030	0.0030	0.0030	0.0020						4	0.002	0.003	0.003	0.001	0.001
BARIUM (Ba)	<	0.10									1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10									1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01									1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05									1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01									1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05									1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05									1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01									1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001									1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01									1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05									1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010						4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10									1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01									1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)		0.0060	0.0045	0.0042	0.0025						4	0.0025	0.0060	0.0043	0.0014	0.0003
Ra 226		11.80	11.30	9.50	6.90						4	6.90	11.80	9.88	2.22	0.2
Ra 226+/-		1.00	1.10	0.50	0.40						4	0.40	1.10	0.75	0.35	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW27								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	10/7/97	11/19/97	12/11/97	2/5/98	10/6/97	11/18/97	12/12/97	2/6/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	15.60	15.00	15.00	16.40					4	15.00	16.40	15.50	0.66	0.10
MAGNESIUM (Mg)	2.30	2.00	2.00	2.50					4	2.00	2.50	2.20	0.24	1.00
SODIUM (Na)	175.00	175.00	174.00	182.00					4	174.00	182.00	176.50	3.70	0.10
POTASSIUM (K)	3.50	4.00	4.00	3.30					4	3.30	4.00	3.70	0.36	0.10
CARBONATE (CO3)	2.40								1	2.40	2.40	2.40		0.10
BICARBONATE (HC03)	101.00								1	101.00	101.00	101.00		0.10
SULFATE (SO4)	334.00	339.00	348.00	349.00					4	334.00	349.00	342.50	7.23	1.00
CHLORIDE (CI)	5.70	6.00	7.00	6.90	7.00	7.00	6.90	6.90	8	5.70	7.00	6.68	0.52	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	0.28*								0	0.00	0.00			0.10
FLUORIDE (F)	2.00*								0	0.00	0.00			0.10
SILICA (SiO2)	8.20								1	8.20	8.20	8.20		1.00
TDS	604.00	612.00	605.00	600.00					4	600.00	612.00	605.25	4.99	1.00
Cond. (umho/cm)	938.00	920.00	945.00	933.00	925.00	946.00	954.00	969.00	8	920.00	969.00	941.25	15.87	1.00
Alk. (as CaC03)	86.70	85.00	85.40	86.50	84.70	88.80	79.90	78.30	8	78.30	88.80	84.41	3.54	0.10
pH (units)	8.62	8.45	8.47	8.06	8.60	8.50	8.50	8.10	8	8.06	8.62	8.41	0.21	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0020	0.0020	0.0020	0.0020					4	0.002	0.002	0.002	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0020	0.0008	0.0009	0.0005					4	0.0005	0.0020	0.0011	0.0007	0.0003
Ra 226	1.10	1.20	5.60	1.40					4	1.10	5.60	2.33	2.19	0.2
Ra 226+/-	0.20	0.10	0.40	0.20					4	0.10	0.40	0.23	0.13	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW28								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	10/7/97	10/31/97	11/19/97	2/26/98	10/6/97	10/31/97	11/19/97	2/27/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	17.10	17.00	17.00	16.60					4	16.60	17.10	16.93	0.22	0.10
MAGNESIUM (Mg)	2.40	2.40	2.00	2.50					4	2.00	2.50	2.33	0.22	1.00
SODIUM (Na) *	179.00	180.00	176.00	178.00					4	176.00	180.00	178.25	1.71	0.10
POTASSIUM (K)	3.00	2.80	3.00	2.70					4	2.70	3.00	2.88	0.15	0.10
CARBONATE (CO3)	2.40	1.40							2	1.40	2.40	1.90	0.71	0.10
BICARBONATE (HC03)	100.00	102.00							2	100.00	102.00	101.00	1.41	0.10
SULFATE (SO4)	345.00	344.00	347.00	343.00					4	343.00	347.00	344.75	1.71	1.00
CHLORIDE (Cl)	5.70	7.00	7.00	6.50	6.90	6.90	7.00	6.70	8	5.70	7.00	6.71	0.45	1.00
AMMONIUM (NH4)	< 0.05	< 0.05							2	0.05	0.05	0.05	0.00	0.05
NITRITE (NO2) as (N)	< 0.10	< 0.10							2	0.10	0.10	0.10	0.00	0.10
NITRATE (NO3) as (N)	< 0.10	< 0.10							2	0.10	0.10	0.10	0.00	0.10
FLUORIDE (F)	0.19	0.22							2	0.19	0.22	0.21	0.02	0.10
SILICA (SiO2)	8.30	8.40							2	8.30	8.40	8.35	0.07	1.00
TDS	610.00	615.00	624.00	615.00					4	610.00	624.00	616.00	5.83	1.00
Cond. (umho/cm)	956.00	953.00	952.00	951.00	945.00	954.00	967.00	943.00	8	943.00	967.00	952.63	7.31	1.00
Alk. (as CaC03)	85.30	85.30	84.40	83.30	84.40	84.40	81.80	80.70	8	80.70	85.30	83.70	1.66	0.10
pH (units)	8.63	8.38	8.41	8.20	8.50	8.40	8.30	8.30	8	8.20	8.63	8.39	0.13	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10	< 0.10							2	0.10	0.10	0.10	0.00	0.1
ARSENIC (As)	0.0020	< 0.0010	0.0020	0.0020					4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	< 0.10	< 0.10							2	0.10	0.10	0.10	0.00	0.1
BORON (B)	< 0.10	< 0.10							2	0.10	0.10	0.10	0.00	0.1
CADMIUM (Cd)	< 0.01	< 0.01							2	0.01	0.01	0.01	0.00	0.01
CHROMIUM (Cr)	< 0.05	< 0.05							2	0.05	0.05	0.05	0.00	0.05
COPPER (Cu)	< 0.01	< 0.01							2	0.01	0.01	0.01	0.00	0.01
IRON (Fe)	< 0.05	< 0.05							2	0.05	0.05	0.05	0.00	0.05
LEAD (Pb)	< 0.05	< 0.05							2	0.05	0.05	0.05	0.00	0.05
MANGANESE (Mn)	0.02	0.02							2	0.02	0.02	0.02	0.00	0.01
MERCURY (Hg)	< 0.001	< 0.001							2	0.001	0.001	0.001	0.000	0.001
MOLYBDENUM (Mo)	< 0.01	< 0.01							2	0.01	0.01	0.01	0.00	0.1
NICKEL (Ni)	< 0.05	< 0.05							2	0.05	0.05	0.05	0.00	0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10	< 0.10							2	0.10	0.10	0.10	0.00	0.1
ZINC (Zn)	< 0.01	< 0.01							2	0.01	0.01	0.01	0.00	0.01
Radiometric pCi/l:														
U (mg/l)	0.0280	0.0150	0.0160	0.0078					4	0.0078	0.0280	0.0167	0.0084	0.0003
Ra 226	6.50	5.40	8.30	2.80					4	2.80	8.30	5.75	2.30	0.2
Ra 226+/-	0.40	0.40	0.50	0.30					4	0.30	0.50	0.40	0.08	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW29								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		10/31/97	11/19/97	12/18/97	2/5/98	10/31/97	11/19/97	12/19/97	2/6/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		16.60	19.00	21.30	17.40					4	16.60	21.30	18.58	2.07	0.10
MAGNESIUM (Mg)		2.40	3.00	3.10	2.60					4	2.40	3.10	2.78	0.33	1.00
SODIUM (Na)		180.00	188.00	202.00	184.00					4	180.00	202.00	188.50	9.57	0.10
POTASSIUM (K)		2.90	3.00	3.30	2.90					4	2.90	3.30	3.03	0.19	0.10
CARBONATE (CO3)		1.60								1	1.60	1.60	1.60		0.10
BICARBONATE (HC03)		101.00								1	101.00	101.00	101.00		0.10
SULFATE (SO4)		343.00	383.00	369.00	356.00					4	343.00	383.00	362.75	17.17	1.00
CHLORIDE (CI)		5.70	6.00	5.10	7.30	6.90	6.80	6.30	6.90	8	5.10	7.30	6.38	0.74	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)		7.80								1	7.80	7.80	7.80		1.00
TDS		627.00	677.00	674.00	614.00					4	614.00	677.00	648.00	32.22	1.00
Cond. (umho/cm)		963.00	1000.00	1070.00	948.00	953.00	1022.00	1071.00	973.00	8	948.00	1071.00	1000.00	49.91	1.00
Alk. (as CaC03)		85.00	82.80	82.70	84.70	85.00	81.80	81.80	78.30	8	78.30	85.00	82.76	2.25	0.10
pH (units)		8.44	8.42	8.40	8.11	8.40	8.30	8.40	8.10	8	8.10	8.44	8.32	0.14	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0040	0.0040	0.0020					4	0.001	0.004	0.003	0.002	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0150	0.0151	0.0140	0.0082					4	0.0082	0.0151	0.0131	0.0033	0.0003
Ra 226		1.30	4.40	3.20	1.00					4	1.00	4.40	2.48	1.61	0.2
Ra 226+/-		0.20	0.40	0.30	0.20					4	0.20	0.40	0.28	0.10	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.::	7MW30								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	10/31/97	11/19/97	12/18/97	2/5/98	10/31/97	11/19/97	12/19/97	2/6/97	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	15.80	16.00	16.60	16.80					4	15.80	16.80	16.30	0.48	0.10
MAGNESIUM (Mg)	2.10	2.00	2.30	2.50					4	2.00	2.50	2.23	0.22	1.00
SODIUM (Na)	178.00	176.00	182.00	185.00					4	176.00	185.00	180.25	4.03	0.10
POTASSIUM (K)	2.90	3.00	2.90	2.80					4	2.80	3.00	2.90	0.08	0.10
CARBONATE (CO3)	1.50								1	1.50	1.50	1.50		0.10
BICARBONATE (HC03)	103.00								1	103.00	103.00	103.00		0.10
SULFATE (SO4)	333.00	341.00	322.00	353.00					4	322.00	353.00	337.25	13.07	1.00
CHLORIDE (Cl)	4.80	6.00	5.60	7.90	6.90	6.90	7.00	7.00	8	4.80	7.90	6.51	0.98	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	0.11								1	0.11	0.11	0.11		0.10
FLUORIDE (F)	0.22								1	0.22	0.22	0.22		0.10
SILICA (SiO2)	8.50								1	8.50	8.50	8.50		1.00
TDS	598.00	605.00	593.00	591.00					4	591.00	605.00	596.75	6.24	1.00
Cond. (umho/cm)	946.00	925.00	952.00	933.00	945.00	945.00	953.00	965.00	8	925.00	965.00	945.50	12.28	1.00
Alk. (as CaC03)	86.60	85.40	86.30	86.00	86.30	82.30	84.40	81.00	8	81.00	86.60	84.79	2.08	0.10
pH (units)	8.41	8.36	8.21	8.07	8.40	8.20	8.30	8.00	8	8.00	8.41	8.24	0.15	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	0.0010	0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	< 0.0003	< 0.0003	< 0.0003	0.0003					4	0.0003	0.0003	0.0003	0.0000	0.0003
Ra 226	< 0.20	0.90	0.50	< 0.20					4	0.20	0.90	0.45	0.33	0.2
Ra 226+/-		0.10	0.20						2	0.10	0.20	0.15	0.07	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW31								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		10/3/97	11/19/97	12/18/97	1/29/98	10/3/97	11/19/97	12/19/97	1/3/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		15.90	16.00	16.90	16.80					4	15.90	16.90	16.40	0.52	0.10
MAGNESIUM (Mg)		2.20	2.00	2.40	2.40					4	2.00	2.40	2.25	0.19	1.00
SODIUM (Na)		176.00	175.00	179.00	174.00					4	174.00	179.00	176.00	2.16	0.10
POTASSIUM (K)		2.80	3.00	2.80	2.80					4	2.80	3.00	2.85	0.10	0.10
CARBONATE (CO3)		1.80								1	1.80	1.80	1.80		0.10
BICARBONATE (HC03)		102.00								1	102.00	102.00	102.00		0.10
SULFATE (SO4)		295.00	339.00	321.00	342.00					4	295.00	342.00	324.25	21.59	1.00
CHLORIDE (Cl)		6.10	7.00	6.60	7.50	7.00	7.30	6.90	6.90	8	6.10	7.50	6.91	0.43	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)		8.60								1	8.60	8.60	8.60		1.00
TDS		568.00	600.00	582.00	616.00					4	568.00	616.00	591.50	20.94	1.00
Cond. (umho/cm)		934.00	919.00	947.00	934.00	927.00	946.00	944.00	933.00	8	919.00	947.00	935.50	9.78	1.00
Alk. (as CaC03)		85.90	85.40	86.30	88.60	94.90	85.20	84.20	87.80	8	84.20	94.90	87.29	3.39	0.10
pH (units)		8.50	8.35	8.37	8.26	8.40	8.20	8.30	8.40	8	8.20	8.50	8.35	0.09	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0020	0.0020	0.0020					4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.02								1	0.02	0.02	0.02		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0010	0.0006	0.0006	0.0006					4	0.00	0.00	0.00	0.00	0.0003
Ra 226	<	0.20	0.60	1.00	< 0.20					4	0.20	1.00	0.50	0.38	0.2
Ra 226+/-			0.20	0.20						2	0.20	0.20	0.20	0.00	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW32					CMI				Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI									Of				Deviation	Limit
Sample Date:		11/5/97	11/19/97	12/23/97	1/29/98	11/5/97	11/20/97	12/23/97	1/30/98		Samples	MIN	MAX	MEAN		
Major Ions mg/l:																
CALCIUM (Ca)		16.30	16.00	19.00	15.50						4	15.50	19.00	16.70	1.57	0.10
MAGNESIUM (Mg)		2.40	2.00	3.20	2.30						4	2.00	3.20	2.48	0.51	1.00
SODIUM (Na)		175.00	174.00	196.00	173.00						4	173.00	196.00	179.50	11.03	0.10
POTASSIUM (K)		2.60	3.00	4.90	2.60						4	2.60	4.90	3.28	1.10	0.10
CARBONATE (CO3)	<	0.10									1	0.10	0.10	0.10		0.10
BICARBONATE (HC03)		107.00									1	107.00	107.00	107.00		0.10
SULFATE (SO4)		331.00	332.00	393.00	336.00						4	331.00	393.00	348.00	30.08	1.00
CHLORIDE (Cl)		6.40	7.00	6.30	6.50	6.90	6.90	6.90	6.90		8	6.30	7.00	6.73	0.28	1.00
AMMONIUM (NH4)	<	0.05									1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.22									1	0.22	0.22	0.22		0.10
SILICA (SiO2)		8.60									1	8.60	8.60	8.60		1.00
TDS		562.00	601.00	678.00	597.00						4	562.00	678.00	609.50	48.91	1.00
Cond. (umho/cm)		928.00	928.00	1010.00	919.00	934.00	945.00	933.00	934.00		8	919.00	1010.00	941.38	28.69	1.00
Alk. (as CaC03)		87.70	85.70	79.30	85.20	85.30	82.80	84.00	86.50		8	79.30	87.70	84.56	2.59	0.10
pH (units)		8.30	8.35	8.49	8.33	8.20	8.40	8.30	8.40		8	8.20	8.49	8.35	0.09	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.10									1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0020	0.0030	0.0010						4	0.001	0.003	0.002	0.001	0.001
BARIUM (Ba)	<	0.10									1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10									1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01									1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05									1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01									1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05									1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05									1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.02									1	0.02	0.02	0.02		0.01
MERCURY (Hg)	<	0.001									1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01									1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05									1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010						4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10									1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01									1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)		0.0030	0.0013	0.0029	0.0012						4	0.0012	0.0030	0.0021	0.0010	0.0003
Ra 226		11.60	3.00	1.90	< 0.20						4	0.20	11.60	4.18	5.08	0.2
Ra 226+/-		1.10	0.30	0.30							3	0.30	1.10	0.57	0.46	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW33								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		10/7/97	11/19/97	12/23/97	1/29/98	10/8/97	11/20/97	12/23/97	1/29/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		21.20	19.00	18.60	15.70					4	15.70	21.20	18.63	2.26	0.10
MAGNESIUM (Mg)		3.40	3.00	3.10	2.40					4	2.40	3.40	2.98	0.42	1.00
SODIUM (Na)		196.00	190.00	192.00	173.00					4	173.00	196.00	187.75	10.14	0.10
POTASSIUM (K)		3.60	4.00	4.10	3.20					4	3.20	4.10	3.73	0.41	0.10
CARBONATE (CO3)		1.10								1	1.10	1.10	1.10		0.10
BICARBONATE (HC03)		99.00								1	99.00	99.00	99.00		0.10
SULFATE (SO4)		409.00	390.00	382.00	339.00					4	339.00	409.00	380.00	29.59	1.00
CHLORIDE (Cl)	<	1.00	6.00	5.70	7.00	7.20	6.50	6.70	6.90	8	1.00	7.20	5.88	2.03	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)		6.70								1	6.70	6.70	6.70		1.00
TDS		688.00	660.00	627.00	598.00					4	598.00	688.00	643.25	39.14	1.00
Cond. (umho/cm)		1060.00	1040.00	987.00	922.00	1048.00	1043.00	1018.00	930.00	8	922.00	1060.00	1006.00	54.17	1.00
Alk. (as CaC03)		75.90	77.60	79.50	85.50	76.30	74.30	77.60	82.90	8	74.30	85.50	78.70	3.78	0.10
pH (units)		8.32	8.50	8.45	8.39	8.50	8.50	8.40	8.40	8	8.32	8.50	8.43	0.07	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0230*	0.0190*	0.0220*	0.0200*					0					0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0170	0.0150	0.0150	0.0160					4	0.0150	0.0170	0.0158	0.0010	0.0003
Ra 226		0.50	1.70	1.10	< 0.20					4	0.20	1.70	0.88	0.67	0.2
Ra 226+/-		0.20	0.30	0.20						3	0.20	0.30	0.23	0.06	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW34								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	10/24/97	11/19/97	12/23/97	2/12/98	10/24/97	11/20/97	12/23/97	2/13/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	21.90	21.00	16.20	13.60					4	13.60	21.90	18.18	3.94	0.10
MAGNESIUM (Mg)	3.80	3.00	2.40	2.30					4	2.30	3.80	2.88	0.69	1.00
SODIUM (Na)	208.00	196.00	181.00	185.00					4	181.00	208.00	192.50	12.12	0.10
POTASSIUM (K)	4.90	4.00	2.70	4.40					4	2.70	4.90	4.00	0.94	0.10
CARBONATE (CO3)	1.20								1	1.20	1.20	1.20		0.10
BICARBONATE (HC03)	93.00								1	93.00	93.00	93.00		0.10
SULFATE (SO4)	433.00	399.00	337.00	351.00					4	337.00	433.00	380.00	44.20	1.00
CHLORIDE (Cl)	6.50	6.00	7.00	7.20	6.40	6.10	6.30	6.90	8	6.00	7.20	6.55	0.44	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.21								1	0.21	0.21	0.21		0.10
SILICA (SiO2)	8.10								1	8.10	8.10	8.10		1.00
TDS	824.00	695.00	588.00	620.00					4	588.00	824.00	681.75	104.90	1.00
Cond. (umho/cm)	1090.00	1070.00	893.00	968.00	1129.00	1084.00	1049.00	966.00	8	893.00	1129.00	1031.13	80.16	1.00
Alk. (as CaC03)	78.20	80.50	85.90	82.90	77.40	77.30	77.90	79.30	8	77.30	85.90	79.93	3.06	0.10
pH (units)	8.36	8.48	8.36	8.31	8.30	8.50	8.40	8.70	8	8.30	8.70	8.43	0.13	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0030	0.0030	0.0020	0.0020					4	0.002	0.003	0.003	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	0.0010	< 0.0010	0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0060	0.0035	0.0014	0.0022					4	0.0014	0.0060	0.0033	0.0020	0.0003
Ra 226	0.50	0.90	0.90	< 0.02					4	0.02	0.90	0.58	0.42	0.2
Ra 226+/-	0.20	0.20	0.20						3	0.20	0.20	0.20	0.00	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW35						CMI			
Production Unit:		ELI									
Sample Date:		10/24/97	11/20/97	12/23/97	1/22/98	10/24/97	11/21/97	12/23/97	1/23/98
Major Ions mg/l:									
CALCIUM (Ca)		30.00	32.00	33.00	32.30				
MAGNESIUM (Mg)		5.40	5.40	5.60	5.80				
SODIUM (Na)		232.00	230.00	240.00	230.00				
POTASSIUM (K)		4.20	4.40	4.80	4.80				
CARBONATE (CO3)	<	0.10							
BICARBONATE (HC03)		123.00							
SULFATE (SO4)		523.00	529.00	537.00	547.00				
CHLORIDE (Cl)		5.30	5.00	5.10	6.50	5.30	5.20	5.00	5.20
AMMONIUM (NH4)		0.06							
NITRITE (NO2) as (N)	<	0.10							
NITRATE (NO3) as (N)	<	0.10							
FLUORIDE (F)		0.18							
SILICA (SiO2)		8.20							
TDS		868.00	858.00	844.00	883.00				
Cond. (umho/cm)		1260.00	1270.00	1270.00	1290.00	1297.00	1295.00	1316.00	1299.00
Alk. (as CaC03)		101.00	71.10	70.00	69.10	72.10	69.10	68.60	67.50
pH (units)		8.21	8.43	8.23	8.07	8.20	8.50	8.30	8.30
Trace Metals mg/l:									
ALUMINUM (Al)	<	0.10							
ARSENIC (As)		0.0040	0.0050	0.0030	0.0030				
BARIUM (Ba)	<	0.10							
BORON (B)	<	0.10							
CADMIUM (Cd)	<	0.01							
CHROMIUM (Cr)	<	0.05							
COPPER (Cu)	<	0.01							
IRON (Fe)	<	0.05							
LEAD (Pb)	<	0.05							
MANGANESE (Mn)	<	0.01							
MERCURY (Hg)	<	0.001							
MOLYBDENUM (Mo)	<	0.01							
NICKEL (Ni)	<	0.05							
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010				
VANADIUM (V)	<	0.10							
ZINC (Zn)	<	0.01							
Radiometric pCi/l:									
U (mg/l)		0.0070	0.0070	0.0056	0.0046				
Ra 226		4.80	25.6*	5.70	< 0.20				
Ra 226+/-		0.40	1.50	0.40					

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	30.00	33.00	31.83	1.29	0.10
4	5.40	5.80	5.55	0.19	1.00
4	230.00	240.00	233.00	4.76	0.10
4	4.20	4.80	4.55	0.30	0.10
1	0.10	0.10	0.10		0.10
1	123.00	123.00	123.00		0.10
4	523.00	547.00	534.00	10.39	1.00
8	5.00	6.50	5.33	0.49	1.00
1	0.06	0.06	0.06		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.18	0.18	0.18		0.10
1	8.20	8.20	8.20		1.00
4	844.00	883.00	863.25	16.44	1.00
8	1260.00	1316.00	1287.13	18.76	1.00
8	67.50	101.00	73.56	11.18	0.10
8	8.07	8.50	8.28	0.14	1-14
1	0.10	0.10	0.10		0.1
4	0.003	0.005	0.004	0.001	0.001
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.001	0.001	0.001		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.001	0.001	0.001	0.000	0.001
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0046	0.0070	0.0061	0.0012	0.0003
3	0.20	5.70	3.57	2.95	0.2
3	0.40	1.50	0.77	0.64	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW36								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		10/28/97	11/19/97	12/18/97	1/22/98	10/28/97	11/20/97	12/19/97	1/23/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		30.30	32.00	33.30	33.00					4	30.30	33.30	32.15	1.35	0.10
MAGNESIUM (Mg)		5.40	6.00	6.00	6.20					4	5.40	6.20	5.90	0.35	1.00
SODIUM (Na)		233.00	229.00	233.00	225.00					4	225.00	233.00	230.00	3.83	0.10
POTASSIUM (K)		4.10	4.00	4.00	3.90					4	3.90	4.10	4.00	0.08	0.10
CARBONATE (CO3)		1.70								1	1.70	1.70	1.70		0.10
BICARBONATE (HC03)		110.00								1	110.00	110.00	110.00		0.10
SULFATE (SO4)		508.00	513.00	495.00	527.00					4	495.00	527.00	510.75	13.23	1.00
CHLORIDE (Cl)		4.50	4.00	4.80	4.90	5.20	4.90	5.20	5.20	8	4.00	5.20	4.84	0.42	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.17								1	0.17	0.17	0.17		0.10
SILICA (SiO2)		8.10								1	8.10	8.10	8.10		1.00
TDS		825.00	846.00	850.00	861.00					4	825.00	861.00	845.50	15.07	1.00
Cond. (umho/cm)		1300.00	1280.00	1300.00	1280.00	1289.00	1296.00	1298.00	1286.00	8	1280.00	1300.00	1291.13	8.51	1.00
Alk. (as CaC03)		92.90	75.10	75.60	75.50	70.30	71.70	74.60	74.20	8	70.30	92.90	76.24	7.00	0.10
pH (units)		8.43	8.43	8.33	8.12	8.30	8.50	8.30	8.20	8	8.12	8.50	8.33	0.13	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0010	0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0040	0.0055	0.0055	0.0049					4	0.0040	0.0055	0.0050	0.0007	0.0003
Ra 226		2.70	3.30	3.30	< 0.20					4	0.20	3.30	2.38	1.48	0.2
Ra 226+/-		0.30	0.40	0.30						3	0.30	0.40	0.33	0.06	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW37								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI				CMI				Of				Deviation	Limit
Sample Date:		10/28/97	11/20/97	12/23/97	1/22/98	10/28/97	11/21/97	12/23/97	1/23/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:															
CALCIUM (Ca)		30.50	28.00	29.40	30.20					4	28.00	30.50	29.53	1.12	0.10
MAGNESIUM (Mg)		1.90	6.00	6.10	6.60					4	1.90	6.60	5.15	2.18	1.00
SODIUM (Na)		167.00	225.00	233.00	223.00					4	167.00	233.00	212.00	30.31	0.10
POTASSIUM (K)		2.90	5.00	5.00	4.60					4	2.90	5.00	4.38	1.00	0.10
CARBONATE (CO3)		1.80								1	1.80	1.80	1.80		0.10
BICARBONATE (HC03)		92.00								1	92.00	92.00	92.00		0.10
SULFATE (SO4)		347.00	515.00	516.00	528.00					4	347.00	528.00	476.50	86.54	1.00
CHLORIDE (Cl)		7.40	4.00	5.20	6.10	6.40	5.10	5.20	5.20	8	4.00	7.40	5.58	1.03	1.00
AMMONIUM (NH4)	<	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.18								1	0.18	0.18	0.18		0.10
SILICA (SiO2)		8.50								1	8.50	8.50	8.50		1.00
TDS		632.00	847.00	836.00	846.00					4	632.00	847.00	790.25	105.62	1.00
Cond. (umho/cm)		1300.00	1250.00	1250.00	1270.00	1295.00	1280.00	1284.00	1276.00	8	1250.00	1300.00	1275.63	18.53	1.00
Alk. (as CaC03)		78.20	72.00	72.30	74.50	76.70	66.10	71.50	73.00	8	66.10	78.20	73.04	3.67	0.10
pH (units)		8.55	8.53	8.43	8.25	8.20	8.60	8.40	8.40	8	8.20	8.60	8.42	0.14	1-14
Trace Metals mg/l:															
ALUMINUM (Al)	<	0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0020	0.0030	0.0020	0.0010					4	0.001	0.003	0.002	0.001	0.001
BARIUM (Ba)	<	0.10								1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	0.0020	< 0.0010					4	0.001	0.002	0.001	0.001	0.001
VANADIUM (V)	<	0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:															
U (mg/l)		0.0140	0.0179	0.0097	0.0077					4	0.0077	0.0179	0.0123	0.0046	0.0003
Ra 226		1.90	3.70	2.70	0.60					4	0.60	3.70	2.23	1.31	0.2
Ra 226+/-		0.30	0.30	0.30	0.20					4					

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW38								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of					
Sample Date:	11/6/97	12/1/97	12/17/97	12/4/98	11/7/97	12/2/97	12/18/97	12/4/98	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:														
CALCIUM (Ca)	27.40	23.00	26.90	39.00					4	23.00	39.00	29.08	6.90	0.10
MAGNESIUM (Mg)	5.50	5.00	6.30	6.00					4	5.00	6.30	5.70	0.57	1.00
SODIUM (Na)	228.00	216.00	226.00	233.00					4	216.00	233.00	225.75	7.14	0.10
POTASSIUM (K)	4.90	4.00	5.00	4.00					4	4.00	5.00	4.48	0.55	0.10
CARBONATE (CO3)	1.50								1	1.50	1.50	1.50		0.10
BICARBONATE (HC03)	93.00								1	93.00	93.00	93.00		0.10
SULFATE (SO4)	499.00	435.00	462.00	521.00					4	435.00	521.00	479.25	38.25	1.00
CHLORIDE (Cl)	5.60	5.00	5.20	6.00	5.80	5.90	5.80	5.50	8	5.00	6.00	5.60	0.35	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.19								1	0.19	0.19	0.19		0.10
SILICA (SiO2)	8.50								1	8.50	8.50	8.50		1.00
TDS	784.00	744.00	812.00	858.00					4	744.00	858.00	799.50	47.95	1.00
Cond. (umho/cm)	1220.00	1170.00	1280.00	1340.00	1235.00	1183.00	1253.00	1279.00	8	1170.00	1340.00	1245.00	55.63	1.00
Alk. (as CaC03)	78.00	78.20	75.20	75.00	77.60	74.90	74.70	69.00	8	69.00	78.20	75.33	2.96	0.10
pH (units)	8.45	8.40	8.19	8.13	8.60	8.50	8.30	8.30	8	8.13	8.60	8.36	0.16	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0010	0.0010	0.0010	0.0010					4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0020	0.0024	0.0026	0.0021					4	0.0020	0.0026	0.0023	0.0003	0.0003
Ra 226	8.20	0.40	1.30	0.70					4	0.40	8.20	2.65	3.72	0.2
Ra 226+/-	0.50	0.10	0.20	0.20					4	0.10	0.50	0.25	0.17	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW39-2								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	11/14/97	12/1/97	12/17/97	1/7/99	11/14/97	12/2/97	12/18/97	1/7/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	14.00	14.00	15.00	11.80					4	11.80	15.00	13.70	1.35	0.10
MAGNESIUM (Mg)	1.90	2.00	2.00	1.70					4	1.70	2.00	1.90	0.14	1.00
SODIUM (Na)	167.00	172.00	168.00	158.00					4	158.00	172.00	166.25	5.91	0.10
POTASSIUM (K)	2.50	3.00	2.10	2.50					4	2.10	3.00	2.53	0.37	0.10
CARBONATE (CO3)	1.80								1	1.80	1.80	1.80		0.10
BICARBONATE (HC03)	106.00								1	106.00	106.00	106.00		0.10
SULFATE (SO4)	286.00	298.00	296.00	295.00					4	286.00	298.00	293.75	5.32	1.00
CHLORIDE (Cl)	6.70	6.00	6.20	7.40	8.20	6.90	7.10	7.60	8	6.00	8.20	7.01	0.73	1.00
AMMONIUM (NH4)	0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.20								1	0.20	0.20	0.20		0.10
SILICA (SiO2)	8.50								1	8.50	8.50	8.50		1.00
TDS	552.00	545.00	562.00	570.00					4	545.00	570.00	557.25	11.00	1.00
Cond. (umho/cm)	926.00	885.00	1090.00	885.00	896.00	904.00	904.00	835.00	8	835.00	1090.00	915.63	75.16	1.00
Alk. (as CaC03)	89.30	97.00	87.90	86.00	92.50	85.70	87.30	89.40	8	85.70	97.00	89.39	3.77	0.10
pH (units)	8.49	8.42	8.45	8.29	8.50	8.60	8.50	8.50	8	8.29	8.60	8.47	0.09	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0010	0.0010	0.0020	< 0.0010					4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	< 0.0003	0.0300	< 0.0003	0.0008					4	0.0003	0.0300	0.0079	0.0148	0.0003
Ra 226	0.50	< 0.20	23.5*	12.60					3	0.20	12.60	4.43	7.07	0.2
Ra 226+/-	0.20		1.60	1.10					3	0.20	1.60	0.97	0.71	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW40												Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI					CMI							Of				Deviation	Limit
Sample Date:		10/7/97		12/3/97		12/18/97	1/5/99	10/8/97		12/3/97	12/19/97		12/4/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:																			
CALCIUM (Ca)		14.40		15.50		14.60	20.00							4	14.40	20.00	16.13	2.63	0.10
MAGNESIUM (Mg)		1.90		2.10		2.00	5.70							4	1.90	5.70	2.93	1.85	1.00
SODIUM (Na)		166.00		166.00		168.00	181.00							4	166.00	181.00	170.25	7.23	0.10
POTASSIUM (K)		3.00		2.70		3.00	3.00							4	2.70	3.00	2.93	0.15	0.10
CARBONATE (CO3)		3.50												1	3.50	3.50	3.50		0.10
BICARBONATE (HC03)		108.00												1	108.00	108.00	108.00		0.10
SULFATE (SO4)		299.00		312.00		288.00	323.00							4	288.00	323.00	305.50	15.24	1.00
CHLORIDE (Cl)		6.50		6.80		6.70	8.00	7.40		7.20	7.60		7.20	8	6.50	8.00	7.18	0.50	1.00
AMMONIUM (NH4)	<	0.05												1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10												1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10												1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.22												1	0.22	0.22	0.22		0.10
SILICA (SiO2)		8.50												1	8.50	8.50	8.50		1.00
TDS		551.00		530.00		539.00	586.00							4	530.00	586.00	551.50	24.56	1.00
Cond. (umho/cm)		878.00		872.00		889.00	896.00	869.00		871.00	884.00		848.00	8	848.00	896.00	875.88	14.69	1.00
Alk. (as CaC03)		93.40		99.00		91.30	93.00	91.70		87.60	90.60		94.20	8	87.60	99.00	92.60	3.29	0.10
pH (units)		8.76		8.40		8.50	8.76	8.60		8.30	8.50		8.40	8	8.30	8.76	8.53	0.17	1-14
Trace Metals mg/l:																			
ALUMINUM (Al)	<	0.10												1	0.10	0.10	0.10		0.1
ARSENIC (As)		0.0020		0.0010		0.0020	0.0080							4	0.001	0.008	0.003	0.003	0.001
BARIUM (Ba)	<	0.10												1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10												1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01												1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05												1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01												1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05												1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05												1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01												1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001												1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01												1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05												1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	<	0.0010	<	0.0010	0.0010							4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10												1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01												1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																			
U (mg/l)		0.0010	<	0.0003		8.010*	0.0005							3	0.0003	0.0010	0.0006	0.0004	0.0003
Ra 226		0.60	<	0.20		8.28	0.50							4	0.20	8.28	2.40	3.93	0.2
Ra 226+/-		0.20				1.62	0.20							3	0.20	1.62	0.67	0.82	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW41							
Production Unit:	ELI				CMI			
Sample Date:	10/28/97	12/3/97	12/30/97	12/4/98	10/29/97	12/3/97	12/31/97	12/4/98
Major Ions mg/l:								
CALCIUM (Ca)	13.20	13.90	12.30	9.60				
MAGNESIUM (Mg)	2.00	2.20	2.00	2.00				
SODIUM (Na)	165.00	163.00	164.00	150.00				
POTASSIUM (K)	3.60	3.20	3.30	3.00				
CARBONATE (CO3)	3.00							
BICARBONATE (HC03)	110.00							
SULFATE (SO4)	288.00	302.00	281.00	270.00				
CHLORIDE (Cl)	7.30	6.90	6.70	8.00	7.40	7.20	7.30	7.70
AMMONIUM (NH4)	< 0.05							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	0.22							
SILICA (SiO2)	8.60							
TDS	518.00	522.00	522.00	535.00				
Cond. (umho/cm)	865.00	857.00	828.00	872.00	863.00	850.00	856.00	833.00
Alk. (as CaC03)	94.20	92.80	91.70	88.00	92.00	89.60	88.80	84.70
pH (units)	8.68	8.50	8.60	8.27	8.70	8.40	8.70	8.40
Trace Metals mg/l:								
ALUMINUM (Al)	< 0.10							
ARSENIC (As)	< 0.0010	0.0020	0.0020	0.0010				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.001							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	0.0005	< 0.0003	0.0003	0.0005				
Ra 226	< 0.20	< 0.20	11.20	2.60				
Ra 226+/-			1.00	0.30				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	9.60	13.90	12.25	1.88	0.10
4	2.00	2.20	2.05	0.10	1.00
4	150.00	165.00	160.50	7.05	0.10
4	3.00	3.60	3.28	0.25	0.10
1	3.00	3.00	3.00		0.10
1	110.00	110.00	110.00		0.10
4	270.00	302.00	285.25	13.40	1.00
8	6.70	8.00	7.31	0.41	1.00
1	0.05	0.05	0.05		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.22	0.22	0.22		0.10
1	8.60	8.60	8.60		1.00
4	518.00	535.00	524.25	7.41	1.00
8	828.00	872.00	853.00	15.42	1.00
8	84.70	94.20	90.23	3.06	0.10
8	8.27	8.70	8.53	0.16	1-14
1	0.10	0.10	0.10		0.1
4	0.001	0.002	0.002	0.001	0.001
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.001	0.001	0.001		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.001	0.001	0.001	0.000	0.001
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0003	0.0005	0.0004	0.0001	0.0003
4	0.20	11.20	3.55	5.22	0.2
2	0.30	1.00	0.65	0.49	

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:		7MW42					CMI				Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:		ELI														
Sample Date:		10/28/97	12/3/97	12/30/97	12/11/98	10/29/97	12/3/97	12/31/97	12/11/98		Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:																
CALCIUM (Ca)		14.00	15.00	13.50	10.00						4	10.00	15.00	13.13	2.17	0.10
MAGNESIUM (Mg)		1.90	2.00	1.90	2.00						4	1.90	2.00	1.95	0.06	1.00
SODIUM (Na)		167.00	166.00	166.00	158.00						4	158.00	167.00	164.25	4.19	0.10
POTASSIUM (K)		2.90	2.80	2.80	4.00						4	2.80	4.00	3.13	0.59	0.10
CARBONATE (CO3)		2.30									1	2.30	2.30	2.30		0.10
BICARBONATE (HC03)		108.00									1	108.00	108.00	108.00		0.10
SULFATE (SO4)		297.00	315.00	291.00	311.00						4	291.00	315.00	303.50	11.36	1.00
CHLORIDE (Cl)		7.40	7.00	6.40	4.00	7.30	7.20	7.00	7.90		8	4.00	7.90	6.78	1.20	1.00
AMMONIUM (NH4)	<	0.05									1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10									1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.22									1	0.22	0.22	0.22		0.10
SILICA (SiO2)		8.50									1	8.50	8.50	8.50		1.00
TDS		526.00	534.00	538.00	556.00						4	526.00	556.00	538.50	12.69	1.00
Cond. (umho/cm)		883.00	870.00	850.00	913.00	880.00	875.00	880.00	852.00		8	850.00	913.00	875.38	19.77	1.00
Alk. (as CaC03)		91.90	92.50	89.80	89.00	89.90	86.80	86.80	89.00		8	86.80	92.50	89.46	2.07	0.10
pH (units)		8.58	8.39	8.47	8.45	8.60	8.40	8.60	8.50		8	8.39	8.60	8.50	0.09	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	<	0.10									1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	0.0010	0.0020	0.0020						4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	<	0.10									1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10									1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01									1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05									1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01									1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05									1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05									1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.01									1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001									1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01									1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05									1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	< 0.0010	< 0.0010	0.0010						4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10									1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01									1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)	<	0.0003	< 0.0003	0.0003	0.0007						4	0.0003	0.0007	0.0004	0.0002	0.0003
Ra 226	<	0.20	< 0.20	37.5*	< 0.20						3	0.20	0.20	0.20	0.00	0.2
Ra 226+/-				1.9*							0	0.00	0.00	#DIV/0!		

* INDICATES STATISTICAL OUTLIERS

CR MU7 PERIMETER ORE ZONE BASELINE DATA

Well I.D.:	7MW43								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	11/12/97	12/1/97	12/30/97	9/25/98	11/7/97	12/2/97	12/31/97	9/25/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	16.30	13.00	13.30	9.80					4	9.80	16.30	13.10	2.66	0.10
MAGNESIUM (Mg)	2.40	2.00	2.20	1.80					4	1.80	2.40	2.10	0.26	1.00
SODIUM (Na)	171.00	170.00	169.00	165.00					4	165.00	171.00	168.75	2.63	0.10
POTASSIUM (K)	2.70	3.00	3.00	3.70					4	2.70	3.70	3.10	0.42	0.10
CARBONATE (CO3)	2.10								1	2.10	2.10	2.10		0.10
BICARBONATE (HC03)	104.00								1	104.00	104.00	104.00		0.10
SULFATE (SO4)	321.00	287.00	300.00	302.00					4	287.00	321.00	302.50	14.01	1.00
CHLORIDE (Cl)	7.00	6.00	6.60	10.7*	7.30	6.90	7.00	7.90	7	6.00	7.90	6.96	0.59	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.19								1	0.19	0.19	0.19		0.10
SILICA (SiO2)	9.10								1	9.10	9.10	9.10		1.00
TDS	545.00	548.00	531.00	526.00					4	526.00	548.00	537.50	10.66	1.00
Cond. (umho/cm)	821.00	878.00	875.00	854.00	893.00	890.00	889.00	857.00	8	821.00	893.00	869.63	24.51	1.00
Alk. (as CaC03)	88.40	89.00	88.10	78.00	88.30	85.50	85.50	77.50	8	77.50	89.00	85.04	4.69	0.10
pH (units)	8.56	8.43	8.49	8.51	8.50	8.50	8.60	8.70	8	8.43	8.70	8.54	0.08	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0010	0.0010	0.0020	< 0.0010					4	0.001	0.002	0.001	0.001	0.001
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001								1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0110	< 0.0003	< 0.0003	0.0026					4	0.0003	0.0110	0.0036	0.0051	0.0003
Ra 226	1.50	< 0.20	21.40	0.80					4	0.20	21.40	5.98	10.30	0.2
Ra 226+/-	0.10		1.40	0.10					3	0.10	1.40	0.53	0.75	

* INDICATES STATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA SUMMARY

Well I.D.: Production Unit: Sample Date:	Number Of Samples		BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
Major Ions mg/l:							
CALCIUM (Ca)	52		2.00	209.00	40.96	50.85	0.10
MAGNESIUM (Mg)	51		1.00	30.70	5.72	7.29	1.00
SODIUM (Na)	52		94.00	300.00	187.12	59.47	0.10
POTASSIUM (K)	51		3.00	204.00	34.99	45.80	0.10
CARBONATE (CO3)	12		1.30	242.00	76.03	96.53	0.10
BICARBONATE (HC03)	13		1.00	279.00	107.62	92.77	0.10
SULFATE (SO4)	52		1.20	965.00	315.73	333.87	1.00
CHLORIDE (Cl)	103		2.00	13.60	7.90	2.50	1.00
AMMONIUM (NH4)	13	<	0.05	2.58	0.56	0.83	0.05
NITRITE (NO2) as (N)	13	<	0.10	0.10	0.10	0.00	0.10
NITRATE (NO3) as (N)	13	<	0.10	0.10	0.10	0.00	0.10
FLUORIDE (F)	14		0.10	1.19	0.50	0.40	0.10
SILICA (SiO2)	13		7.80	39.90	12.48	8.48	1.00
TDS	52		257.00	1570.00	764.31	398.57	1.00
Cond. (umho/cm)	102		417.00	3870.00	1421.57	734.06	1.00
Alk. (as CaC03)	102		23.90	744.00	236.93	184.35	0.10
pH (units)	104		7.70	12.29	9.53	1.45	1-14
Trace Metals mg/l:							
ALUMINUM (Al)	13	<	0.10	0.57	0.16	0.16	0.1
ARSENIC (As)	49	<	0.001	0.003	0.001	0.000	0.001
BARIUM (Ba)	13	<	0.100	0.23	0.11	0.04	0.1
BORON (B)	13	<	0.10	0.10	0.10	0.00	0.1
CADMIUM (Cd)	13	<	0.01	0.01	0.01	0.00	0.01
CHROMIUM (Cr)	13	<	0.05	0.05	0.05	0.00	0.05
COPPER (Cu)	13	<	0.01	0.01	0.01	0.00	0.01
IRON (Fe)	13	<	0.05	0.05	0.05	0.00	0.05
LEAD (Pb)	13	<	0.05	0.05	0.05	0.00	0.05
MANGANESE (Mn)	13	<	0.01	0.23	0.04	0.06	0.01
MERCURY (Hg)	13	<	0.001	0.001	0.001	0.000	0.001
MOLYBDENUM (Mo)	13	<	0.01	0.01	0.01	0.00	0.1
NICKEL (Ni)	13	<	0.05	0.05	0.05	0.00	0.05
SELENIUM (Se)	51	<	0.001	0.008	0.001	0.001	0.001
VANADIUM (V)	13	<	0.10	0.10	0.10	0.00	0.1
ZINC (Zn)	13	<	0.01	0.02	0.01	0.003	0.01
Radiometric pCi/l:							
U (mg/l)	51		0.0003	0.0110	0.0009	0.0018	0.0003
Ra 226	51		0.2000	15.10	3.20	3.96	0.2
Ra 226+/-	42		0.10	1.70	0.35	0.35	

* INDICA[redacted]ATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM1																			
Production Unit:	ELI						CMI								Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Sample Date:	7/11/97		7/31/97		1/6/98		11/23/98		7/11/97		7/31/97		1/6/98		10/23/98	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:																					
CALCIUM (Ca)		209.00		177.00		50.00		40.20								4	40.20	209.00	119.05	86.48	0.10
MAGNESIUM (Mg)		34.10*		30.70		11.90		13.90								3	11.90	30.70	18.83	10.33	1.00
SODIUM (Na)		240.00		237.00		262.00		252.00								4	237.00	262.00	247.75	11.50	0.10
POTASSIUM (K)		11.30		12.80		34.40		30.60								4	11.30	34.40	22.28	11.92	0.10
CARBONATE (CO3)		0*														0	0.00	0.00			0.10
BICARBONATE (HC03)		254.00														1	254.00	254.00	254.00		0.10
SULFATE (SO4)		907.00		859.00		762.00		690.00								4	690.00	907.00	804.50	97.28	1.00
CHLORIDE (Cl)		11.80		10.30		9.90		8.30		11.40		11.50		10.70	21.1*	7	8.30	11.80	10.56	1.21	1.00
AMMONIUM (NH4)		0.23														1	0.23	0.23	0.23		0.05
NITRITE (NO2) as (N)	<	0.10														1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10														1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.20						0.20								2	0.20	0.20	0.20	0.00	0.10
SILICA (SiO2)		11.90														1	11.90	11.90	11.90		1.00
TDS		1570.00		1510.00		1110.00		1100.00								4	1100.00	1570.00	1322.50	252.37	1.00
Cond. (umho/cm)		1960.00		2040.00		1600.00		1570.00		2026.00		2033.00		1620.00	1538.00	8	1538.00	2040.00	1798.38	233.75	1.00
Alk. (as CaC03)		208.00		195.00		27.30		26.00		189.80		188.80		28.30	23.90	8	23.90	208.00	110.89	90.54	0.10
pH (units)		8.04		7.97		9.61		8.63		7.70		7.70		9.60	8.70	8	7.70	9.61	8.49	0.78	1-14
Trace Metals mg/l:																					
ALUMINUM (Al)	<	0.10														1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	<	0.0010	<	0.0010	<	0.0010								4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	<	0.10														1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10														1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01														1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05														1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01														1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05														1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05														1	0.05	0.05	0.05		0.05
MANGANESE (Mn)		0.23														1	0.23	0.23	0.23		0.01
MERCURY (Hg)	<	0.001														1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01														1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05														1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	<	0.0010	<	0.0010		0.0010								4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10														1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01														1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																					
U (mg/l)		0.0003	<	0.0003	<	0.0003	<	0.0003								4	0.0003	0.0003	0.0003	0.0000	0.0003
Ra 226		7.70		6.90	<	0.20		2.50								4	0.20	7.70	4.33	3.58	0.2
Ra 226+/-		0.50		0.40				0.10								3	0.10	0.50	0.33	0.21	

* INDICATES STATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM2								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	7/17/97	7/30/97	8/12/97	11/19/98	7/18/97	7/31/97	8/13/97	11/20/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	42.90	44.60	42.70	32.50					4	32.50	44.60	40.68	5.52	0.10
MAGNESIUM (Mg)	6.20	6.50	6.10	3.30					4	3.30	6.50	5.53	1.49	1.00
SODIUM (Na)	232.00	221.00	217.00	205.00					4	205.00	232.00	218.75	11.15	0.10
POTASSIUM (K)	5.90	5.90	5.80	10.40					4	5.80	10.40	7.00	2.27	0.10
CARBONATE (CO3)	2.70								1	2.70	2.70	2.70		0.10
BICARBONATE (HC03)	101.00								1	101.00	101.00	101.00		0.10
SULFATE (SO4)	484.00	509.00	529.00	462.00					4	462.00	529.00	496.00	29.20	1.00
CHLORIDE (Cl)	4.70	4.00	4.90	5.10	5.20	5.30	5.10	5.70	8	4.00	5.70	5.00	0.50	1.00
AMMONIUM (NH4)	0.07								1	0.07	0.07	0.07		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.12								1	0.12	0.12	0.12		0.10
SILICA (SiO2)	9.10								1	9.10	9.10	9.10		1.00
TDS	847.00	813.00	846.00	847.00					4	813.00	847.00	838.25	16.84	1.00
Cond. (umho/cm)	1250.00	1270.00	1230.00	1260.00	1256.00	1264.00	1223.00	1237.00	8	1223.00	1270.00	1248.75	16.98	1.00
Alk. (as CaC03)	86.90	88.20	86.40	75.00	80.30	82.00	86.00	82.00	8	75.00	88.20	83.35	4.39	0.10
pH (units)	8.67	8.79	8.80	8.62	8.80	8.80	8.80	9.00	8	8.62	9.00	8.79	0.11	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.03								1	0.03	0.03	0.03		0.01
MERCURY (Hg)	< 0.00								1	0.00	0.00	0.00		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	0.0010	0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0009	< 0.0003	0.0003	< 0.0030					4	0.0003	0.0030	0.0011	0.0013	0.0003
Ra 226	9.60	0.50	1.30	0.50					4	0.50	9.60	2.98	4.43	0.2
Ra 226+/-	0.50	0.10	0.20	0.20					4					

* INDICA[redacted]ATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM3				CMI			
Production Unit:	ELI							
Sample Date:	11/14/97	12/17/97	1/6/98	4/23/98	11/14/97	12/18/97	1/6/98	4/23/98
Major Ions mg/l:								
CALCIUM (Ca)	52.40	46.50	14.40	12.00				
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00				
SODIUM (Na)	288.00	234.00	193.00	203.00				
POTASSIUM (K)	275.0*	204.00	128.00	137.00				
CARBONATE (CO3)	79.00							
BICARBONATE (HC03)	1.00							
SULFATE (SO4)	82.90	130.00	212.00	194.00				
CHLORIDE (Cl)	2.90	4.10	6.60	7.00	2.90	6.50	6.00	6.30
AMMONIUM (NH4)	2.58							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	0.51							
SILICA (SiO2)	15.10							
TDS	1460.00	1100.00	824.00	835.00				
Cond. (umho/cm)	5340.0*	3870.00	2250.00	2610.00	4830.0*	3753.00	2435.00	3602.00
Alk. (as CaC03)	1084.0*	744.00	406.00	445.00	1043.0*	701.00	431.00	711.00
pH (units)	12.29	11.91	11.63	11.47	11.60	11.70	11.60	12.00
Trace Metals mg/l:								
ALUMINUM (Al)	0.57							
ARSENIC (As)	0.0020	0.0020	0.0030	< 0.0010				
BARIUM (Ba)	0.23							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	0.02							
Radiometric pCi/l:								
U (mg/l)	< 0.0003	< 0.0003	0.0066	< 0.0003				
Ra 226	2.10	3.50	36.80*	4.70				
Ra 226+/-	0.10	0.30	1.90*	0.30				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	12.00	52.40	31.33	21.09	0.10
4	1.00	1.00	1.00	0.00	1.00
4	193.00	288.00	229.50	42.73	0.10
3	128.00	204.00	156.33	41.53	0.10
1	79.00	79.00	79.00		0.10
1	1.00	1.00	1.00		0.10
4	82.90	212.00	154.73	59.42	1.00
8	2.90	7.00	5.29	1.71	1.00
1	2.58	2.58	2.58		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.51	0.51	0.51		0.10
1	15.10	15.10	15.10		1.00
4	824.00	1460.00	1054.75	298.78	1.00
6	2250.00	3870.00	3086.67	731.45	1.00
6	406.00	744.00	573.00	160.69	0.10
8	11.47	12.29	11.78	0.27	1-14
1	0.57	0.57	0.57		0.1
4	0.0010	0.0030	0.0020	0.0008	0.0010
1	0.23	0.23	0.23		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.02	0.02	0.02		0.01
4	0.0003	0.0066	0.0019	0.0032	0.0003
3	2.10	4.70	3.43	1.30	0.2
3					

* INDICA[illegible]ATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM4								Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
Production Unit:	ELI				CMI									
Sample Date:	11/4/97	12/17/97	1/6/98	11/20/98	11/14/97	12/18/97	1/6/98	11/20/98						
Major Ions mg/l:														
CALCIUM (Ca)	4.30	2.40	3.20	2.10					4	2.10	4.30	3.00	0.98	0.10
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00					4	1.00	1.00	1.00	0.00	1.00
SODIUM (Na)	108.00	99.00	112.00	99.00					4	99.00	112.00	104.50	6.56	0.10
POTASSIUM (K)	23.80	15.40	15.00	16.10					4	15.00	23.80	17.58	4.17	0.10
CARBONATE (CO3)	127.00								1	127.00	127.00	127.00		0.10
BICARBONATE (HC03)	56.00								1	56.00	56.00	56.00		0.10
SULFATE (SO4)	31.40	37.30	42.00	41.70					4	31.40	42.00	38.10	4.96	1.00
CHLORIDE (Cl)	7.20	9.00	8.60	8.30	8.20	9.20	9.50	9.60	8	7.20	9.60	8.70	0.80	1.00
AMMONIUM (NH4)	0.61								1	0.61	0.61	0.61		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.92								1	0.92	0.92	0.92		0.10
SILICA (SiO2)	10.60								1	10.60	10.60	10.60		1.00
TDS	344.00	321.00	332.00	328.00					4	321.00	344.00	331.25	9.64	1.00
Cond. (umho/cm)	747.00	545.00	560.00	665.00	764.00	539.00	549.00	629.00	8	539.00	764.00	624.75	92.29	1.00
Alk. (as CaC03)	240.00	188.00	212.00	197.00	264.10	230.30	209.40	195.10	8	188.00	264.10	216.99	25.99	0.10
pH (units)	10.60	10.00	9.57	10.30	10.90	8.70	9.70	10.40	8	8.70	10.90	10.02	0.70	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.00								1	0.00	0.00	0.00		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	< 0.0003	< 0.0003	< 0.0003	< 0.0003					4	0.0003	0.0003	0.0003	0.0000	0.0003
Ra 226	3.40	2.80	0.50	< 0.20					4	0.20	3.40	1.73	1.61	0.2
Ra 226+/-	0.30	0.30	0.10						3					

* INDICA[redacted]ATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM5							
Production Unit:	ELI				CMI			
Sample Date:	11/6/97	12/18/97	1/14/98	12/4/98	11/7/97	12/19/97	1/14/98	12/4/98
Major Ions mg/l:								
CALCIUM (Ca)	91.70	86.20	80.30	90.00				
MAGNESIUM (Mg)	14.10	14.20	14.30	13.00				
SODIUM (Na)	230.00	231.00	231.00	241.00				
POTASSIUM (K)	9.60	9.30	8.90	7.00				
CARBONATE (CO3)	2.60							
BICARBONATE (HC03)	107.00							
SULFATE (SO4)	672.00	626.00	635.00	717.00				
CHLORIDE (Cl)	9.10	7.80	9.90	9.00	8.90	8.90	9.30	9.00
AMMONIUM (NH4)	0.13							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	0.15							
SILICA (SiO2)	9.30							
TDS	1030.00	1060.00	1040.00	1050.00				
Cond. (umho/cm)	1490.00	1530.00	1490.00	1520.00	1498.00	1507.00	1497.00	1469.00
Alk. (as CaC03)	91.80	80.20	73.70	76.00	90.90	77.50	70.30	71.50
pH (units)	8.63	8.30	8.17	8.07	8.70	8.30	7.80	8.10
Trace Metals mg/l:								
ALUMINUM (Al)	< 0.10							
ARSENIC (As)	0.005*	0.005*	0.005*	0.0020				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	0.04							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	0.0080	< 0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	0.0010	0.0007	0.0025	0.0004				
Ra 226	0.90	0.70	2.40	0.90				
Ra 226+/-	0.20	0.20	0.10	0.20				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	80.30	91.70	87.05	5.05	0.10
4	13.00	14.30	13.90	0.61	1.00
4	230.00	241.00	233.25	5.19	0.10
4	7.00	9.60	8.70	1.17	0.10
1	2.60	2.60	2.60		0.10
1	107.00	107.00	107.00		0.10
4	626.00	717.00	662.50	41.43	1.00
8	7.80	9.90	8.99	0.58	1.00
1	0.13	0.13	0.13		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.15	0.15	0.15		0.10
1	9.30	9.30	9.30		1.00
4	1030.00	1060.00	1045.00	12.91	1.00
8	1469.00	1530.00	1500.13	18.98	1.00
8	70.30	91.80	78.99	8.26	0.10
8	7.80	8.70	8.26	0.30	1-14
1	0.10	0.10	0.10		0.1
1	0.0020	0.0020	0.0020		0.0010
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.04	0.04	0.04		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.0010	0.0080	0.0028	0.0035	0.0010
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0004	0.0025	0.0012	0.0009	0.0003
4	0.70	2.40	1.23	0.79	0.2
4					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM6				CMI			
Production Unit:	ELI							
Sample Date:	10/28/97	12/17/97	1/14/98	12/3/98	10/28/97	12/18/97	1/14/98	12/4/98
Major Ions mg/l:								
CALCIUM (Ca)	3.40	3.40	4.60	7.00				
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	1.00				
SODIUM (Na)	111.00	107.00	109.00	94.00				
POTASSIUM (K)	3.80	4.90	4.30	3.00				
CARBONATE (CO3)	6.70							
BICARBONATE (HC03)	279.00							
SULFATE (SO4)	1.90	1.20	9.90	25.00				
CHLORIDE (Cl)	10.20	9.90	11.80	13.00	11.60	10.70	11.50	11.80
AMMONIUM (NH4)	< 0.05							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	0.76							
SILICA (SiO2)	8.60							
TDS	264.00	267.00	269.00	257.00				
Cond. (umho/cm)	494.00	514.00	466.00	450.00	472.00	472.00	467.00	417.00
Alk. (as CaC03)	238.00	232.00	234.00	204.00	237.50	230.30	226.10	206.30
pH (units)	8.63	8.86	8.90	8.06	8.50	8.70	8.60	8.90
Trace Metals mg/l:								
ALUMINUM (Al)	< 0.10							
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	< 0.0003	0.0003	< 0.0003	< 0.0030				
Ra 226	< 0.20	4.10	< 0.20	< 0.20				
Ra 226+/-		0.30						

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	3.40	7.00	4.60	1.70	0.10
4	1.00	1.00	1.00	0.00	1.00
4	94.00	111.00	105.25	7.68	0.10
4	3.00	4.90	4.00	0.80	0.10
1	6.70	6.70	6.70		0.10
1	279.00	279.00	279.00		0.10
4	1.20	25.00	9.50	11.06	1.00
8	9.90	13.00	11.31	1.00	1.00
1	0.05	0.05	0.05		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.76	0.76	0.76		0.10
1	8.60	8.60	8.60		1.00
4	257.00	269.00	264.25	5.25	1.00
8	417.00	514.00	469.00	28.65	1.00
8	204.00	238.00	226.03	13.45	0.10
8	8.06	8.90	8.64	0.28	1-14
1	0.10	0.10	0.10		0.1
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0003	0.0030	0.0010	0.0014	0.0003
4	0.20	4.10	1.18	1.95	0.2
1					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM7								Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Samples	MIN	MAX	MEAN	Deviation	Limit
Sample Date:	11/11/97	12/17/97	1/14/98	12/4/98	11/13/97	12/18/97	1/14/98	12/4/98						
Major Ions mg/l:														
CALCIUM (Ca)	6.70	5.20	3.80	3.00					4	3.00	6.70	4.68	1.63	0.10
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00					4	1.00	1.00	1.00	0.00	1.00
SODIUM (Na)	144.00	149.00	161.00	151.00					4	144.00	161.00	151.25	7.14	0.10
POTASSIUM (K)	86.30	90.00	96.50	64.00					4	64.00	96.50	84.20	14.11	0.10
CARBONATE (CO3)	242.00								1	242.00	242.00	242.00		0.10
BICARBONATE (HC03)	39.00								1	39.00	39.00	39.00		0.10
SULFATE (SO4)	5.60	3.70	4.10	15.00					4	3.70	15.00	7.10	5.33	1.00
CHLORIDE (Cl)	9.40	8.50	9.10	7.00	11.10	10.30	10.40	8.00	8	7.00	11.10	9.23	1.37	1.00
AMMONIUM (NH4)	0.42								1	0.42	0.42	0.42		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.85								1	0.85	0.85	0.85		0.10
SILICA (SiO2)	11.60								1	11.60	11.60	11.60		1.00
TDS	506.00	556.00	561.00	533.00					4	506.00	561.00	539.00	25.15	1.00
Cond. (umho/cm)	1270.00	1400.00	1790.00	1690.00	1187.00	1385.00	1839.00	1640.00	8	1187.00	1839.00	1525.13	246.04	1.00
Alk. (as CaC03)	417.00	438.00	467.00	411.00	440.80	438.30	595.50	420.40	8	411.00	595.50	453.50	60.02	0.10
pH (units)	11.40	11.03	11.58	11.20	10.80	11.20	11.80	11.40	8	10.80	11.80	11.30	0.31	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	0.11								1	0.11	0.11	0.11		0.1
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01								1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.00								1	0.00	0.00	0.00		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	0.0020	< 0.0010	0.0010	< 0.0010					4	0.0010	0.0020	0.0013	0.0005	0.0010
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0110	< 0.0003	< 0.0003	< 0.0003					4	0.0003	0.0110	0.0030	0.0054	0.0003
Ra 226	1.80	1.10	< 0.20	0.50					4	0.20	1.80	0.90	0.71	0.2
Ra 226+/-	0.30	0.20		0.20					3					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM8								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of				Deviation	Limit
Sample Date:	11/12/97	12/16/97	1/8/98	12/3/98	11/12/97	12/16/97	1/9/98	12/4/98	Samples	MIN	MAX	MEAN		
Major Ions mg/l:														
CALCIUM (Ca)	29.80	33.00	29.50	23.00					4	23.00	33.00	28.83	4.19	0.10
MAGNESIUM (Mg)	3.70	4.00	4.20	4.00					4	3.70	4.20	3.98	0.21	1.00
SODIUM (Na)	187.00	183.00	193.00	209.00					4	183.00	209.00	193.00	11.43	0.10
POTASSIUM (K)	5.10	5.00	4.62	5.00					4	4.62	5.10	4.93	0.21	0.10
CARBONATE (CO3)	1.60								1	1.60	1.60	1.60		0.10
BICARBONATE (HC03)	98.00								1	98.00	98.00	98.00		0.10
SULFATE (SO4)	392.00	380.00	411.00	429.00					4	380.00	429.00	403.00	21.53	1.00
CHLORIDE (Cl)	6.40	6.00	7.80	7.00	7.10	6.90	7.20	7.50	8	6.00	7.80	6.99	0.57	1.00
AMMONIUM (NH4)	< 0.05								1	0.05	0.05	0.05		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.14								1	0.14	0.14	0.14		0.10
SILICA (SiO2)	8.50								1	8.50	8.50	8.50		1.00
TDS	663.00	636.00	704.00	675.00					4	636.00	704.00	669.50	28.20	1.00
Cond. (umho/cm)	960.00	1070.00	1040.00	1070.00	1047.00	1048.00	1042.00	1017.00	8	960.00	1070.00	1036.75	35.38	1.00
Alk. (as CaC03)	82.60	83.10	83.30	81.00	82.60	88.60	80.80	80.40	8	80.40	88.60	82.80	2.59	0.10
pH (units)	8.47	8.27	8.21	8.09	8.20	8.40	8.20	8.20	8	8.09	8.47	8.26	0.12	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.02								1	0.02	0.02	0.02		0.01
MERCURY (Hg)	< 0.00								1	0.00	0.00	0.00		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0007	< 0.0003	< 0.0003	< 0.0003					4	0.0003	0.0007	0.0004	0.0002	0.0003
Ra 226	12.30	0.40	5.10	1.10					4	0.40	12.30	4.73	5.46	0.2
Ra 226+/-	1.70	0.10	0.40	0.20					4					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM9				CMI			
Production Unit:	ELI							
Sample Date:	11/14/97	12/16/97	1/6/98	12/3/98	11/14/97	12/17/97	1/6/98	12/4/98
Major Ions mg/l:								
CALCIUM (Ca)	2.60	3.00	5.00	4.00				
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00				
SODIUM (Na)	109.00	115.00	120.00	115.00				
POTASSIUM (K)	7.90	9.00	10.90	6.00				
CARBONATE (CO3)	26.20							
BICARBONATE (HC03)	233.00							
SULFATE (SO4)	15.40	18.00	20.10	15.00				
CHLORIDE (Cl)	8.90	9.00	10.30	10.00	10.00	9.90	9.70	13.60
AMMONIUM (NH4)	0.10							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	0.80							
SILICA (SiO2)	7.80							
TDS	300.00	290.00	330.00	303.00				
Cond. (umho/cm)	542.00	570.00	564.00	529.00	511.00	536.00	535.00	482.00
Alk. (as CaC03)	228.00	238.00	239.00	246.00	237.30	237.80	243.60	231.60
pH (units)	9.30	9.27	9.30	8.76	9.30	9.40	9.40	8.90
Trace Metals mg/l:								
ALUMINUM (Al)	0.10							
ARSENIC (As)	< 0.0010	< 0.0010	0.0020	< 0.0010				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	0.0810*	< 0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	0.0003	< 0.0003	0.0230*	< 0.0003				
Ra 226	< 0.20	0.50	15.10	3.00				
Ra 226+/-		0.10	1.20	0.30				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	2.60	5.00	3.65	1.08	0.10
4	1.00	1.00	1.00	0.00	1.00
4	109.00	120.00	114.75	4.50	0.10
4	6.00	10.90	8.45	2.05	0.10
1	26.20	26.20	26.20		0.10
1	233.00	233.00	233.00		0.10
4	15.00	20.10	17.13	2.39	1.00
8	8.90	13.60	10.18	1.47	1.00
1	0.10	0.10	0.10		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.80	0.80	0.80		0.10
1	7.80	7.80	7.80		1.00
4	290.00	330.00	305.75	17.10	1.00
8	482.00	570.00	533.63	28.09	1.00
8	228.00	246.00	237.66	5.82	0.10
8	8.76	9.40	9.20	0.24	1-14
1	0.10	0.10	0.10		0.1
4	0.0010	0.0020	0.0013	0.0005	0.0010
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
3	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
3	0.0003	0.0003	0.0003	0.0000	0.0003
4	0.20	15.10	4.70	7.05	0.2
3					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM10				CMI			
Production Unit:	ELI							
Sample Date:	11/14/97	12/16/97	1/6/98	4/23/98	11/13/97	12/16/97	1/6/98	4/28/98
Major Ions mg/l:								
CALCIUM (Ca)	15.20	16.00	10.20	2.00				
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00				
SODIUM (Na)	203.00	187.00	166.00	140.00				
POTASSIUM (K)	121.00	118.00	104.00	76.00				
CARBONATE (CO3)	235.00							
BICARBONATE (HC03)	7.00							
SULFATE (SO4)	6.40	5.00	4.70	13.00				
CHLORIDE (Cl)	3.70	6.00	6.30	9.00	2.20	2.00	2.20	9.00
AMMONIUM (NH4)	2.14							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	1.19							
SILICA (SiO2)	39.90							
TDS	788.00	734.00	680.00	480.00				
Cond. (umho/cm)	2840.00	2610.00	2180.00	1480.00	2833.00	2656.00	2141.00	1736.00
Alk. (as CaC03)	635.00	594.00	506.00	390.00	692.30	613.50	491.00	443.10
pH (units)	11.79	11.78	11.75	11.15	11.80	11.60	11.50	11.60
Trace Metals mg/l:								
ALUMINUM (Al)	0.45							
ARSENIC (As)	0.0020	0.0010	0.0010	< 0.0010				
BARIUM (Ba)	0.10							
BORON (B)	0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	0.0020	0.0010	0.0010	0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	*< 0.0003*	*< 0.0003*	*< 0.0003*	*< 0.0003*				
Ra 226	3.40	1.50	1.50	5.50				
Ra 226+/-	0.30	0.20	0.10	0.40				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	2.00	16.00	10.85	6.43	0.10
4	1.00	1.00	1.00	0.00	1.00
4	140.00	203.00	174.00	27.26	0.10
4	76.00	121.00	104.75	20.55	0.10
1	235.00	235.00	235.00		0.10
1	7.00	7.00	7.00		0.10
4	4.70	13.00	7.28	3.89	1.00
8	2.00	9.00	5.05	2.95	1.00
1	2.14	2.14	2.14		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	1.19	1.19	1.19		0.10
1	39.90	39.90	39.90		1.00
4	480.00	788.00	670.50	134.44	1.00
8	1480.00	2840.00	2309.50	511.02	1.00
8	390.00	692.30	545.61	104.01	0.10
8	11.15	11.80	11.62	0.22	1-14
1	0.45	0.45	0.45		0.1
4	0.0010	0.0020	0.0013	0.0005	0.0010
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.0010	0.0020	0.0013	0.0005	0.0010
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0003	0.0003	0.0003	0.0000	0.0003
4	1.50	5.50	2.98	1.91	0.2
4					

* INDICA[redacted]ATISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM11								Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI				Of					
Sample Date:	11/12/97	12/4/97	12/23/97	1/6/98	11/6/97	12/5/97	12/23/97	1/6/98	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:														
CALCIUM (Ca)	52.20	55.20	49.70	50.40					4	49.70	55.20	51.88	2.45	0.10
MAGNESIUM (Mg)	5.90	6.80	7.00	7.40					4	5.90	7.40	6.78	0.63	1.00
SODIUM (Na)	229.00	230.00	234.00	235.00					4	229.00	235.00	232.00	2.94	0.10
POTASSIUM (K)	5.20	4.70	4.20	4.30					4	4.20	5.20	4.60	0.45	0.10
CARBONATE (CO3)	1.30								1	1.30	1.30	1.30		0.10
BICARBONATE (HC03)	100.00								1	100.00	100.00	100.00		0.10
SULFATE (SO4)	546.00	571.00	549.00	583.00					4	546.00	583.00	562.25	17.76	1.00
CHLORIDE (Cl)	5.10	5.00	5.40	4.00	5.60	5.20	5.30	5.40	8	4.00	5.60	5.13	0.49	1.00
AMMONIUM (NH4)	0.07								1	0.07	0.07	0.07		0.05
NITRITE (NO2) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10								1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.12								1	0.12	0.12	0.12		0.10
SILICA (SiO2)	8.70								1	8.70	8.70	8.70		1.00
TDS	887.00	885.00	888.00	920.00					4	885.00	920.00	895.00	16.71	1.00
Cond. (umho/cm)	1210.00	1340.00	1320.00	1320.00	1330.00	1363.00	1363.00	1352.00	8	1210.00	1363.00	1324.75	49.49	1.00
Alk. (as CaC03)	84.20	84.00	84.60	84.60	85.60	81.20	82.00	84.60	8	81.20	85.60	83.85	1.48	0.10
pH (units)	8.36	8.25	8.25	8.25	8.30	8.20	8.10	8.10	8	8.10	8.36	8.23	0.09	1-14
Trace Metals mg/l:														
ALUMINUM (Al)	< 0.10								1	0.10	0.10	0.10		0.1
ARSENIC (As)	< 0.0010	< 0.0010	0.0010	0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
BARIUM (Ba)	< 0.10								1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10								1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01								1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05								1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01								1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05								1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05								1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	0.03								1	0.03	0.03	0.03		0.01
MERCURY (Hg)	< 0.00								1	0.00	0.00	0.00		0.001
MOLYBDENUM (Mo)	< 0.01								1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05								1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	0.0010	< 0.0010					4	0.0010	0.0010	0.0010	0.0000	0.0010
VANADIUM (V)	< 0.10								1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01								1	0.01	0.01	0.01		0.01
Radiometric pCi/l:														
U (mg/l)	0.0010	< 0.0003	< 0.0003	< 0.0003					4	0.0003	0.0010	0.0005	0.0004	0.0003
Ra 226	10.70	0.60	13.30	10.50					4	0.60	13.30	8.78	5.60	0.2
Ra 226+/-	1.10	0.10	1.10	1.00					4					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM12				CMI			
Production Unit:	ELI							
Sample Date:	11/14/97	12/16/97	1/14/98	12/10/98	11/14/97	12/17/97	1/14/97	12/11/98
Major Ions mg/l:								
CALCIUM (Ca)	4.30	3.00	2.00	5.10				
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00				
SODIUM (Na)	136.00	139.00	142.00	158.00				
POTASSIUM (K)	51.10	54.00	55.00	52.00				
CARBONATE (CO3)	187.00							
BICARBONATE (HC03)	20.00							
SULFATE (SO4)	10.00	14.00	13.70	7.00				
CHLORIDE (Cl)	7.50	8.00	9.30	7.00	3.90	8.30	10.30	9.60
AMMONIUM (NH4)	0.71							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	0.97							
SILICA (SiO2)	11.80							
TDS	443.00	428.00	433.00	567.00				
Cond. (umho/cm)	1150.00	1270.00	1200.00	1570.00	1052.00	1282.00	1155.00	2472.00
Alk. (as CaC03)	357.00	355.00	353.00	438.00	184.70	378.50	412.30	577.40
pH (units)	11.23	11.15	11.21	11.30	10.70	11.30	11.40	11.60
Trace Metals mg/l:								
ALUMINUM (Al)	0.11							
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	0.0010	< 0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	< 0.0003	< 0.0003	< 0.0003	0.0015				
Ra 226	0.30	11.50	< 0.20	< 0.20				
Ra 226+/-	0.10	0.40						

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	2.00	5.10	3.60	1.37	0.10
4	1.00	1.00	1.00	0.00	1.00
4	136.00	158.00	143.75	9.81	0.10
4	51.10	55.00	53.03	1.79	0.10
1	187.00	187.00	187.00		0.10
1	20.00	20.00	20.00		0.10
4	7.00	14.00	11.18	3.33	1.00
8	3.90	10.30	7.99	1.99	1.00
1	0.71	0.71	0.71		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.97	0.97	0.97		0.10
1	11.80	11.80	11.80		1.00
4	428.00	567.00	467.75	66.46	1.00
8	1052.00	2472.00	1393.88	461.71	1.00
8	184.70	577.40	381.99	109.13	0.10
8	10.70	11.60	11.24	0.26	1-14
1	0.11	0.11	0.11		0.1
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10	#DIV/0!	0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0003	0.0015	0.0006	0.0006	0.0003
4	0.20	11.50	3.05	5.63	0.2
2					

* INDICA[redacted]TISTICAL OUTLIERS

CR MU7 SHALLOW ZONE BASELINE DATA

Well I.D.:	7SM13				CMI			
Production Unit:	ELI							
Sample Date:	11/12/97	12/16/97	1/14/98	12/4/98	11/12/97	12/16/97	1/14/98	12/4/98
Major Ions mg/l:								
CALCIUM (Ca)	149.00	148.00	151.00	125.00				
MAGNESIUM (Mg)	19.40	22.00	23.40	21.50				
SODIUM (Na)	300.00	292.00	295.00	252.00				
POTASSIUM (K)	15.20	9.00	6.90	6.40				
CARBONATE (CO3)	1.30							
BICARBONATE (HC03)	104.00							
SULFATE (SO4)	965.00	909.00	953.00	898.00				
CHLORIDE (Cl)	8.90	8.00	8.90	8.00	8.90	8.60	9.00	9.00
AMMONIUM (NH4)	0.17							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	< 0.10							
FLUORIDE (F)	< 0.10							
SILICA (SiO2)	9.40							
TDS	1520.00	1530.00	1530.00	1550.00				
Cond. (umho/cm)	1860.00	2090.00	2060.00	2110.00	2071.00	2073.00	2071.00	2028.00
Alk. (as CaC03)	87.40	90.10	88.90	92.00	88.90	95.10	86.10	86.90
pH (units)	8.63	8.10	7.99	8.03	8.10	8.00	7.70	7.70
Trace Metals mg/l:								
ALUMINUM (Al)	< 0.10							
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	0.09							
MERCURY (Hg)	< 0.00							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	0.0010	0.0010	< 0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	< 0.01							
Radiometric pCi/l:								
U (mg/l)	0.0014	< 0.0003	< 0.0003	< 0.0003				
Ra 226	1.30	1.40	0.60	3.30				
Ra 226+/-	0.10	0.20	0.10	0.30				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	125.00	151.00	143.25	12.23	0.10
4	19.40	23.40	21.58	1.66	1.00
4	252.00	300.00	284.75	22.08	0.10
4	6.40	15.20	9.38	4.04	0.10
1	1.30	1.30	1.30		0.10
1	104.00	104.00	104.00		0.10
4	898.00	965.00	931.25	32.72	1.00
8	8.00	9.00	8.66	0.43	1.00
1	0.17	0.17	0.17		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	9.40	9.40	9.40		1.00
4	1520.00	1550.00	1532.50	12.58	1.00
8	1860.00	2110.00	2045.38	78.49	1.00
8	86.10	95.10	89.43	2.96	0.10
8	7.70	8.63	8.03	0.29	1-14
1	0.10	0.10	0.10		0.1
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.09	0.09	0.09		0.01
1	0.00	0.00	0.00		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.0010	0.0010	0.0010	0.0000	0.0010
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0003	0.0014	0.0006	0.0006	0.0003
4	0.60	3.30	1.65	1.16	0.2
4					

CR MU7 DEEP ZONE BASELINE DATA SUMMARY

Well I.D.: Production Unit: Sample Date:	Number Of Samples		BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
Major Ions mg/l:							
CALCIUM (Ca)	16		1.80	6.50	4.33	1.50	0.10
MAGNESIUM (Mg)	16		1.00	1.40	1.03	0.10	1.00
SODIUM (Na)	16		102.00	135.00	121.94	8.72	0.10
POTASSIUM (K)	16		2.00	20.10	7.26	6.07	0.10
CARBONATE (CO3)	4		7.00	48.90	24.73	20.77	0.10
BICARBONATE (HC03)	4		93.00	303.00	232.75	98.09	0.10
SULFATE (SO4)	16		1.00	87.00	34.93	33.65	1.00
CHLORIDE (Cl)	32		4.30	11.70	7.99	1.62	1.00
AMMONIUM (NH4)	4		0.10	0.18	0.13	0.04	0.05
NITRITE (NO2) as (N)	4	<	0.10	0.10	0.10	0.00	0.10
NITRATE (NO3) as (N)	4	<	0.10	0.80	0.28	0.35	0.10
FLUORIDE (F)	5		0.89	0.98	0.92	0.04	0.10
SILICA (SiO2)	4		7.00	9.40	8.58	1.09	1.00
TDS	16		281.00	384.00	335.94	28.60	1.00
Cond. (umho/cm)	31		506.00	627.00	563.29	32.32	1.00
Alk. (as CaC03)	32		148.00	383.30	249.95	54.54	0.10
pH (units)	32		8.53	9.97	8.96	0.43	1-14
Trace Metals mg/l:							
ALUMINUM (Al)	4	<	0.10	0.10	0.10	0.00	0.1
ARSENIC (As)	16	<	0.001	0.002	0.001	0.0003	0.001
BARIUM (Ba)	4	<	0.10	0.10	0.10	0.00	0.1
BORON (B)	4	<	0.10	0.10	0.10	0.00	0.1
CADMIUM (Cd)	4	<	0.01	0.01	0.01	0.00	0.01
CHROMIUM (Cr)	4	<	0.05	0.05	0.05	0.00	0.05
COPPER (Cu)	4	<	0.01	0.01	0.01	0.00	0.01
IRON (Fe)	4	<	0.05	0.05	0.05	0.00	0.05
LEAD (Pb)	4	<	0.05	0.05	0.05	0.00	0.05
MANGANESE (Mn)	4	<	0.01	0.01	0.01	0.00	0.01
MERCURY (Hg)	4	<	0.001	0.001	0.001	0.000	0.001
MOLYBDENUM (Mo)	4	<	0.01	0.01	0.01	0.00	0.1
NICKEL (Ni)	4	<	0.05	0.05	0.05	0.00	0.05
SELENIUM (Se)	16	<	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	4	<	0.10	0.10	0.10	0.00	0.1
ZINC (Zn)	4	<	0.01	0.06	0.02	0.03	0.01
Radiometric pCi/l:							
U (mg/l)	16		0.0003	0.0030	0.0005	0.0007	0.0003
Ra 226	16		0.20	20.80	3.06	5.14	0.2
Ra 226+/-	11		0.20	1.50	0.38	0.38	

CR MU7 DEEP ZONE BASELINE DATA

Well I.D.:	7DM1																	
Production Unit:	ELI						CMI								Number Of	BASELINE	BASELINE	BASELINE	Standard	Detection
Sample Date:	7/11/97		7/31/97		9/12/97	10/23/98	7/31/97		7/11/97		9/12/97	10/23/97	Samples	MIN	MAX	MEAN	Deviation	Limit
Major Ions mg/l:																		
CALCIUM (Ca)		6.20		4.70	4.40	6.10							4	4.40	6.20	5.35	0.93	0.10
MAGNESIUM (Mg)	<	1.00	<	1.00	< 1.00	1.40							4	1.00	1.40	1.10	0.20	1.00
SODIUM (Na)		119.00		120.00	123.00	129.00							4	119.00	129.00	122.75	4.50	0.10
POTASSIUM (K)		2.10		2.10	2.00	3.50							4	2.00	3.50	2.43	0.72	0.10
CARBONATE (CO3)		7.80											1	7.80	7.80	7.80		0.10
BICARBONATE (HC03)		303.00											1	303.00	303.00	303.00		0.10
SULFATE (SO4)		15.00		17.70	14.10	48.20							4	14.10	48.20	23.75	16.37	1.00
CHLORIDE (Cl)		6.80		5.70	4.30	6.40	7.00		7.30		7.00	7.40	8	4.30	7.40	6.49	1.04	1.00
AMMONIUM (NH4)		0.10											1	0.10	0.10	0.10		0.05
NITRITE (NO2) as (N)	<	0.10											1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	<	0.10											1	0.10	0.10	0.10		0.10
FLUORIDE (F)		0.89				0.90							2	0.89	0.90	0.90	0.01	0.10
SILICA (SiO2)		9.40											1	9.40	9.40	9.40		1.00
TDS		294.00		281.00	296.00	342.00							4	281.00	342.00	303.25	26.68	1.00
Cond. (umho/cm)		521.00		536.00	534.00	527.00	518.00		516.00		506.00	510.00	8	506.00	536.00	521.00	10.76	1.00
Alk. (as CaC03)		259.00		267.00	266.00	270.00	253.20		247.40		254.60	252.40	8	247.40	270.00	258.70	8.15	0.10
pH (units)		8.66		8.68	8.69	8.53	8.60		8.60		8.60	8.60	8	8.53	8.69	8.62	0.05	1-14
Trace Metals mg/l:																		
ALUMINUM (Al)	<	0.10											1	0.10	0.10	0.10		0.1
ARSENIC (As)	<	0.0010	<	0.0010	< 0.0010	< 0.0010							4	0.001	0.001	0.001	0.000	0.001
BARIUM (Ba)	<	0.10											1	0.10	0.10	0.10		0.1
BORON (B)	<	0.10											1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	<	0.01											1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	<	0.05											1	0.05	0.05	0.05		0.05
COPPER (Cu)	<	0.01											1	0.01	0.01	0.01		0.01
IRON (Fe)	<	0.05											1	0.05	0.05	0.05		0.05
LEAD (Pb)	<	0.05											1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	<	0.01											1	0.01	0.01	0.01		0.01
MERCURY (Hg)	<	0.001											1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	<	0.01											1	0.01	0.01	0.01		0.1
NICKEL (Ni)	<	0.05											1	0.05	0.05	0.05		0.05
SELENIUM (Se)	<	0.0010	<	0.0010	< 0.0010	< 0.0010							4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	<	0.10											1	0.10	0.10	0.10		0.1
ZINC (Zn)	<	0.01											1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																		
U (mg/l)	<	0.0003	<	0.0030	< 0.0003	< 0.0003							4	0.0003	0.0030	0.0010	0.0014	0.0003
Ra 226		0.60		1.40	1.10	1.30							4	0.60	1.40	1.10	0.36	0.2
Ra 226+/-		0.20		0.20	0.20	0.30							4	0.20	0.30	0.23	0.05	

* INDICATES STATISTICAL OUTLIERS

CR MU7 DEEP ZONE BASELINE DATA

Well I.D.:		7DM2						CMI			
Production Unit:		ELI									
Sample Date:		7/11/97	7/30/97	8/12/97	11/19/98	7/11/97	7/30/97	8/13/97	11/20/97
Major Ions mg/l:									
CALCIUM (Ca)		5.10	4.40	4.90	3.60				
MAGNESIUM (Mg)	<	1.00	< 1.00	< 1.00	< 1.00				
SODIUM (Na)		126.00	126.00	127.00	113.00				
POTASSIUM (K)		2.20	2.30	2.30	2.00				
CARBONATE (CO3)		7.00							
BICARBONATE (HC03)		236.00							
SULFATE (SO4)		75.40	71.30	79.30	67.70				
CHLORIDE (Cl)		9.90	9.60	9.50	9.40	10.40	10.10	9.50	11.70
AMMONIUM (NH4)		0.10							
NITRITE (NO2) as (N)	<	0.10							
NITRATE (NO3) as (N)	<	0.10							
FLUORIDE (F)		0.89							
SILICA (SiO2)		9.20							
TDS		330.00	352.00	351.00	365.00				
Cond. (umho/cm)		572.00	586.00	589.00	573.00	571.00	576.00	560.00	549.00
Alk. (as CaC03)		203.00	206.00	203.00	181.00	192.90	192.00	200.70	177.80
pH (units)		8.72	8.71	8.64	8.65	8.60	8.70	8.60	8.80
Trace Metals mg/l:									
ALUMINUM (Al)	<	0.10							
ARSENIC (As)	<	0.0010	< 0.0010	< 0.0010	< 0.0010				
BARIUM (Ba)	<	0.10							
BORON (B)	<	0.10							
CADMIUM (Cd)	<	0.01							
CHROMIUM (Cr)	<	0.05							
COPPER (Cu)	<	0.01							
IRON (Fe)	<	0.05							
LEAD (Pb)	<	0.05							
MANGANESE (Mn)	<	0.01							
MERCURY (Hg)	<	0.001							
MOLYBDENUM (Mo)	<	0.01							
NICKEL (Ni)	<	0.05							
SELENIUM (Se)	<	0.0010	< 0.0010	0.0010	< 0.0010				
VANADIUM (V)	<	0.10							
ZINC (Zn)	<	0.01							
Radiometric pCi/l:									
U (mg/l)	<	0.0003	0.0004	< 0.0003	< 0.0003				
Ra 226	<	0.20	5.20	< 0.20	< 0.20				
Ra 226+/-			0.30						

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	3.60	5.10	4.50	0.67	0.10
4	1.00	1.00	1.00	0.00	1.00
4	113.00	127.00	123.00	6.68	0.10
4	2.00	2.30	2.20	0.14	0.10
1	7.00	7.00	7.00		0.10
1	236.00	236.00	236.00		0.10
4	67.70	79.30	73.43	5.02	1.00
8	9.40	11.70	10.01	0.76	1.00
1	0.10	0.10	0.10		0.05
1	0.10	0.10	0.10		0.10
1	0.10	0.10	0.10		0.10
1	0.89	0.89	0.89		0.10
1	9.20	9.20	9.20		1.00
4	330.00	365.00	349.50	14.48	1.00
8	549.00	589.00	572.00	12.96	1.00
8	177.80	206.00	194.55	10.59	0.10
8	8.60	8.80	8.68	0.07	1-14
1	0.10	0.10	0.10		0.1
4	0.001	0.001	0.001	0.000	0.001
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.001	0.001	0.001		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.001	0.001	0.001	0.000	0.001
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
4	0.0003	0.0004	0.0003	0.0001	0.0003
4	0.20	5.20	1.45	2.50	0.2
1	0.30	0.30	0.30		

* INDICATES STATISTICAL OUTLIERS

CR MU7 DEEP ZONE BASELINE DATA

Well I.D.:	7DM3A										Number	BASELINE	BASELINE	BASELINE	Standard	Detection
Production Unit:	ELI				CMI						Of				Deviation	
Sample Date:	11/14/97	12/17/97	1/6/98	11/20/98	11/14/97	12/18/97	1/6/98	11/20/98			Samples	MIN	MAX	MEAN		Limit
Major Ions mg/l:																
CALCIUM (Ca)	2.30	2.20	3.40	1.80							4	1.80	3.40	2.43	0.68	0.10
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00							4	1.00	1.00	1.00	0.00	1.00
SODIUM (Na)	102.00	117.00	135.00	110.00							4	102.00	135.00	116.00	14.07	0.10
POTASSIUM (K)	9.10	17.80	20.10	8.90							4	8.90	20.10	13.98	5.82	0.10
CARBONATE (CO3)	48.90										1	48.90	48.90	48.90		0.10
BICARBONATE (HC03)	93.00										1	93.00	93.00	93.00		0.10
SULFATE (SO4)	87.00	64.00	2.20	11.10							4	2.20	87.00	41.08	41.01	1.00
CHLORIDE (Cl)	7.80	7.40	8.00	7.30	8.50	8.80	8.70	10.40			8	7.30	10.40	8.36	1.00	1.00
AMMONIUM (NH4)	0.13										1	0.13	0.13	0.13		0.05
NITRITE (NO2) as (N)	< 0.10										1	0.10	0.10	0.10		0.10
NITRATE (NO3) as (N)	< 0.10										1	0.10	0.10	0.10		0.10
FLUORIDE (F)	0.98										1	0.98	0.98	0.98		0.10
SILICA (SiO2)	7.00										1	7.00	7.00	7.00		1.00
TDS	305.00	339.00	384.00	345.00							4	305.00	384.00	343.25	32.38	1.00
Cond. (umho/cm)	577.00	609.00	627.00	549.00	555.00	575.00	807.0*	530.00			7	530.00	627.00	574.57	34.07	1.00
Alk. (as CaC03)	148.00	204.00	310.00	265.00	151.60	248.80	383.30	250.80			8	148.00	383.30	245.19	78.93	0.10
pH (units)	9.97	9.76	9.48	9.02	9.90	9.50	9.80	9.10			8	9.02	9.97	9.57	0.36	1-14
Trace Metals mg/l:																
ALUMINUM (Al)	< 0.10										1	0.10	0.10	0.10		0.1
ARSENIC (As)	0.0020	0.0020	< 0.0010	< 0.0010							4	0.001	0.002	0.002	0.001	0.001
BARIUM (Ba)	< 0.10										1	0.10	0.10	0.10		0.1
BORON (B)	< 0.10										1	0.10	0.10	0.10		0.1
CADMIUM (Cd)	< 0.01										1	0.01	0.01	0.01		0.01
CHROMIUM (Cr)	< 0.05										1	0.05	0.05	0.05		0.05
COPPER (Cu)	< 0.01										1	0.01	0.01	0.01		0.01
IRON (Fe)	< 0.05										1	0.05	0.05	0.05		0.05
LEAD (Pb)	< 0.05										1	0.05	0.05	0.05		0.05
MANGANESE (Mn)	< 0.01										1	0.01	0.01	0.01		0.01
MERCURY (Hg)	< 0.001										1	0.001	0.001	0.001		0.001
MOLYBDENUM (Mo)	< 0.01										1	0.01	0.01	0.01		0.1
NICKEL (Ni)	< 0.05										1	0.05	0.05	0.05		0.05
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	< 0.0010							4	0.001	0.001	0.001	0.000	0.001
VANADIUM (V)	< 0.10										1	0.10	0.10	0.10		0.1
ZINC (Zn)	< 0.01										1	0.01	0.01	0.01		0.01
Radiometric pCi/l:																
U (mg/l)	0.0006	0.0009	0.0003	< 0.0003							4	0.0003	0.0009	0.0005	0.0003	0.0003
Ra 226	3.60	5.40	5.90	1.10							4	1.10	5.90	4.00	2.17	0.2
Ra 226+/-	0.30	0.40	0.40	0.20							4	0.20	0.40	0.33	0.10	

* INDICATES STATISTICAL OUTLIERS

CR MU7 DEEP ZONE BASELINE DATA

Well I.D.:	7DM4A				CMI			
Production Unit:	ELI							
Sample Date:	11/14/97	12/17/97	1/6/98	11/20/98	11/14/97	12/18/97	1/6/98	11/20/98
Major Ions mg/l:								
CALCIUM (Ca)	3.00	6.00	6.50	4.70				
MAGNESIUM (Mg)	< 1.00	< 1.00	< 1.00	< 1.00				
SODIUM (Na)	123.00	130.00	133.00	118.00				
POTASSIUM (K)	14.60	10.80	9.90	6.50				
CARBONATE (CO3)	35.20							
BICARBONATE (HC03)	299.00							
SULFATE (SO4)	2.60	1.30	1.00	< 1.00				
CHLORIDE (Cl)	6.50	6.60	5.80	6.70	7.70	7.70	7.80	7.90
AMMONIUM (NH4)	0.18							
NITRITE (NO2) as (N)	< 0.10							
NITRATE (NO3) as (N)	0.80							
FLUORIDE (F)	0.94							
SILICA (SiO2)	8.70							
TDS	336.00	336.00	363.00	356.00				
Cond. (umho/cm)	612.00	598.00	584.00	577.00	587.00	599.00	585.00	554.00
Alk. (as CaC03)	294.00	303.00	304.00	295.00	310.50	310.50	313.60	280.20
pH (units)	9.32	8.97	9.01	8.66	9.10	9.10	8.90	8.70
Trace Metals mg/l:								
ALUMINUM (Al)	< 0.10							
ARSENIC (As)	< 0.0010	< 0.0010	< 0.0010	< 0.0010				
BARIUM (Ba)	< 0.10							
BORON (B)	< 0.10							
CADMIUM (Cd)	< 0.01							
CHROMIUM (Cr)	< 0.05							
COPPER (Cu)	< 0.01							
IRON (Fe)	< 0.05							
LEAD (Pb)	< 0.05							
MANGANESE (Mn)	< 0.01							
MERCURY (Hg)	< 0.001							
MOLYBDENUM (Mo)	< 0.01							
NICKEL (Ni)	< 0.05							
SELENIUM (Se)	< 0.0010	< 0.0010	< 0.0010	0.0010				
VANADIUM (V)	< 0.10							
ZINC (Zn)	0.06							
Radiometric pCi/l:								
U (mg/l)	< 0.0003	< 0.0003	< 0.0003	< 0.0003				
Ra 226	< 0.20	20.80	< 0.20	1.50				
Ra 226+/-		1.50		0.20				

Number Of Samples	BASELINE MIN	BASELINE MAX	BASELINE MEAN	Standard Deviation	Detection Limit
4	3.00	6.50	5.05	1.56	0.10
4	1.00	1.00	1.00	0.00	1.00
4	118.00	133.00	126.00	6.78	0.10
4	6.50	14.60	10.45	3.33	0.10
1	35.20	35.20	35.20		0.10
1	299.00	299.00	299.00		0.10
4	1.00	2.60	1.48	0.76	1.00
8	5.80	7.90	7.09	0.78	1.00
1	0.18	0.18	0.18		0.05
1	0.10	0.10	0.10		0.10
1	0.80	0.80	0.80		0.10
1	0.94	0.94	0.94		0.10
1	8.70	8.70	8.70		1.00
4	336.00	363.00	347.75	13.87	1.00
8	554.00	612.00	587.00	17.29	1.00
8	280.20	313.60	301.35	11.14	0.10
8	8.66	9.32	8.97	0.22	1-14
1	0.10	0.10	0.10		0.1
4	0.001	0.001	0.001	0.000	0.001
1	0.10	0.10	0.10		0.1
1	0.10	0.10	0.10		0.1
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.05	0.05	0.05		0.05
1	0.05	0.05	0.05		0.05
1	0.01	0.01	0.01		0.01
1	0.001	0.001	0.001		0.001
1	0.01	0.01	0.01		0.1
1	0.05	0.05	0.05		0.05
4	0.001	0.001	0.001	0.000	0.001
1	0.10	0.10	0.10		0.1
1	0.06	0.06	0.06		0.01
4	0.0003	0.0003	0.0003	0.0000	0.0003
4	0.20	20.80	5.68	10.10	0.2
2	0.20	1.50	0.85	0.92	

* INDICATES STATISTICAL OUTLIERS

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April 13, 1998

April 13, 1998

Ms. Donna Wichers
COGEMA Mining, Inc.
935 Pendell Boulevard
Mills, WY 82644

RE: FINAL REPORT FOR MINE UNIT 7 PUMP TESTING

Dear Donna:

Please find enclosed an original copy of the final Unit 7 aquifer characterization. It is finally ready to present to you. If you have any questions or modifcations, please let me know.

Thank you for putting up with my overloaded time schedule. I always enjoy working on your interesting projects. Please call me here in the office with any questions.

Sincerely,

Hugh C. Kendrick, P.E.

HCK:me

Enc: - report w/ original 11x17 figures and maps

Mine Unit 7 Pump Test
Results and Analysis

April 10, 1998

Prepared For:

COGEMA Mining, Inc.
935 Pendell Boulevard
Mills, Wyoming 82644

Prepared By:

Mint Mining & Exploration, llc.
Hugh C. Kendrick, P.E, Manager
635 Park Street
Sheridan, WY 82801

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Attachment C: Raw Field Data
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INTRODUCTION

This report presents the results of a series of pump tests conducted by COGEMA Mining, Inc. (COGEMA) to characterize the producing zone sandstone (K sand) found at the Mine Unit 7 site. In October, 1997, a 120-hour multiple well pump test was performed to characterize the K sand. Also in October, 1997, a number of producing zone wells were pumped to stress the K sand, further demonstrating the connection between the perimeter ring of monitor wells and the producing zone. This test also demonstrates that the K sand is isolated from the vertically adjacent aquifers. In addition, the results from several single well pump tests, conducted in August, 1995 are presented here to supplement the multiple well test findings. To provide additional evidence supporting the isolation analysis discussed above, the expected very low vertical permeability of the aquitards separating the various tested sandstone strata was verified with several direct laboratory measurements. A velocity vector analysis was also performed using the proven MODFLOW model. The results of this modeling are used to demonstrate that if an excursion were detected at the perimeter monitor wells, it could be retrieved within the 60 days stipulated by regulation.

The K sand aquifer is a well-cemented sandstone ranging from approximately 130 to over 200 feet thick within Mine Unit 7. Typical cross sections depicting the strata surrounding the K sand are presented as Attachment A to this report. Uranium ore occurs in the K sand as roll front deposits and, as such, the ore grade is highly variable both vertically and horizontally. Production wells for insitu mining operations are opened to the aquifer by under-reaming only in intervals where the ore meets or exceeds the cutoff criteria. Monitor wells are typically fully penetrating completions of the target aquifer, this usually being all K sand subunits having nearby production well completions. Both production and monitor type wells were used for the multiple well pump test. All wells used during the test were constructed as open-holes with no well screen installed. Typical monitor or production well completions are presented as Attachment B.

As mentioned above, the aquifer characterization portions of this testing program consisted of a multiple well test and several single well tests. The multiple well test was conducted using a pump well and five observation wells completed in the K sand as shown on Map 1. The locations and static water levels for the wells used in this testing program are presented in Table 1. The data used to determine the aquifer parameters of storativity and permeability in the K sand appear robust and produced consistent results from well to well. Further, the results of the multiple well test are in general agreement with the results of the 5 single well tests.

Using these data and results, a radius of influence for this test of approximately 4900 feet was calculated form the various pump tests distributed over mine Unit 7. Therefore, this test adequately characterizes the K sand within a radius of approximately 4900 feet of the pump well (7MW14) which completely encompasses Mine Unit 7.

TEST DESCRIPTION

In order to achieve all the requirements set forward for this test, 3 phases of pumping were employed. As was discussed above, a primary multiple well test was supplemented with 7 single well pump tests and additional aquifer communication/isolation pump testing.

Multiple Well Pump Testing

The initial pumping rate for the multiple well test was determined by allowing the pump well to operate with no flow restrictions for about 30 minutes. The results of this testing indicated that well 7MW14 could sustain a pumping rate of about 45 gallons per minute (gpm) for the estimated pumping interval of 3 days. Based on these results, a conservative pumping rate of approximately 40 gpm was selected for the primary test. In actuality, well 7MW14 was pumped at an average rate of 40.2 gallons per minute for a 96 hour period. The aquifer was then monitored during a recovery period of an additional 24 hours. During this test, 5 observation wells and the pump well were monitored at appropriate intervals using water level probes. An additional well, 7BC107-2 was monitored together with a pair of deep and shallow wells using a pressure transducer and integral data recorders. The data collected in the course of this testing were analyzed using standard Theis and Jacobs techniques, the results of which are presented below.

The observation and pump wells used for these tests were constructed by drilling and logging pilot holes so that the desired completion intervals could be selected. These holes were then cased with blank PVC casing, cemented and the desired completion interval opened by under-reaming. Finally, each well was developed by airlifting and swabbing until the produced water was clear. This construction technique results in an open hole completion with minimal well inefficiency effects since the entire area open to the aquifer is available for flow.

The following table presents the completed intervals and distances from the pump well for each observation well used in this test.

Well Name	Completed Interval (ft)	Radius from Pump Well (ft)
7MW14 [1]	485 - 628	0
7AU114-2	566-578, 600-613	610
7BD102-1	482-516	445
NPHW-8	612-631	475
7TW-6	365-515	495
7MW-12	485-638	290

[1] The pump is set in the pump well at 460 feet below measuring point.

The raw field data collected during the course of this testing are presented herein as Attachment C. The results of the aquifer characterization performed using this data are presented in Table 2.

Single Well Pump Testing

Several single well pump tests have been performed in the Unit 7 area for development purposes. The data from these wells is useful for characterizing the K sand and have therefore been brought forward with this study. Locations for the 7 pump wells within the Mine Unit 7 well field are shown on Map 1. The wells are distributed as evenly as possible over those mineral bodies which are economically recoverable from resource, grade and depth standpoints and thus provide good spatial coverage of Mine Unit 7.

Each of the 7 test wells was drilled, logged, run with blank casing, cemented inside out to the surface and under reamed in the producing zone within the K sand. This completion procedure is identical to that used in COGEMA's other well fields. Note that this completion technique results in an intentional partial completion within the K sand aquifer. Each well was then airlifted and swabbed to develop the wells and to obtain preliminary productivity estimates. Finally, each well was integrity tested to insure that the well casing and cement is intact above the completed interval.

Each well was subjected to 1 or more pumping episodes at progressively higher production rates lasting an average of 90 minutes each. After one pumping episode was ended, the flow control valve was opened further and the well allowed to equilibrate at the new pumping rate. Drawdown versus time-since-pumping-started information was collected throughout each of these tests in addition to instantaneous flow measurements. Except when precluded by malfunctions of the flow meter, total production was also recorded and overall production rates calculated for each pumping episode. The results of these aquifer tests are presented in Table 3.

Communication/Isolation Pump Testing

In addition to the testing described above, an additional pump test lasting approximately 1 day was conducted to show that each well in the perimeter ring of monitor wells not sufficiently influenced by the multiple well pump test is in communication with the producing zone wells. This testing also demonstrates further that the wells completed in the overlying and underlying monitor zone sands are vertically isolated from the production zone. This test was accomplished by pumping 2 wells completed in the K sand whose locations are shown on Map 1 on the following schedule.

Well	Pump On	Pump Off	Discharge (gpm)
BE61-1	12:55, 10/22/97	07:34, 10/23/97	20.6
AZ59-1	12:55, 10/22/97	07:40, 10/23/97	20.6

During the course of this pumping, each of the perimeter monitor wells not sufficiently influenced by the multiple well pump test was monitored for water level changes. At least 1 foot of drawdown observed over successive monitoring intervals was required before a well was considered to be affected. All the perimeter wells were influenced by pumping in the K sand. The data collected from these wells are presented in Tables 4.

Several wells completed in the shallow or deep monitor zone were also monitored for water levels during this additional pump testing. Again, 1 foot of drawdown was taken to indicate that a well was influenced by pumping. None of the shallow or deep monitor wells were affected by pumping in the K sand. The data collected from these wells are presented in Tables 5 and 6 respectively.

Several days before pumping was initiated, selected wells in each of the strata under study were monitored for water level so that baseline potentiometric surfaces could be constructed. These potentiometric surfaces are depicted on Maps 2 through 4. Also, pressure transducers with integral data recorders were operated in the K sand well 7BC102-2, the shallow sand well 7SM10 and the deep sand well 7DM3A. In addition, a pair of continuously recording barometers were operated during this pretest period and throughout the multiple well pump test. This pretest information was primarily used to determine the barometric efficiency and porosity of the K sand and to provide a comparison between barometric pressure and water levels. The results of this monitoring is presented on Figures 27 through 29.

AQUIFER PROPERTY DETERMINATIONS FOR THE K SAND

As discussed above, a 5-day pump test was performed to determine the basic aquifer parameters for the K sand. To ensure that pumping continued long enough to reveal the presence of flow boundaries, recharge boundaries or leaky artesian conditions, real time drawdown plots were maintained during the course of the test. No indications of flow or recharge boundaries were detected during the test or in later analysis. Further, no evidence of leaky artesian conditions was observed except at the pump well for the multiple well test as is discussed below.

Transmissivity, Hydraulic Conductivity and Storativity Determinations

Steady-state artesian log-log type curve drawdown plots (Walton, 1969), semi-log straight line plots for drawdown and recovery (Driscoll, 1986) and a drawdown versus distance plot (Driscoll, 1986) were prepared for 5 observation wells and the pump well to obtain basic aquifer parameters for the K sand. These plots are presented as Figures 1 through 18 while Table 2 summarizes the results of the type curve analyses and groups the results by analytical technique. The straight line semi-log and drawdown versus distance plots are included mainly as supporting evidence.

The average transmissivity (T), hydraulic conductivity (K) and storativity (S) determined for the K sand using the log-log type curve analyses are as follows:

Parameter	Units	Result
Transmissivity	(gpd/ft)	2150
Permeability	(gpd/ft^2) (ft/d)	28 3.8
Storativity	(Unitless)	10^{-4}

Nonleaky Theis type curves were fitted to the test data to obtain the results tabulated above. The results of this curve fitting process are shown on Figures 1 through. With the exception of the pump well, the data from which the aquifer parameters were derived fitted the theoretical nonleaky curves almost perfectly. At the pump well a very slight indication of leakage was obtained by the curve fitting process. However, since no other well showed any sign of leakage, and since the pump well is heavily affected by nonradial flow and other violations of the basic Theis assumptions, this minor indication of leakage at the pump well is not considered significant. Due to the good curve fits obtained, these values are considered very robust, and leaky artesian conditions are not indicated.

Porosity Determination

The methodology outlined by Lohman (1979) was used to determine a porosity value for the K sand. The results of this analysis are shown on Figure 29. To accomplish this analysis, the pretest monitoring results for well 7BC107-2 were compared to the barometric pressure recording for the same period. The raw field data for the barometric pressure recorders is provided in Attachment C. From these measurements, the barometric efficiency of the K sand was calculated to be 50%. In accordance with Lohman (1979), a porosity value of 23% was then determined for the K sand. This is a reasonable and expected result given the well-cemented, fine sandy nature of this aquifer. Further, this porosity value is in good agreement with other porosity determinations for the K sand taken from nearby pump tests.

Anisotropic Transmissivity Determination

Anisotropic transmissivity tensors were calculated for the K sand using the procedure set forward in Maslia and Randolph (1987). Like other directional transmissivity analyses, this method uses transmissivity values obtained from 3 observation wells to solve for an ellipse which is defined by the major and minor axes of transmissivity. The accuracy of, and even the possibility of solution for, this method is affected by the geometry of the observation wells relative to the pump well. If all the observation wells lie near a line through the pump well, accuracy will be reduced and, in extreme cases, the resulting system of simultaneous

equations may be unsolvable. The radial placement of the wells used for this pump test largely precluded this problem. The results of this procedure are reported below in units of gpd/ft:

T_{xx}	T_{yy}	T_{xy}	T_{major}	T_{minor}	T_{mean}	T_{Ratio}	Direction
780	3960	-280	3980	760	1740	5.1	N5°E

These results compare well with the results of past investigations conducted for other nearby mine units in the K sand. Further, the mean transmissivity value of 1740 gpd/ft is within 20% of the average transmissivity value of 2150 gpd/ft determined for the K sand by type curve matching and is within the range of transmissivities determined for the individual observation wells used in the multiple well test.

Potentiometric Surface and Ground Water Flow Determinations

Potentiometric surface, gradient and flow rate information were determined for the K sand using the pretest water level data and the hydraulic parameters determined above. Map 2 presents a potentiometric surface for the K sand which was constructed from pretest water level data taken from several monitor, pump and observation wells. From this map, an average gradient ($^{dh}/_{dl}$)for Mine Unit 7 of 0.006 ft/ft in an easterly direction was determined. By then applying Darcy's Law ($v = K * {}^{dh}/_{dl}$) and using the permeability (K) of 28 gpd/ft^2 or 3.8 ft/day determined above, a ground water velocity (v) of 0.023 ft/day was calculated for the K sand.

PERIMETER MONITOR WELL COMMUNICATION ANALYSIS

Table 4 consists of a series of depth to water measurements taken from the perimeter monitor wells tested in the course of this pumping program. The last rows in this table are the maximum drawdown and minimum drawdown observed during the test and the difference between the maximum and minimum water levels respectively. Scanning the columns for each perimeter well, observe that several consecutive measurements taken over several hours showing over 1 foot of drawdown are recorded for each well tested. These results confirm that all the perimeter monitor wells for the well field are in connection with the pump wells in the K sand. Several trend wells completed within the K sand package were also monitored during the multiple well pump test. The water level data collected from these wells is presented in table 7. As with the perimeter monitor wells, each of these trend wells is in communication with the producing zone as shown by the water level data in Table 7.

ADJACENT AQUIFER ISOLATION ANALYSIS

To demonstrate that the producing zone sands are vertically isolated from the overlying and underlying sands, several wells completed in the shallow or deep sands were monitored during the multiple well and additional communication pump tests. The results

of these monitoring activities are presented in Tables 5 and 6. In addition, the drawdown versus barometer results for the shallow and deep wells monitored with pressure transducers are depicted graphically on Figures 27 and 28. Note that the water level in the deep well rose by 0.8 feet during the test and eventually exceeded the capacity of the transducer due to an inadvertently deep setting of the probe. As in the previously described communication testing, a 1-foot criterion was used to define measurable drawdown. Potentiometric surfaces for the deep and shallow zones are shown on Maps 3 and 4 respectively.

The results of this testing indicate that both the shallow and deep monitor sands are completely isolated from the pumping wells in the K sand. An examination of Tables 5 and 6 reveals that none of the shallow or deep wells was influenced by the test.

AQUITARD PROPERTIES

To further quantify the degree to which the producing zone in the K sand is isolated from the surrounding units, 4 core samples taken from the aquitards separating the overlying and underlying sands from the producing zone were subjected to laboratory permeability testing. Locations for these 2 core holes are shown on Map 1. These direct laboratory measurements of vertical permeability (K') were taken from undisturbed core samples, and the results of this testing are tabulated below.

Core Hole	Vertical Permeability (cm/s)	
	Upper Aquitard	Lower Aquitard
JC-8664C	1.4×10^{-8}	4.1×10^{-8}
JC-8665C	7.3×10^{-8}	1.1×10^{-7}
Averages	**4.4×10^{-8}**	**7.6×10^{-8}**
Average for Units 4, 5 and 6	3×10^{-8}	5×10^{-8}

Note that the average values of K' for both the shallow and deep aquifers are in good agreement with the results of previous K sand aquitard characterizations using various laboratory tests and analytical procedures. The laboratory data sheets for this testing are included as Attachment D.

VELOCITY VECTOR AND EXCURSION RECOVERY ANALYSIS

Methodology

In order to show that a lixiviant excursion from the well field could be retrieved within 60 days, a 2-dimensional ground water simulation of the Unit 7 well field was developed and used to calculate flow velocities at the perimeter monitor wells. The MODFLOW (MODFLW96) ground water model was used for this simulation. Input files representing the case for an excursion recovery at perimeter monitor well 7MW38 are included in Attachment E. Table 8 presents the well data used to calibrate the model as well as output for the calibrated model. The model grid relative to the well field is shown on Map 5 together with a trim frame that was used to produce the figures described below. Figure 30 presents the original potentiometric surface with the data points used to produce it. Note that the available data are amply contained within the portion of model grid shown.

Past operations at the Christensen Ranch Mine indicate that an operational bleed rate of about 0.5% of the total well field production will be required to prevent excursions. Bleed rate is defined as the difference between production and reinjection. By maintaining a constant small bleed rate, a potentiometric depression develops in the well field and excursions are thereby prevented. During a preproduction "conditioning" period, and during the early phases of production, a higher bleed rate commonly near 1% is employed to produce the initial potentiometric surface depression. The bleed rate is greatly increased locally by increased pumping and by reduced injection if an excursion is detected or even anticipated through rising water levels at the perimeter monitor wells.

For these reason, the well field was simulated by making a 60 day conditioning run with an overall bleed of 1.0% (32gpm) for a period of 60 days. This situation was assumed to be a conservatively reasonable approximation of the excursion free operational well field and was therefore used as the starting point for the recovery analysis. For the subsequent recovery simulation, the overall well field bleed rate was reduced to 0.5% (16 gpm), while a recovery bleed of an additional 1% was imposed locally near the simulated excursion to develop a strong gradient back into the well field. Thus, the total well field bleed during the recovery simulation was 1.5% or 48 gpm. This technique is very similar to the actual operational practice were large local bleed rates are used to control excursions while the overall bleed rate is kept fairly constant.

The well field itself was simulated with a pattern of 16 pump wells spatially distributed across the well field. Operationally, only about 100 of the 115 production wells in the field will be pumped at one time so each simulated well represents about 6 actual producing wells. The expected maximum production rate of 3200 gpm from the well field will result in a 16 gpm bleed if the overall bleed rate is close to the expected 0.5%. The net influence of the well field on its surroundings can be taken as the difference between the injection and recovery rates, i.e., the bleed rate. With this assumption in mind, the operational potentiometric surfaces shown on Figures 31 and 32 can be though of as averages for the well field. The conservative case with all pumping occurring in the western (down gradient) portion of the well field is examined here. The locations of these 16 wells can

be found in the input file u7-60.wel file included in Attachment E and are shown on Figures 31 and 32.

Calibration

A directional transmissivity was assigned to each node in the model using the results of the previously described tensor analysis to adjust the average transmissivity of 1740 gpd/ft determined for the K sand. This resulted in a column-wise (Northerly) transmissivity of 4920 gpd/ft and a row-wise transmissivity of 615 gpd/ft. These values represent a transmissivity ratio of 8, a value close to the value determined above and within the range of other determinations made for the K sand at nearby sites. Initial calibration runs revealed that this transmissivity ratio, rather than the factor of 5.1 determined above was required to achieve a good calibration for the simulated well field. This departure from the calculated value is probably required to adjust for other simplifications made for this modeling effort such as homogeneous storage, permeability, and aquifer thickness. The K sand aquifer is simulated as a homogenous aquifer of large extent having a constant thickness of 50 feet. While the K sand package as a whole is approximately 200 feet thick, it is broken into sub units by several intervening discontinuous aquitards. Further, at most locations in the well field, mining will occur in only one of these subunits which are commonly about 50 feet thick. Using this aquifer thickness also allows the usage of permeability and transmissivity values consistent with the values determined from the multiple well pump test. The average storativity value determined from the multiple well testing is also used as model input for all cells. The entire outside boundary of the model is composed of constant head cells. These cells are used to represent the large lateral extent of the K sand package relative to the simulated well field.

Table 8 shows the process by which the model was calibrated. First, the measured head values determined for each well were input into the model. Head values for intermediate nodes were interpolated from these known points. The head values at the wells used to generate the premining potentiometric surface shown on Figure 30 and also on Map 2. The "difference" column on this table is the difference between the input heads and the resultant output heads at these nodes from steady state calibration run. Note that the model is well calibrated with only one well showing more than a 10-foot change from the original data and with an overall average departure of 0.5-foot. As mentioned above, the K sand aquifer is simulated as a homogenous aquifer of large extent and constant thickness. The small differences between the modeled and measured values result from the use of this constant transmissivity and thickness.

Well Field Simulations

As discussed above, two transient well field simulation runs were made, these being a 60-day "conditioning" run, and a 60-day excursion recovery simulation. The preproduction conditioning run was made at a total well field bleed rate of 1% and was initialized with the heads output from the final steady state calibration run. The subsequent recovery simulation was initialized with the heads from this conditioning run.

To produce a well field bleed rate of 1% (32 gpm) for the conditioning run, a pumping rate of 385 ft^3/day (2gpm) was applied to each the 16 producing wells. During this procedure, well 7MW38 was found to be the well most directly down gradient from, and to have the largest gradient away from the well field. For this reason, the following analysis is confined to this well. However, all other perimeter wells were checked after the simulated pumping period to insure that a gradient could be maintained from the perimeter wells into the well field. The head and drawdown results from this conditioning run are tabulated in Table 9 and presented graphically on Figure 31. Note that the conditioning process has significantly flattened the potentiometric surface within the well field. This is an expected and desired result as it facilitates control of mining fluids in the actual well field.

The following calculation was made to determine the maximum distance an excursion could travel past a perimeter monitor well in the 14 days between monitoring events. This calculation assumed that an excursion was already at the well, but not yet detectable, thus maximizing the time available for travel beyond the well. As mentioned above, most incipient excursions are detected before they reach the perimeter monitors through rising water levels.

Flow velocities were estimated using the following equation:

$$v = \frac{l}{t} = -\frac{K}{n} * \frac{dH}{dl}$$

Where: n= porosity = 0.23, K=28 gpd/ft^2 = 3.8 ft/d and dH/dl=gradient at the monitor well.

By entering the gradient taken from the model across the two nodes on either side of the perimeter well under study into this equation, the velocity at the well could be calculated under various conditions. During the excursion it self, the gradient was assumed to be the regional preconditioning gradient plus the gradient induced at the monitor well by the closest injector well. Note that during excursion recovery, nearby by injection wells are turned off so no mound of impression is present. The Theis nonequilibrium well equation (Driscoll 1986) was used to calculate the injection induced gradient. The injection well was assumed to be at the minimum distance required between the well field and the monitor wells, (250 ft) and to be injecting at the expected well field average rate of 29 gpm. Further, since the perimeter monitor wells are sampled every 14 days, a time of 14 days was used in the equation. Finally, the average aquifer parameters discussed above were input into the Theis equation and used to calculate the height of the mound of impression at the nodes on either side of the monitor well on a line between the injection well and the monitor well. This procedure resulted in a regional gradient of 0.02 ft/ft, an injection induced gradient of 0.03 ft/ft for a total gradient driving an excursion across the monitor

well of 0.05 ft/ft. This approximation makes several worst case assumptions and therefore represents a conservative approach to calculating the distance an excursion might travel.

To determine what velocity was appropriate for the recovery of an excursion, the gradient calculated above was used to determine an average interstitial velocity of 0.83 ft/day at well 7MW38. Using this velocity and the perimeter well sampling interval of 14 days, a probable maximum excursion distance of 11.6 ft in 14 days was calculated. Based on the forgoing calculations, the minimum induced gradient back into the well field needed to withdraw an excursion to within the perimeter well ring in less than 60 days of simulated recovery is 0.012 ft/ft.

As described above, the perimeter monitor well with the largest premining gradient away from the well field was chosen for simulated excursion recovery. The simulated pump well nearest the monitor well under study was pumped at the rate of 1.0% of the bleed rate (32 gpm) for a period of 60 days. Note that the normal background bleed of 2 gpm assigned to the well was also maintained resulting in a total pumping rate of 34 gpm. The results of this testing are tabulated below and the resulting heads and drawdowns are included as Table 10. Also, a modeled potentiometric surface for a post excursion recovery simulation at well 7MW38 is shown on Figure 32.

Well	Node	Simulated Pump Well Node and Pumping Rate (Bleed Rate / gpm)	Resultant Gradient from Simulated Pumping (ft/ft)	Resultant Gradient Direction
7MW38	R39 - C45	R39 - C47 (1.03% / 34)	0.0123	East

Note that after the 60 day simulated recovery period, the gradient toward the well field exceeds the 0.012 ft/ft gradient required to withdraw the excursion. This analysis demonstrates that the perimeter monitor wells are correctly placed to detect an excursion early enough to allow recovery within 60 days. This simulation methodology closely mimics the actual procedure used when an incipient excursion is detected through rising water levels at a perimeter monitor well. When potential excursions are detected in this manner, injection is locally stopped and the high local bleed rates used generally prevent lixiviant from reaching a perimeter monitor well.

CONCLUSION

The pump test described above adequately characterizes the K sand aquifer within a 4900 foot radius of the pump well. The determined basic aquifer parameters are within the expected range and agree well with the results of past investigations. Further, the vertical isolation of the K sand from the overlying and underlying sands is demonstrated by the

lack of drawdown in wells completed in these strata and is supported by laboratory permeability testing. The 10.51 feet of drawdown observed at well 7AU114-2 which is located 610 feet from the multiple well test pump well is typical for the observation wells and demonstrates that the aquifer was adequately stressed to produce good quality analytical results. Further, no evidence of flow boundaries, recharge boundaries or leaky artesian conditions was discovered. In addition, all the perimeter monitor wells for Unit 7 are shown to be in communication with the pumping wells in the K sand. Finally, direct aquifer simulation was used to verify the correct placement of the perimeter monitor wells to detect excursions early enough to allow lixiviant recovery within 60 days.

TABLES

Table 1. Well Locations and Static Water Levels

Well	Easting	Northing	Elev. (ft MSL)	Static Water Level * (ft MSL)	Completed Stratum	Well Type
7MW1	856395	1146987	4953.0	4632.8	K3,K4	Perimeter Monitor Well
7MW2	856419	1146528	4958.4	4633.0	K3,K4	Perimeter Monitor Well
7MW3	856377	1147457	4913.2	4630.9	K3,K4	Perimeter Monitor Well
7MW4	856126	1146153	4914.6	4632.9	K3,K4	Perimeter Monitor Well
7MW5	856401	1147946	4890.8	4632.2	K3,K4	Perimeter Monitor Well
7MW6	855638	1146135	4909.7	4629.8	K3,K4	Perimeter Monitor Well
7MW7	856619	1148384	4917.0	4632.2	K4	Perimeter Monitor Well
7MW8	855262	1146438	4878.7	4628.1	K3,K4	Perimeter Monitor Well
7MW9	856488	1148851	4915.7	4632.7	K4	Perimeter Monitor Well
7MW10	855182	1146711	4864.3	4628.2	K3,K4	Perimeter Monitor Well
7MW11	856194	1149247	4878.1	4630.3	K4	Perimeter Monitor Well
7MW12	855154	1146992	4881.6	4627.3	K3,K4	Perimeter Monitor Well
7MW13	856102	1149684	4846.5	4629.5	K4	Perimeter Monitor Well
7MW14	855156	1147282	4872.9	4625.9	K3,K4	Perimeter Monitor Well
7MW15	855826	1150085	4824.4	4628.2	K4	Perimeter Monitor Well
7MW16	855132	1145966	4944.2	4628.9	K3,K4	Perimeter Monitor Well
7MW17	855368	1150173	4850.3	4625.4	K4	Perimeter Monitor Well
7MW18	855087	1145489	4935.8	4630.7	K3,K4	Perimeter Monitor Well
7MW19	855111	1150034	4811.4	4624.3	K2,K3,K4	Perimeter Monitor Well
7MW20	855117	1145013	4889.7	4630.7	K3,K4	Perimeter Monitor Well
7MW21	854822	1144637	4862.7	4629.8	K3,K4	Perimeter Monitor Well
7MW22	854348	1144700	4880.0	4625.8	K3,K4	Perimeter Monitor Well
7MW23	854215	1145100	4900.1	4624.8	K3,K4	Perimeter Monitor Well
7MW24	854228	1145388	4896.5	4624.4	K3,K4	Perimeter Monitor Well
7MW25	854228	1145684	4890.8	4622.8	K3,K4	Perimeter Monitor Well
7MW26	854233	1145971	4880.0	4621.1	K3,K4	Perimeter Monitor Well
7MW27	854195	1146265	4877.1	4621.8	K3,K4	Perimeter Monitor Well
7MW28	854173	1146548	4862.6	4618.5	K3,K4	Perimeter Monitor Well
7MW29	854352	1146773	4858.0	4620.2	K3,K4	Perimeter Monitor Well
7MW30	854295	1147060	4835.3	4622.1	K4	Perimeter Monitor Well
7MW31	854261	1147350	4827.8	4621.3	K4	Perimeter Monitor Well
7MW32	854228	1147641	4844.4	4620.7	K4	Perimeter Monitor Well
7MW33	854305	1147928	4836.4	4617.9	K2,K3,K4	Perimeter Monitor Well
7MW34	854295	1148216	4827.7	4616.7	K2,K3,K4	Perimeter Monitor Well
7MW35	854331	1148507	4829.8	4617.3	K2,K3,K4	Perimeter Monitor Well
7MW36	853836	1148278	4817.7	4612.4	K2,K3	Perimeter Monitor Well
7MW37	853482	1148470	4810.0	4607.3	K2,K3	Perimeter Monitor Well
7MW38	853739	1149198	4751.2	4610.5	K3,K4	Perimeter Monitor Well
7MW39-2	854009	1149413	4770.0	4620.7	K4	Perimeter Monitor Well
7MW40	854033	1149709	4804.8	4618.8	K4	Perimeter Monitor Well

Table 1. Well Locations and Static Water Levels
(Cont.)

Well	Easting	Northing	Elev. (ft MSL)	Static Water Level * (ft MSL)	Completed Stratum	Well Type
7MW41	854044	1150003	4834.0	4619.3	K4	Perimeter Monitor Well
7MW42	854300	1150137	4837.1	4621.0	K4	Perimeter Monitor Well
7MW43	854602	1150291	4825.3	4622.7	K4	Perimeter Monitor Well
7TW1	855301	1149226	4850.3	4625.8	K2,K3	K Sand Trend Well
7TW2	855450	1148822	4849.1	4627.4	K2,K3	K Sand Trend Well
7TW3	855746	1148496	4855.1	4629.0	K2,K3	K Sand Trend Well
7TW4	856228	1148404	4876.8	4632.4	K3	K Sand Trend Well
7TW5	855232	1148130	4870.4	4626.0	K2	K Sand Trend Well
7TW6	854860	1147678	4847.2	4623.3	K2,K3	K Sand Trend Well
7SM1	855499	1149652	4852.9	4691.4	K1	Shallow Sand Monitor Well
7SM2	855879	1148885	4861.3	4733.0	J2	Shallow Sand Monitor Well
7SM3	855868	1147975	4908.5	4665.6	K1	Shallow Sand Monitor Well
7SM4	854882	1149342	4840.7	4692.3	K1	Shallow Sand Monitor Well
7SM5	855897	1147103	4902.2	4732.0	J2	Shallow Sand Monitor Well
7SM6	854857	1148618	4842.3	4664.3	K1	Shallow Sand Monitor Well
7SM7	854922	1148196	4841.2	4684.5	K1	Shallow Sand Monitor Well
7SM8	854651	1147419	4869.8	4729.6	J2	Shallow Sand Monitor Well
7SM9	854493	1148993	4832.8	4673.0	K1	Shallow Sand Monitor Well
7SM10	855497	1147480	4873.8	4682.0	K1	Shallow Sand Monitor Well
7SM11	854675	1146608	4861.4	4729.4	J2	Shallow Sand Monitor Well
7SM12	854671	1146127	4892.1	4682.3	K1	Shallow Sand Monitor Well
7SM13	854658	1145224	4894.4	4730.6	J2	Shallow Sand Monitor Well
7DM1	855590	1149596	4855.1	4629.9	L1,L2,L3	Deep Sand Monitor Well
7DM2	855883	1148856	4859.7	4633.1	L1,L2	Deep Sand Monitor Well
7DM3A	855870	1147878	4916.8	4614.2	L1	Deep Sand Monitor Well
7DM4B	854995	1149355	4842.6	4629.6	L2	Deep Sand Monitor Well
7AS65-1	854400	1149360	4770.0	4612.9	K3M	K Sand Baseline Well
7AT129-1	854577	1146138	4889.8	4622.8	K3U	K Sand Baseline Well
7AT142-1	854536	1145478	4906.3	4626.4	K3M	K Sand Baseline Well
7AT72-1	854561	1149005	4834.2	4620.4	K3L	K Sand Baseline Well
7AU102-1	854634	1147509	4872.2	4621.8	K4L	K Sand Baseline Well
7AU114-2	854653	1146924	4844.0	4623.9	K4U,K4L	K Sand Baseline Well
7AU130-1	854691	1146104	4895.9	4626.4	K4M,K4L	K Sand Baseline Well
7AU138-1	854606	1145691	4930.5	4627.0	K4L	K Sand Baseline Well
7AU146-1	854661	1145313	4899.4	4629.2	K4L	K Sand Baseline Well
7AU63-1	854693	1149430	4808.0	4620.6	K3M,K3L	K Sand Baseline Well
7AU88-1	854665	1148205	4835.0	4621.9	K2M,K2L	K Sand Baseline Well
7AU96-1	854612	1147792	4863.6	4620.9	K4U,K4M	K Sand Baseline Well
7AV122-1	854715	1146508	4867.9	4625.1	K4M,K4L	K Sand Baseline Well
7AW84-1	854835	1148420	4838.0	4621.7	K4M,K4L	K Sand Baseline Well

Table 1. Well Locations and Static Water Levels
(Cont.)

Well	Easting	Northing	Elev. (ft MSL)	Static Water Level * (ft MSL)	Completed Stratum	Well Type
7AX75-1	854983	1148834	4843.3	4623.1	K3M	K Sand Baseline Well
7AY88-1	855005	1148192	4849.7	4622.3	K4L	K Sand Baseline Well
7BC107-2	855460	1147235	4875.0	4625.4	K3L	K Sand Baseline Well
7BD60-1	855527	1149628	4853.7	4627.4	K4M,K4L	K Sand Baseline Well
7BE61-1	855691	1149527	4858.3	4627.5	K4M,K4L	K Sand Baseline Well
7BE68-2	855629	1149219	4858.6	4821.3	K4L	K Sand Baseline Well
7BF74-1	855713	1148917	4855.6	4627.8	K4M,K4L	K Sand Baseline Well
7BF96-1	855724	1147783	4903.8	4629.8	K3M	K Sand Baseline Well
7BG100-1	855824	1147597	4902.3	4631.1	K3M,K3L	K Sand Baseline Well
7BG112-1	855868	1147011	4900.2	4630.9	K3M,K3L	K Sand Baseline Well
7BG92-1	855812	1147989	4907.3	4629.8	K3L	K Sand Baseline Well
7BH118-1	855958	1146679	4912.4	4631.8	K3L	K Sand Baseline Well
7BH120-1	855946	1146572	4919.0	4630.4	K4M	K Sand Baseline Well
7BH92-2	855977	1147988	4894.5	4630.3	K4L	K Sand Baseline Well
7BJ82-1	856152	1148460	4871.6	4630.8	K3M	K Sand Baseline Well
NPHW-11	854853	1149263	4840.3	4622.3	K3M	Hydrologic Test Wells
NPHW-13	855871	1147223	4901.2	4630.6	K3L	Hydrologic Test Wells
NPHW-14	855996	1148204	4873.2	4629.8	K4L	Hydrologic Test Wells
NPHW-16	855065	1148626	4843.0	4623.0	K4L	Hydrologic Test Wells
NPHW-8	854682	1147309	4871.4	4621.9	K4M	Hydrologic Test Wells
NPHW-9A	854686	1148074	4834.4	4620.7	K4U,K4L	Hydrologic Test Wells

* Water Level Data Collected October 11, 1997 Except The NPHW Wells That Were Measured in August, 1995

Table 2. Pump and Observation Well Properties: Multiple Well Test

Log-Log Analytical Results

Well	r (ft)	T (gpd/ft)	b (ft)	K (gpd/ft²)	S (unitless)	Well Type
7MW14	0	614	143	4.3	N/A	Pump Well
7AU114-2	610	2710	40	68.0	10^{-4}	Observation Well
7BD102-1	445	4610	170	27.1	10^{-4}	Observation Well
NPHW-8	475	2430	55	54.0	10^{-4}	Observation Well
7TW-6	495	1320	150	8.8	10^{-4}	Observation Well
7MW12	290	1210	153	7.9	10^{-5}	Observation Well
Averages		2150		28	10^{-4}	

Semi-Log Drawdown Analytical Results

Well	r (ft)	T (gpd/ft)	b (ft)	K (gpd/ft²)	S (unitless)	Well Type
7MW14	0	1010	143	7.1	N/A	Pump Well
7AU114-2	610	3540	40	88.5	10^{-4}	Observation Well
7BD102-1	445	5050	170	29.7	10^{-4}	Observation Well
NPHW-8	475	2870	55	52.2	10^{-4}	Observation Well
7TW-6	495	1380	150	9.2	10^{-4}	Observation Well
7MW12	290	1290	153	8.4	10^{-5}	Observation Well
Averages		2520		33	10^{-4}	

Semi-Log Recovery Analytical Results

Well	r (ft)	T (gpd/ft)	b (ft)	K (gpd/ft²)	S (unitless)	Well Type
7MW14	0	860	143	6.0	N/A	Pump Well
7AU114-2	610	4820	40	121.0	10^{-5}	Observation Well
7BD102-1	445	4820	170	28.4	10^{-5}	Observation Well
NPHW-8	475	4250	55	77.3	10^{-4}	Observation Well
7TW-6	495	1690	150	11.3	10^{-7}	Observation Well
7MW12	290	1500	153	8.4	10^{-6}	Observation Well
Averages		2990		42	10^{-5}	

Drawdown Versus Distance Results at Time = 48 hoursT

Well	r (ft)	T (gpd/ft)	b (ft)	K (gpd/ft²)	S (unitless)	Well Type
–	–	630	–	12.6	10^{-4}	All Observation Wells
Overall Averages		2070		29	10^{-4}	

Table 3. Pump and Observation Well Properties: Single Well Tests

Semi-Log Drawdown Analytical Results

Well	T (gpd/ft)	K (gpd/ft^2)	Aquifer Thickness (ft)	Completed Interval Thickness (ft)	Well Type
NPHW-11	1920	55	35	8	Pump Well
NPHW-12	83	4	22	5	Pump Well
NPHW-13	7720	119	65	11	Pump Well
NPHW-14	340	7	52	16	Pump Well
NPHW-16	28	2	14	14	Pump Well
NPHW-8	1920	55	35	8	Pump Well
NPHW-9A	100	2	60	22	Pump Well
Averages	1730	35	40	12	

Table 4.
Perimeter Monitor Wells, Depth to Water Data

MW-1			MW-2			MW-3			MW-4			MW-5			MW-6			MW-7			MW-8			MW-9*			MW-10			MW-11*		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
0	320.17	0	0	325.42	0	0	282.36	0	0	281.64	0	0	258.58	0	0	279.91	0	0	284.79	0	-15	250.41	0				-25	235.96	0			
1540	323.0	2.8	1530	327.7	2.3	1628	284.5	2.2	1520	284.0	2.3	1637	260.0	1.4	113	281.0	1.1	1665	284.9	0.1	1575	255.7	5.2	1674	282.6	0.0	1570	243.4	7.5	1681	246.8	0.0
2994	324.8	4.6	2985	329.4	3.9	3017	286.2	3.9	2975	285.6	4.0	3025	261.4	2.8	2925	284.7	4.8	3033	285.6	0.8	4368	259.0	8.6	3043	282.1	-0.6	4373	246.9	11.0	2710	247.2	0.4
4342	326.0	5.8	4350	330.5	5.1	4344	287.7	5.3	4356	286.8	5.1	4351	262.7	4.1	4362	286.0	6.1	4359	286.6	1.8	5861	259.8	9.4	4366	283.9	1.2	5861	247.7	11.8	4374	247.8	1.0
5724	326.2	6.1	5741	330.7	5.2	5631	288.5	6.2	5115	287.5	5.9	5625	263.4	4.9	5123	286.8	6.9	5615	287.1	2.3				5588	284.3	1.6				5570	248.2	1.3
																								7288	283.6	0.9				7279	246.9	0.0
																								7392	283.5	0.9				7396	247.1	0.3
																								7477	283.7	1.0				7482	248.7	1.8
																								7530	283.8	1.2				7534	249.6	2.8
																								8383	286.8	4.2				8389	259.5	12.7
Max		**6.1**			**5.2**			**6.2**			**5.9**			**4.9**			**6.9**			**2.3**			**9.4**			**4.2**			**11.8**			**12.7**
Min		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**-0.6**			**0.0**			**0.0**
Diff		**6.1**			**5.2**			**6.2**			**5.9**			**4.9**			**6.9**			**2.3**			**9.4**			**4.7**			**11.8**			**12.7**

MW-12			MW-13*			MW-14			MW-15*			MW-16			MW-17*			MW-18			MW-19*			MW-20			MW-21			MW-22		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
0	254.38	0				0	247.02	0										0	305.06	0				0	258.94	0	0	232.89	0	0	254.21	0
			1690	215.7	0.0				1720	194.2	0.0	1500	317.5	0.0	1712	221.7	0.0	1455	306.3	1.3	1700	182.6	0.0	1460	259.8	0.9	1490	233.7	0.8	6160	257.0	2.8
			3058	215.9	0.2				3072	194.4	0.2	2966	319.0	1.5	3080	222.1	0.3	2935	307.6	2.5	3065	183.0	0.4	2940	260.8	1.9	2956	234.5	1.6	6323	257.2	2.9
			4381	216.4	0.7				4397	194.7	0.5	4379	320.2	2.7	1720	222.4	0.7	4385	308.5	3.5	4391	183.6	1.0	4391	261.7	2.7	4398	235.2	2.3	7002	257.3	3.1
			5560	216.6	0.9				5424	194.9	0.7	5667	320.6	3.1	5415	222.7	1.0	5673	309.3	4.2	5436	183.1	0.5	5180	262.3	3.4	5680	235.8	2.9	7214	257.3	3.1
			7262	216.1	0.4				5908	194.9	0.7				7301	221.6	-0.2				7295	183.6	1.1				6168	235.9	3.0			
			7400	216.4	0.7				6132	194.8	0.6				7380	221.6	-0.2				7386	183.7	1.1				6328	236.0	3.1			
			7485	220.3	4.6				7383	194.5	0.3				7466	222.4	0.7				7473	183.9	1.3				7007	236.1	3.2			
			7537	221.7	6.0				7470	197.0	2.8				7525	223.1	1.4				7520	183.9	1.3				7218	236.0	3.1			
			8394	235.3	19.6				7522	198.2	4.0				8465	238.0	16.3				8465	187.0	4.4									
									8401	213.01	18.8																						
Observation Well (see attached drawdown curve)		**19.6**				Pump Well (see attached drawdown curve)		**18.8**						**3.1**			**16.3**			**4.2**			**4.4**			**3.4**			**3.2**			**3.1**
		0.0						**0.0**						**0.0**			**-0.2**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**
		19.6						**18.8**						**3.1**			**16.4**			**4.2**			**4.4**			**3.4**			**3.2**			**3.1**

Table 4 (cont.).
Perimeter Monitor Wells, Depth to Water Data

MW-23			MW-24			MW-25			MW-26			MW-27			MW-28			MW-29			MW-30			MW-31			MW-32			MW-33		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
0	275.27	0	0	272.07	0	-53	268.54	0	-62	259.22	0	-82	255.15	0	-72	244.2	0	-94	237.85	0												
1475	276.1	0.8	1395	272.4	0.4	1855	269.3	0.7	1847	260.4	1.1	1835	257.3	2.1	1840	246.4	2.2	1827	241.5	3.6	310	212.5	0.0	305	205.5	0.0	300	222.2	0.0	290	216.6	0.0
2950	276.8	1.5	3303	273.1	1.1	4416	271.1	2.5	4421	262.4	3.2	4426	259.8	4.6	4431	248.8	4.6	4438	244.3	6.4	1822	217.1	4.7	1817	210.2	4.7	1810	226.0	3.8	1870	219.7	3.1
4404	277.6	2.3	4409	274.6	2.5	5233	271.7	3.2	5255	263.2	4.0	5261	260.6	5.4	5266	249.5	5.3	5283	245.1	7.2	4433	220.8	8.4	4438	214.0	8.5	4443	229.6	7.4	4437	222.5	5.9
5209	278.2	2.9	5226	275.3	3.2																5278	221.8	9.3	5272	214.9	9.4	5246	230.5	8.4	5253	223.2	6.6
Max		**2.9**			**3.2**			**3.2**			**4.0**			**5.4**			**5.3**			**7.2**			**9.3**			**9.4**			**8.4**			**6.6**
Min		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**
Diff		**2.9**			**3.2**			**3.2**			**4.0**			**5.4**			**5.3**			**7.2**			**9.3**			**9.4**			**8.4**			**6.6**

MW-34			MW-35			MW-36			MW-37			MW-38*			MW-39-2*			MW-40*			MW-41*			MW-42*			MW-43*		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
390	208.5	0.0	395	209.2	0.0	1890	203.6	0.0	1898	200.4	0.0	3209	136.4	0.0	220	144.8	0.0	235	180.9	0.0	278	209.3	0.0	286	210.4	0.0	261	197.3	0.0
1880	210.3	1.8	1885	210.7	1.5	3224	204.7	1.1	3218	201.3	0.9	4470	137.2	0.8	3200	145.6	0.8	3100	181.7	0.8	3094	210.1	0.8	3086	211.3	0.9	3077	198.1	0.8
4462	212.6	4.1	4467	212.8	3.6	4472	205.5	1.9	4476	202.0	1.6	5358	137.8	1.4	4452	146.1	1.3	4446	182.1	1.2	4441	210.4	1.1	4430	211.6	1.3	4422	198.4	1.0
5318	213.3	4.8	5323	213.5	4.3	5345	206.2	2.6	5338	202.6	2.2	7293	137.6	1.2	5352	146.6	1.8	5369	182.5	1.6	5375	210.8	1.5	5385	212.0	1.6	5406	198.7	1.3
												7381	137.7	1.3	7290	146.4	1.6	7286	182.5	1.7	7281	210.7	1.4	7276	212.0	1.6	7271	198.5	1.2
												7454	137.6	1.2	7378	146.4	1.6	7383	182.6	1.7	7386	210.7	1.4	7390	212.0	1.6	7394	198.6	1.2
												7524	137.4	1.0	7450	146.4	1.6	7456	182.6	1.7	7459	210.7	1.4	7463	211.9	1.5	7466	198.5	1.2
												8445	137.7	1.3	7520	146.2	1.4	7527	182.4	1.5	7530	210.6	1.3	7534	211.8	1.5	7539	198.4	1.1
															8448	147.8	3.0	8451	184.2	3.3	8454	212.3	2.9	8458	214.0	3.6	8461	201.7	4.3
Max		**4.8**			**4.3**			**2.6**			**2.2**			**1.4**			**3.0**			**3.3**			**2.9**			**3.6**			**4.3**
Min		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**
Diff		**4.8**			**4.3**			**2.6**			**2.2**			**1.4**			**3.0**			**3.3**			**2.9**			**3.6**			**4.3**

* Wells subjected to additional testing by pumping wells BE61-1 and AZ59-1 at 20.6 GPM each starting 22 Oct. '97, 12:55.

Table 5.
Upper Sand Monitor Wells, Depth to Water Data

7SM-1			7SM-2			7SM-3			7SM-4			7SM-5			7SM-6			7SM-7			7SM-8			7SM-9		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
-108	161.75	0.00	-73	128.63	0.00	-33	243.65	0.00	-97	149.05	0.00	-28	170.40	0.00	-90	177.38	0.00	0	156.7	0.00	-10	140.47	0.00	-94	159.88	0.00
881	161.95	0.20	883	128.75	0.12	318	243.87	0.22	206	149.13	0.08	333	170.39	-0.01	196	177.47	0.09	129	156.96	0.26	380	140.45	-0.02	400	159.93	0.05
2273	162.09	0.34	2255	128.83	0.20	1230	243.86	0.21	908	149.19	0.14	1420	170.35	-0.05	1286	177.36	-0.02	305	157.09	0.39	1385	140.44	-0.03	917	160.08	0.20
3265	161.95	0.20	3271	128.65	0.02	2232	243.98	0.33	1930	149.08	0.03	2698	170.51	0.11	2315	177.33	-0.05	1198	157.08	0.38	2193	140.63	0.16	2303	160.11	0.23
4196	162.12	0.37	4181	128.74	0.11	3285	243.68	0.03	2288	149.26	0.21	3669	170.53	0.13	3704	177.13	-0.25	2321	157.04	0.34	2664	140.61	0.14	3681	160.02	0.14
4595	161.98	0.23	4610	128.74	0.11	4151	243.94	0.29	3690	149.26	0.21	4110	170.55	0.15	4136	177.13	-0.25	3711	156.98	0.28	3629	140.62	0.15	4666	159.88	0.00
7270	161.39	-0.36				4643	243.87	0.22	4656	149.17	0.12	4711	170.48	0.08	4671	176.96	-0.42	4132	157.02	0.32	4071	140.64	0.17			
7455	161.42	-0.33																4633	156.93	0.23	4679	140.55	0.08			
7501	161.37	-0.38																								
8469	160.98	-0.77																								
Max		**0.37**			**0.20**			**0.33**			**0.21**			**0.15**			**0.09**			**0.39**			**0.17**			**0.23**
Min		**-0.77**			**0.00**			**0.00**			**0.00**			**-0.05**			**-0.42**			**0.00**			**-0.03**			**0.00**
Diff		**1.14**			**0.20**			**0.33**			**0.21**			**0.20**			**0.51**			**0.39**			**0.20**			**0.23**
M.P. = 1.35			M.P. = 1.7			M.P. = 0.9			M.P. = 1.4			M.P. = 1.4			M.P. = 1.5			M.P. = 1.7			M.P. = 1.1			M.P. = 1.5		

7SM-10			7SM-11			7SM-12			7SM-13		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
0	191.85	0.00	0	132.00	0.00	0	209.76	0.00	0	163.74	0.00
			113	132.21	0.21	116	209.81	0.05	120	164.02	0.28
			235	132.21	0.21	1447	209.78	0.02	1470	164.06	0.32
			510	132.21	0.21	2720	209.93	0.17	2734	164.32	0.58
			1442	132.17	0.17	3609	209.87	0.11	3617	164.19	0.45
			2706	132.35	0.35	4032	209.86	0.10	4022	164.23	0.49
			3600	132.38	0.38	4690	209.70	-0.06	4696	164.13	0.39
			4043	132.40	0.40						
			4685	132.31	0.31						
(Well Equipped with a pressure transducer see attached water level curve)			**Max**		**0.40**			**0.17**			**0.58**
			Min		**0.00**			**-0.06**			**0.00**
			Diff		**0.40**			**0.23**			**0.58**
			M.P. = 1.5			M.P. = 1.3			M.P. = 1.25		

Table 6.
Lower Sand Monitor Wells, Depth to Water Data

7DM-1			7DM-2			7DM-3A*			7DM-4B		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
-105	225.47	0.00	-85	226.94	0.00	0	302.55	0.00	-99	213.32	0.00
856	225.78	0.31	856	227.11	0.17				209	213.53	0.21
2268	225.83	0.36	2261	227.15	0.21				902	213.55	0.23
3310	225.53	0.06	3275	226.83	-0.11				1922	213.33	0.01
4192	225.77	0.30	4179	227.12	0.18				2281	213.63	0.31
4599	225.58	0.11	4615	226.97	0.03				3695	213.57	0.25
7275	224.76	-0.71							4659	213.42	0.10
7519	225.05	-0.42									
7572	224.98	-0.49									
7634	224.92	-0.55									
8469	224.62	-0.85									
Max		**0.36**			**0.21**	(Well Equipped with a					**0.31**
Min		**-0.85**			**-0.11**	pressure transducer see					**0.00**
Diff		**1.21**			**0.32**	attached water level curve)					**0.31**

M.P. = 1.3 M.P. = 2.0 M.P. = 1.4

Table 7.
K Sand Trend Wells, Depth to Water Data

7TW-1			7TW-2			7TW-3			7TW-4			7TW-5			7TW-6		
Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)	Time Since Pump On (min)	Depth to Water (ft)	Draw-down (ft)
-101	221.67	0.00	-87	219.91	0.00	-76	225	0.00	-79	243.72	0.00	-62	243.22	0.00	0	223.94	0.00
870	221.72	0.05	841	220.15	0.24	495	225.00	0.00	1262	244.64	0.92	308	243.34	0.12			
1937	222.13	0.46	2250	221.31	1.40	1252	225.93	0.93	2353	245.76	2.04	490	243.97	0.75			
2296	222.65	0.98	3254	221.85	1.94	2339	227.20	2.20	3245	246.17	2.45	1209	244.30	1.08			
3260	222.94	1.27	4144	222.64	2.73	3248	227.73	2.73	4143	247.00	3.28	4115	247.03	3.81			
4200	223.56	1.89	4605	222.73	2.82	4230	228.66	3.66	4626	247.07	3.35						
4590	223.60	1.93	5663	223.47	3.56	4620	228.69	3.69	5576	247.70	3.98						
5669	224.29	2.62				5674	229.47	4.47									
Max		**2.62**			**3.56**			**4.47**			**3.98**			**3.81**	Observation Well (see		
Min		**0.00**			**0.00**			**0.00**			**0.00**			**0.00**	attached drawdown curve)		
Diff		**2.62**			**3.56**			**4.47**			**3.98**			**3.81**			

Table 8. Well Locations, Water Levels and Model output

Block centered node coordinates			Pot. Surface	Model		Modeled Drawdown
Well	Easting	Northing	(ft MSL)	Row	Col	(ft)
7AS65-1	854400	1149360	4612.9	39	49	-0.5
7AT129-1	854577	1146138	4622.8	60	51	-1.4
7AT142-1	854536	1145478	4626.4	64	50	1.0
7AT72-1	854561	1149005	4620.4	41	50	-3.3
7AU102-1	854634	1147509	4621.8	51	51	-2.0
7AU114-2	854653	1146924	4623.9	55	51	-1.1
7AU130-1	854691	1146104	4626.4	60	51	-1.4
7AU138-1	854606	1145691	4627.0	63	51	1.7
7AU146-1	854661	1145313	4629.2	66	51	2.9
7AU63-1	854693	1149430	4620.6	38	51	-1.7
7AU88-1	854665	1148205	4621.9	46	51	-2.8
7AU96-1	854612	1147792	4620.9	49	51	-2.5
7AV122-1	854715	1146508	4625.1	58	51	-0.6
7AW84-1	854835	1148420	4621.7	45	52	-2.2
7AX75-1	854983	1148834	4623.1	42	53	-1.7
7AY88-1	855005	1148192	4622.3	46	53	-2.5
7BC107-2	855460	1147235	4625.4	53	56	-0.9
7BD60-1	855527	1149628	4627.4	37	57	0.9
7BE61-1	855691	1149527	4627.5	37	58	0.6
7BE68-2	855629	1149219	4821.3	40	58	0.3
7BF74-1	855713	1148917	4627.8	42	58	0.8
7BF96-1	855724	1147783	4629.8	49	58	1.2
7BG100-1	855824	1147597	4631.1	50	59	1.8
7BG112-1	855868	1147011	4630.9	54	59	1.4
7BG92-1	855812	1147989	4629.8	48	59	1.4
7BH118-1	855958	1146679	4631.8	56	60	1.7
7BH120-1	855946	1146572	4630.4	57	60	0.4
7BH92-2	855977	1147988	4630.3	48	60	1.5
7BJ82-1	856152	1148460	4630.8	45	61	1.1
7MW1	856395	1146987	4632.8	54	63	1.4
7MW10	855182	1146711	4628.2	56	55	1.3
7MW11	856194	1149247	4630.3	39	61	0.9
7MW12	855154	1146992	4627.3	54	54	0.4
7MW13	856102	1149684	4629.5	36	61	0.9
7MW14	855156	1147282	4625.9	52	54	-0.8
7MW15	855826	1150085	4628.2	34	59	0.9
7MW16	855132	1145966	4628.9	61	54	1.7
7MW17	855368	1150173	4625.4	33	56	0.2
7MW18	855087	1145489	4630.7	64	54	3.3
7MW19	855111	1150034	4624.3	34	54	-0.2
7MW2	856419	1146528	4633.0	57	63	1.1
7MW20	855117	1145013	4630.7	68	54	2.8
7MW21	854822	1144637	4629.8	70	52	2.2
7MW22	854348	1144700	4625.8	70	49	0.9
7MW23	854215	1145100	4624.8	67	48	0.5
7MW24	854228	1145388	4624.4	65	48	0.3
7MW25	854228	1145684	4622.8	63	48	-0.5
7MW26	854233	1145971	4621.1	61	48	-1.9
7MW27	854195	1146265	4621.8	59	48	-1.3

Table 8. Well Locations, Water Levels and Model output

(Cont.)

7MW28	854173	1146548	4618.5	57	48	-3.8
7MW29	854352	1146773	4620.2	56	49	-3.4
7MW3	856377	1147457	4630.9	51	63	-0.1
7MW30	854295	1147060	4622.1	54	49	-1.2
7MW31	854261	1147350	4621.3	52	48	-2.0
7MW32	854228	1147641	4620.7	50	48	-2.1
7MW33	854305	1147928	4617.9	48	49	-3.6
7MW34	854295	1148216	4616.7	46	49	-5.1
7MW35	854331	1148507	4617.3	44	49	-4.9
7MW36	853836	1148278	4612.4	46	46	-6.9
7MW37	853482	1148470	4607.3	44	44	-10.3
7MW38	853739	1149198	4610.5	40	45	-8.7
7MW39-2	854009	1149413	4620.7	38	47	-0.5
7MW4	856126	1146153	4632.9	60	61	1.7
7MW40	854033	1149709	4618.8	36	47	-1.2
7MW41	854044	1150003	4619.3	34	47	-1.0
7MW42	854300	1150137	4621.0	33	49	0.3
7MW43	854602	1150291	4622.7	32	51	0.8
7MW5	856401	1147946	4632.2	48	63	1.1
7MW6	855638	1146135	4629.8	60	58	0.9
7MW7	856619	1148384	4632.2	45	64	1.1
7MW8	855262	1146438	4628.1	58	55	0.9
7MW9	856488	1148851	4632.7	42	63	1.7
7TW1	855301	1149226	4625.8	39	55	-0.2
7TW2	855450	1148822	4627.4	42	56	0.0
7TW3	855746	1148496	4629.0	44	58	0.7
7TW4	856228	1148404	4632.4	45	62	2.2
7TW5	855232	1148130	4626.0	47	55	-0.2
7TW6	854860	1147678	4623.3	50	52	-1.8
NPHW-11	854853	1149263	4622.3	39	52	-1.8
NPHW-13	855871	1147223	4630.6	53	59	0.5
NPHW-14	855996	1148204	4629.8	46	60	0.9
NPHW-16	855065	1148626	4623.0	43	54	-2.0
NPHW-8	854682	1147309	4621.9	52	51	-1.9
NPHW-9A	854686	1148074	4620.7	47	51	-3.3
					Avg	-0.5
					Min	-10.3
					Max	3.3

Table 9a. Modeled Heads Within Trim Frame Shown on Map 5

60 Day Operational Run at 1.0% Bleed Initialized With Steady State Heads

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
27	4610.2	4610.8	4611.3	4611.9	4612.4	4612.9	4613.4	4613.9	4614.4	4614.9	4615.3	4615.8	4616.3	4616.8	4617.3	4617.9	4618.5	4619.2	4619.9	4620.6	4621.4	4622.2	4623.0	4623.8	4624.7	4625.6	4626.4	4627.2	4628.1	4628.8	4629.6	4630.3	4631.1	4631.8	4632.4
28	4610.3	4610.8	4611.4	4611.9	4612.4	4612.9	4613.4	4613.9	4614.4	4614.8	4615.3	4615.8	4616.2	4616.7	4617.2	4617.8	4618.4	4619.1	4619.8	4620.5	4621.3	4622.1	4622.9	4623.8	4624.7	4625.5	4626.4	4627.2	4628.0	4628.8	4629.6	4630.4	4631.1	4631.8	4632.5
29	4610.3	4610.9	4611.4	4611.9	4612.4	4612.9	4613.4	4613.9	4614.4	4614.8	4615.3	4615.7	4616.2	4616.6	4617.1	4617.7	4618.3	4619.0	4619.7	4620.4	4621.1	4622.0	4622.8	4623.7	4624.6	4625.5	4626.4	4627.2	4628.0	4628.8	4629.6	4630.4	4631.1	4631.8	4632.5
30	4610.4	4610.9	4611.5	4612.0	4612.5	4613.0	4613.4	4613.9	4614.4	4614.8	4615.3	4615.7	4616.1	4616.6	4617.0	4617.6	4618.2	4618.9	4619.6	4620.3	4621.0	4621.9	4622.8	4623.7	4624.6	4625.5	4626.4	4627.2	4628.1	4628.9	4629.6	4630.4	4631.1	4631.8	4632.5
31	4610.4	4611.0	4611.5	4612.0	4612.5	4613.0	4613.4	4613.9	4614.4	4614.8	4615.2	4615.7	4616.1	4616.5	4616.9	4617.5	4618.1	4618.8	4619.4	4620.2	4620.9	4621.8	4622.7	4623.6	4624.5	4625.4	4626.3	4627.2	4628.1	4628.9	4629.7	4630.4	4631.1	4631.9	4632.5
32	4610.5	4611.0	4611.6	4612.1	4612.5	4613.0	4613.5	4613.9	4614.3	4614.8	4615.2	4615.6	4616.0	4616.4	4616.8	4617.3	4618.0	4618.6	4619.3	4620.0	4620.8	4621.6	4622.6	4623.5	4624.5	4625.4	4626.3	4627.2	4628.1	4628.9	4629.7	4630.4	4631.2	4631.9	4632.6
33	4610.6	4611.1	4611.6	4612.1	4612.6	4613.0	4613.5	4613.9	4614.3	4614.8	4615.2	4615.6	4615.9	4616.3	4616.6	4617.2	4617.9	4618.5	4619.2	4619.9	4620.6	4621.5	4622.5	4623.5	4624.4	4625.4	4626.3	4627.2	4628.1	4628.9	4629.7	4630.5	4631.2	4631.9	4632.6
34	4610.7	4611.2	4611.7	4612.2	4612.6	4613.1	4613.5	4613.9	4614.3	4614.8	4615.2	4615.5	4615.9	4616.1	4616.4	4617.1	4617.7	4618.4	4619.1	4619.8	4620.4	4621.4	4622.4	4623.4	4624.4	4625.4	4626.3	4627.2	4628.1	4628.9	4629.7	4630.5	4631.2	4632.0	4632.6
35	4610.7	4611.2	4611.7	4612.2	4612.7	4613.1	4613.5	4613.9	4614.3	4614.8	4615.2	4615.5	4615.8	4616.0	4616.2	4616.9	4617.6	4618.3	4619.0	4619.6	4620.2	4621.3	4622.3	4623.3	4624.4	4625.4	4626.3	4627.2	4628.1	4629.0	4629.8	4630.5	4631.3	4632.0	4632.7
36	4610.8	4611.3	4611.8	4612.3	4612.7	4613.1	4613.5	4613.9	4614.3	4614.8	4615.2	4615.5	4615.8	4615.9	4615.9	4616.8	4617.5	4618.1	4618.9	4619.5	4619.8	4621.1	4622.2	4623.3	4624.3	4625.4	4626.3	4627.3	4628.1	4629.0	4629.8	4630.6	4631.3	4632.0	4632.7
37	4610.9	4611.4	4611.9	4612.3	4612.8	4613.2	4613.5	4613.9	4614.3	4614.8	4615.2	4615.5	4615.7	4615.8	4615.5	4616.6	4617.3	4618.0	4618.8	4619.5	4620.0	4621.0	4622.1	4623.2	4624.3	4625.3	4626.3	4627.3	4628.2	4629.0	4629.8	4630.6	4631.4	4632.1	4632.8
38	4611.0	4611.5	4612.0	4612.4	4612.8	4613.2	4613.5	4613.8	4614.3	4614.8	4615.2	4615.5	4615.7	4615.8	4615.6	4616.5	4617.2	4617.8	4618.7	4619.5	4620.1	4620.9	4622.1	4623.1	4624.3	4625.4	4626.4	4627.3	4628.2	4629.1	4629.9	4630.7	4631.4	4632.1	4632.8
39	4611.0	4611.5	4612.0	4612.5	4612.9	4613.3	4613.6	4613.8	4614.3	4614.8	4615.2	4615.5	4615.7	4615.8	4615.4	4616.5	4617.1	4617.6	4618.6	4619.4	4620.1	4620.8	4622.0	4623.1	4624.2	4625.4	4626.4	4627.4	4628.3	4629.1	4629.9	4630.7	4631.5	4632.2	4632.9
40	4611.1	4611.6	4612.1	4612.6	4613.0	4613.3	4613.6	4613.7	4614.4	4614.8	4615.2	4615.5	4615.7	4615.8	4615.7	4616.5	4617.1	4617.3	4618.6	4619.5	4620.1	4620.6	4622.0	4623.0	4624.2	4625.4	4626.4	4627.4	4628.3	4629.2	4630.0	4630.8	4631.5	4632.2	4632.9
41	4611.2	4611.7	4612.2	4612.6	4613.0	4613.4	4613.6	4613.5	4614.4	4614.9	4615.3	4615.6	4615.8	4615.9	4615.9	4616.5	4617.1	4617.5	4618.6	4619.5	4620.2	4620.8	4622.0	4622.8	4624.2	4625.4	4626.5	4627.4	4628.4	4629.2	4630.0	4630.8	4631.6	4632.3	4633.0
42	4611.3	4611.8	4612.3	4612.7	4613.1	4613.5	4613.7	4613.8	4614.5	4615.0	4615.3	4615.6	4615.8	4615.9	4616.0	4616.5	4617.1	4617.5	4618.6	4619.5	4620.3	4621.0	4622.0	4622.7	4624.3	4625.5	4626.5	4627.5	4628.4	4629.3	4630.1	4630.9	4631.6	4632.4	4633.0
43	4611.4	4611.9	4612.4	4612.8	4613.2	4613.6	4613.8	4614.1	4614.6	4615.0	4615.4	4615.7	4615.8	4616.0	4616.1	4616.5	4617.1	4617.5	4618.7	4619.6	4620.4	4621.2	4622.1	4622.9	4624.3	4625.5	4626.6	4627.6	4628.5	4629.4	4630.2	4631.0	4631.7	4632.4	4633.1
44	4611.5	4612.0	4612.5	4612.9	4613.3	4613.7	4614.0	4614.2	4614.7	4615.1	4615.5	4615.7	4615.9	4616.0	4616.2	4616.5	4617.1	4617.4	4618.7	4619.7	4620.5	4621.3	4622.2	4623.1	4624.4	4625.6	4626.7	4627.6	4628.6	4629.4	4630.2	4631.0	4631.8	4632.5	4633.2
45	4611.6	4612.1	4612.6	4613.0	4613.4	4613.8	4614.1	4614.4	4614.8	4615.2	4615.5	4615.8	4616.0	4616.1	4616.2	4616.4	4617.2	4617.8	4618.9	4619.8	4620.6	4621.4	4622.3	4623.3	4624.5	4625.7	4626.8	4627.7	4628.6	4629.5	4630.3	4631.1	4631.8	4632.6	4633.3
46	4611.7	4612.2	4612.7	4613.1	4613.5	4613.9	4614.2	4614.6	4614.9	4615.3	4615.6	4615.9	4616.0	4616.1	4616.2	4616.3	4617.3	4618.0	4619.0	4619.9	4620.7	4621.5	4622.3	4623.5	4624.7	4625.8	4626.8	4627.8	4628.7	4629.6	4630.4	4631.2	4631.9	4632.6	4633.3
47	4611.8	4612.3	4612.8	4613.2	4613.6	4614.0	4614.4	4614.7	4615.1	4615.4	4615.7	4616.0	4616.1	4616.2	4616.2	4616.6	4617.5	4618.3	4619.2	4620.1	4620.8	4621.6	4622.3	4623.6	4624.8	4625.9	4627.0	4627.9	4628.8	4629.7	4630.5	4631.3	4632.0	4632.7	4633.4
48	4611.9	4612.4	4612.9	4613.3	4613.7	4614.1	4614.5	4614.8	4615.2	4615.5	4615.8	4616.1	4616.2	4616.3	4616.2	4616.8	4617.7	4618.5	4619.4	4620.2	4621.0	4621.8	4622.3	4623.8	4624.9	4626.0	4627.1	4628.0	4628.9	4629.8	4630.6	4631.4	4632.1	4632.8	4633.5
49	4612.0	4612.5	4613.0	4613.4	4613.8	4614.2	4614.6	4615.0	4615.3	4615.7	4615.9	4616.2	4616.3	4616.4	4616.1	4617.0	4617.9	4618.7	4619.5	4620.3	4621.1	4621.9	4622.6	4623.9	4625.1	4626.2	4627.2	4628.1	4629.0	4629.9	4630.7	4631.4	4632.2	4632.9	4633.6
50	4612.1	4612.6	4613.1	4613.5	4614.0	4614.4	4614.8	4615.1	4615.5	4615.8	4616.1	4616.3	4616.4	4616.5	4616.4	4617.2	4618.1	4618.9	4619.7	4620.5	4621.1	4622.1	4623.0	4624.1	4625.3	4626.3	4627.3	4628.3	4629.1	4630.0	4630.8	4631.5	4632.3	4633.0	4633.6
51	4612.2	4612.7	4613.2	4613.7	4614.1	4614.5	4614.9	4615.3	4615.6	4615.9	4616.2	4616.4	4616.6	4616.6	4616.7	4617.4	4618.3	4619.1	4619.9	4620.6	4621.2	4622.3	4623.2	4624.4	4625.4	4626.5	4627.5	4628.4	4629.3	4630.1	4630.9	4631.6	4632.4	4633.1	4633.7
52	4612.3	4612.8	4613.3	4613.8	4614.2	4614.6	4615.0	4615.4	4615.7	4616.1	4616.3	4616.5	4616.7	4616.8	4616.8	4617.6	4618.5	4619.3	4620.1	4620.8	4621.2	4622.5	4623.5	4624.6	4625.6	4626.6	4627.6	4628.5	4629.4	4630.2	4631.0	4631.7	4632.5	4633.2	4633.8
53	4612.4	4613.0	4613.4	4613.9	4614.3	4614.8	4615.2	4615.5	4615.9	4616.2	4616.5	4616.7	4616.8	4616.9	4616.9	4617.8	4618.7	4619.5	4620.3	4621.1	4621.6	4622.7	4623.8	4624.8	4625.8	4626.8	4627.7	4628.6	4629.5	4630.3	4631.1	4631.8	4632.6	4633.3	4633.9
54	4612.6	4613.1	4613.6	4614.0	4614.5	4614.9	4615.3	4615.7	4616.0	4616.4	4616.6	4616.8	4617.0	4617.0	4616.8	4618.0	4618.9	4619.7	4620.6	4621.3	4622.0	4623.0	4624.0	4625.0	4626.0	4627.0	4627.9	4628.8	4629.6	4630.4	4631.2	4632.0	4632.7	4633.4	4634.0
55	4612.7	4613.2	4613.7	4614.2	4614.6	4615.0	4615.5	4615.8	4616.2	4616.5	4616.8	4617.0	4617.1	4617.2	4617.2	4618.2	4619.1	4620.0	4620.8	4621.6	4622.3	4623.3	4624.2	4625.2	4626.2	4627.1	4628.1	4628.9	4629.8	4630.6	4631.3	4632.1	4632.8	4633.5	4634.1
56	4612.8	4613.3	4613.8	4614.3	4614.8	4615.2	4615.6	4616.0	4616.3	4616.7	4616.9	4617.2	4617.3	4617.4	4617.4	4618.4	4619.3	4620.2	4621.0	4621.8	4622.6	4623.5	4624.5	4625.4	4626.4	4627.3	4628.2	4629.1	4629.9	4630.7	4631.5	4632.2	4632.9	4633.6	4634.2
57	4612.9	4613.5	4614.0	4614.4	4614.9	4615.3	4615.8	4616.1	4616.5	4616.8	4617.1	4617.3	4617.5	4617.6	4617.6	4618.6	4619.5	4620.4	4621.3	4622.1	4622.9	4623.8	4624.7	4625.7	4626.6	4627.5	4628.4	4629.2	4630.0	4630.8	4631.6	4632.3	4633.0	4633.7	4634.3
58	4613.1	4613.6	4614.1	4614.6	4615.0	4615.5	4615.9	4616.3	4616.7	4617.0	4617.3	4617.5	4617.7	4617.8	4617.6	4618.8	4619.8	4620.7	4621.5	4622.4	4623.2	4624.1	4625.0	4625.9	4626.8	4627.7	4628.5	4629.4	4630.2	4631.0	4631.7	4632.4	4633.1	4633.8	4634.4
59	4613.2	4613.7	4614.2	4614.7	4615.2	4615.6	4616.1	4616.5	4616.8	4617.2	4617.5	4617.7	4617.9	4618.0	4618.0	4619.0	4620.0	4620.9	4621.8	4622.6	4623.4	4624.3	4625.2	4626.1	4627.0	4627.9	4628.7	4629.5	4630.3	4631.1	4631.9	4632.6	4633.3	4633.9	4634.6
60	4613.3	4613.8	4614.4	4614.9	4615.3	4615.8	4616.2	4616.6	4617.0	4617.4	4617.7	4617.9	4618.1	4618.2	4618.3	4619.3	4620.3	4621.2	4622.0	4622.9	4623.7	4624.6	4625.4	4626.3	4627.2	4628.1	4628.9	4629.7	4630.5	4631.3	4632.0	4632.7	4633.4	4634.0	4634.7
61	4613.4	4614.0	4614.5	4615.0	4615.5	4615.9	4616.4	4616.8	4617.2	4617.6	4617.9	4618.1	4618.3	4618.5	4618.5	4619.5	4620.5	4621.4	4622.3	4623.1	4624.0	4624.8	4625.7	4626.5	4627.4	4628.3	4629.1	4629.9	4630.7	4631.4	4632.1	4632.8	4633.5	4634.2	4634.8
62	4613.6	4614.1	4614.6	4615.1	4615.6	4616.1	4616.6	4617.0	4617.4	4617.7	4618.1	4618.4	4618.6	4618.7	4618.6	4619.8	4620.8	4621.7	4622.6	4623.4	4624.2	4625.1	4625.9	4626.8	4627.6	4628.4	4629.3	4630.0	4630.8	4631.6	4632.3	4633.0	4633.6	4634.3	4634.9
63	4613.7	4614.3	4614.8	4615.3	4615.8	4616.3	4616.7	4617.2	4617.6	4617.9	4618.3	4618.6	4618.8	4619.0	4619.0	4620.1	4621.1	4622.0	4622.8	4623.7	4624.5	4625.3	4626.2	4627.0	4627.8	4628.6	4629.4	4630.2	4631.0	4631.7	4632.4	4633.1	4633.8	4634.4	4635.0
64	4613.8	4614.4	4614.9	4615.4	4615.9	4616.4	4616.9	4617.3	4617.8	4618.1	4618.5	4618.8	4619.1	4619.2	4619.4	4620.4	4621.3	4622.2	4623.1	4623.9	4624.7	4625.6	4626.4	4627.2	4628.0	4628.8	4629.6	4630.4	4631.1	4631.9	4632.6	4633.2	4633.9	4634.5	4635.1
65	4614.0	4614.5	4615.1	4615.6	4616.1	4616.6	4617.1	4617.5	4618.0	4618.4	4618.7	4619.0	4619.3	4619.5	4619.7	4620.7	4621.6	4622.5	4623.3	4624.2	4625.0	4625.8	4626.6	4627.4	4628.2	4629.0	4629.8	4630.6	4631.3	4632.0	4632.7	4633.4	4634.0	4634.7	4635.3
66	4614.1	4614.7	4615.2	4615.8	4616.3	4616.8	4617.2	4617.7	4618.1	4618.6	4618.9	4619.3	4619.6	4619.8	4619.8	4621.0	4621.9	4622.8	4623.6	4624.4	4625.2	4626.1	4626.9	4627.7	4628.5	4629.2	4630.0	4630.8	4631.5	4632.2	4632.9	4633.5	4634.2	4634.8	4635.4
67	4614.3	4614.8	4615.4	4615.9	4616.4	4616.9	4617.4	4617.9	4618.3	4618.8	4619.2	4619.5	4619.9	4620.2	4620.4	4621.3	4622.2	4623.1	4623.9	4624.7	4625.5	4626.3	4627.1	4627.9	4628.7	4629.4	4630.2	4630.9	4631.7	4632.4	4633.0	4633.7	4634.3	4634.9	4635.5
68	4614.4	4615.0	4615.5	4616.1	4616.6	4617.1	4617.6	4618.1	4618.6	4619.0	4619.4	4619.8	4620.2	4620.5	4620.9	4621.7	4622.5	4623.4	4624.2	4625.0	4625.8	4626.5	4627.3	4628.1	4628.9	4629.6	4630.4	4631.1	4631.8	4632.5	4633.2	4633.8	4634.5	4635.1	4635.7
69	4614.5	4615.1	4615.7	4616.2	4616.8	4617.3	4617.8	4618.3	4618.8	4619.2	4619.6	4620.1	4620.5	4620.8	4621.3	4622.0	4622.8	4623.6	4624.4	4625.2	4626.0	4626.8	4627.6	4628.3	4629.1	4629.9	4630.6	4631.3	4632.0	4632.7	4633.4	4634.0	4634.6	4635.2	4635.8
70	4614.7	4615.3	4615.8	4616.4	4616.9	4617.5	4618.0	4618.5	4619.0	4619.4	4619.9	4620.3	4620.7	4621.2	4621.7	4622.4	4623.1	4623.9	4624.7	4625.5	4626.3	4627.0	4627.8	4628.6	4629.3	4630.1	4630.8	4631.5	4632.2	4632.9	4633.5	4634.2	4634.8	4635.4	4635.9
71	4614.8	4615.4	4616.0	4616.5	4617.1	4617.6	4618.2	4618.7	4619.2	4619.7	4620.1	4620.6	4621.0	4621.5	4622.0	4622.7	4623.4	4624.2	4625.0	4625.8	4626.5	4627.3	4628.0	4628.8	4629.5	4630.3	4631.0	4631.7	4632.4	4633.0	4633.7	4634.3	4634.9	4635.5	4636.1
72	4615.0	4615.6	4616.1	4616.7	4617.3	4617.8	4618.4	4618.9	4619.4	4619.9	4620.4	4620.8	4621.3	4621.8	4622.4	4623.0	4623.8	4624.5	4625.3	4626.0	4626.8	4627.5	4628.3	4629.0	4629.8	4630.5	4631.2	4631.9	4632.6	4633.2	4633.9	4634.5	4635.1	4635.7	4636.2
73	4615.1	4615.7	4616.3	4616.9	4617.4	4618.0	4618.5	4619.1	4619.6	4620.1	4620.6	4621.1	4621.6	4622.1	4622.7	4623.3	4624.1	4624.8	4625.5	4626.3	4627.0	4627.8	4628.5	4629.3	4630.0	4630.7	4631.4	4632.1	4632.7	4633.4	4634.0	4634.6	4635.2	4635.8	4636.4
74	4615.3	4615.9	4616.5	4617.0	4617.6	4618.2	4618.7	4619.3	4619.8	4620.3	4620.9	4621.4	4621.9	4622.4	4623.0	4623.7	4624.4	4625.1	4625.8	4626.6	4627.3	4628.0	4628.8	4629.5	4630.2	4630.9	4631.6	4632.3	4632.9	4633.6	4634.2	4634.8	4635.4	4636.0	4636.5

Table 9b. Modeled Drawdown Within Trim Frame Shown on Map 5

60 Day Operational Run at 1.0% Bleed Initialized With Steady State Heads

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
27	1.4	1.5	1.7	1.9	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.7	3.9	4.0	4.0	4.0	4.0	3.9	3.8	3.7	3.5	3.3	3.1	2.8	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.4	1.2
28	1.5	1.6	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.2	4.2	4.2	4.2	4.1	4.0	3.9	3.7	3.4	3.2	2.9	2.7	2.5	2.3	2.1	1.9	1.7	1.5	1.4	1.3
29	1.5	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.9	4.1	4.3	4.4	4.4	4.4	4.4	4.3	4.2	4.1	3.8	3.6	3.3	3.1	2.8	2.6	2.3	2.1	1.9	1.8	1.6	1.4	1.3
30	1.5	1.7	1.9	2.0	2.2	2.4	2.7	2.9	3.1	3.3	3.5	3.8	4.0	4.3	4.5	4.6	4.6	4.6	4.6	4.5	4.4	4.2	4.0	3.7	3.4	3.2	2.9	2.6	2.4	2.2	2.0	1.8	1.6	1.5	1.3
31	1.6	1.7	1.9	2.1	2.3	2.5	2.7	3.0	3.2	3.4	3.7	3.9	4.2	4.5	4.7	4.8	4.8	4.8	4.8	4.8	4.7	4.4	4.2	3.9	3.6	3.3	3.0	2.7	2.5	2.2	2.0	1.8	1.7	1.5	1.4
32	1.6	1.8	2.0	2.1	2.4	2.6	2.8	3.1	3.3	3.5	3.8	4.1	4.4	4.7	4.9	5.0	5.1	5.1	5.0	5.0	4.9	4.6	4.3	4.0	3.7	3.4	3.1	2.8	2.5	2.3	2.1	1.9	1.7	1.6	1.4
33	1.6	1.8	2.0	2.2	2.4	2.7	2.9	3.2	3.4	3.7	3.9	4.2	4.5	4.9	5.2	5.3	5.3	5.3	5.2	5.2	5.1	4.9	4.5	4.2	3.8	3.5	3.2	2.9	2.6	2.4	2.1	1.9	1.8	1.6	1.4
34	1.7	1.9	2.0	2.3	2.5	2.7	3.0	3.3	3.5	3.8	4.0	4.3	4.7	5.1	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.1	4.7	4.3	3.9	3.6	3.2	2.9	2.7	2.4	2.2	2.0	1.8	1.6	1.5
35	1.7	1.9	2.1	2.3	2.5	2.8	3.1	3.4	3.6	3.9	4.1	4.5	4.9	5.3	5.8	5.8	5.7	5.7	5.7	5.6	5.8	5.3	4.9	4.5	4.1	3.7	3.3	3.0	2.7	2.5	2.2	2.0	1.8	1.7	1.5
36	1.7	1.9	2.1	2.3	2.6	2.9	3.2	3.5	3.7	4.0	4.3	4.6	5.0	5.5	6.2	6.0	6.0	6.0	5.9	5.8	6.2	5.5	5.1	4.6	4.2	3.8	3.4	3.1	2.8	2.5	2.3	2.0	1.9	1.7	1.5
37	1.8	2.0	2.2	2.4	2.6	2.9	3.3	3.6	3.8	4.1	4.4	4.7	5.1	5.7	6.7	6.2	6.2	6.2	6.0	6.0	6.1	5.7	5.2	4.8	4.3	3.9	3.5	3.1	2.8	2.5	2.3	2.1	1.9	1.7	1.5
38	1.8	2.0	2.2	2.4	2.7	3.0	3.4	3.7	3.9	4.2	4.4	4.8	5.3	5.9	6.7	6.4	6.4	6.5	6.2	6.1	6.1	5.9	5.4	4.9	4.4	4.0	3.5	3.2	2.9	2.6	2.3	2.1	1.9	1.7	1.6
39	1.8	2.0	2.2	2.5	2.7	3.1	3.4	3.9	4.0	4.2	4.5	4.9	5.4	6.0	7.0	6.6	6.6	6.8	6.4	6.2	6.2	6.1	5.5	5.1	4.5	4.0	3.6	3.2	2.9	2.6	2.4	2.1	1.9	1.7	1.6
40	1.8	2.0	2.3	2.5	2.8	3.1	3.5	4.1	4.1	4.3	4.6	5.0	5.5	6.0	6.8	6.7	6.7	7.2	6.5	6.3	6.2	6.5	5.7	5.3	4.6	4.1	3.6	3.3	2.9	2.6	2.4	2.2	2.0	1.8	1.6
41	1.9	2.1	2.3	2.5	2.8	3.1	3.6	4.4	4.2	4.4	4.7	5.1	5.5	6.1	6.7	6.8	6.9	7.1	6.6	6.4	6.3	6.3	5.8	5.5	4.7	4.2	3.7	3.3	3.0	2.7	2.4	2.2	2.0	1.8	1.6
42	1.9	2.1	2.3	2.5	2.8	3.2	3.6	4.2	4.2	4.4	4.7	5.1	5.6	6.1	6.7	6.9	7.0	7.2	6.7	6.4	6.3	6.2	5.8	5.8	4.8	4.2	3.7	3.3	3.0	2.7	2.4	2.2	2.0	1.8	1.6
43	1.9	2.1	2.3	2.6	2.8	3.2	3.6	4.1	4.2	4.4	4.8	5.2	5.6	6.2	6.7	7.0	7.0	7.3	6.8	6.4	6.3	6.1	5.8	5.6	4.8	4.2	3.7	3.3	3.0	2.7	2.4	2.2	2.0	1.8	1.6
44	1.9	2.1	2.3	2.6	2.9	3.2	3.6	4.0	4.2	4.5	4.8	5.2	5.7	6.2	6.8	7.1	7.1	7.5	6.8	6.5	6.3	6.1	5.9	5.5	4.8	4.2	3.8	3.4	3.0	2.7	2.5	2.2	2.0	1.8	1.7
45	1.9	2.1	2.3	2.6	2.9	3.2	3.5	3.9	4.2	4.5	4.8	5.2	5.7	6.3	6.8	7.3	7.1	7.2	6.8	6.5	6.3	6.1	5.9	5.4	4.8	4.2	3.8	3.4	3.0	2.7	2.5	2.2	2.0	1.8	1.7
46	1.9	2.1	2.3	2.6	2.9	3.2	3.5	3.9	4.2	4.5	4.8	5.3	5.8	6.3	6.9	7.5	7.1	7.1	6.7	6.4	6.3	6.1	5.9	5.4	4.8	4.2	3.8	3.4	3.0	2.7	2.5	2.2	2.0	1.8	1.7
47	1.9	2.1	2.3	2.6	2.9	3.2	3.5	3.8	4.2	4.5	4.9	5.3	5.8	6.4	7.0	7.3	7.1	6.9	6.6	6.4	6.3	6.1	6.0	5.3	4.7	4.2	3.8	3.4	3.0	2.7	2.5	2.2	2.0	1.8	1.7
48	1.9	2.1	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.5	4.9	5.3	5.8	6.4	7.1	7.2	7.0	6.8	6.6	6.4	6.2	6.1	6.2	5.3	4.7	4.2	3.7	3.4	3.0	2.7	2.5	2.2	2.0	1.8	1.7
49	1.9	2.1	2.3	2.6	2.8	3.1	3.5	3.8	4.1	4.5	4.9	5.3	5.8	6.4	7.4	7.1	6.9	6.7	6.5	6.3	6.2	6.0	5.9	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.5	2.2	2.0	1.8	1.7
50	1.9	2.1	2.3	2.6	2.8	3.1	3.4	3.8	4.1	4.4	4.8	5.3	5.8	6.4	7.1	7.0	6.8	6.6	6.4	6.3	6.3	5.9	5.7	5.1	4.6	4.1	3.7	3.3	3.0	2.7	2.5	2.2	2.0	1.8	1.7
51	1.9	2.1	2.3	2.6	2.8	3.1	3.4	3.7	4.1	4.4	4.8	5.3	5.8	6.4	7.0	6.9	6.7	6.5	6.3	6.2	6.3	5.8	5.5	5.0	4.5	4.0	3.6	3.3	3.0	2.7	2.4	2.2	2.0	1.8	1.7
52	1.9	2.1	2.3	2.5	2.8	3.1	3.4	3.7	4.0	4.4	4.8	5.3	5.8	6.4	7.0	6.8	6.6	6.4	6.2	6.2	6.4	5.7	5.3	4.9	4.4	4.0	3.6	3.3	2.9	2.7	2.4	2.2	2.0	1.8	1.7
53	1.9	2.1	2.3	2.5	2.8	3.0	3.3	3.7	4.0	4.4	4.8	5.2	5.7	6.3	7.0	6.8	6.5	6.3	6.1	6.0	6.1	5.6	5.2	4.8	4.3	3.9	3.6	3.2	2.9	2.6	2.4	2.2	2.0	1.8	1.6
54	1.9	2.1	2.3	2.5	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.2	5.7	6.3	7.2	6.7	6.4	6.2	6.0	5.9	5.8	5.4	5.1	4.6	4.2	3.9	3.5	3.2	2.9	2.6	2.4	2.2	2.0	1.8	1.6
55	1.9	2.0	2.3	2.5	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.1	5.7	6.3	6.9	6.6	6.3	6.1	5.9	5.8	5.6	5.3	4.9	4.5	4.2	3.8	3.4	3.1	2.9	2.6	2.4	2.1	2.0	1.8	1.6
56	1.8	2.0	2.2	2.4	2.7	2.9	3.2	3.5	3.9	4.2	4.6	5.1	5.6	6.2	6.8	6.5	6.2	6.0	5.8	5.6	5.4	5.1	4.8	4.4	4.1	3.7	3.4	3.1	2.8	2.6	2.3	2.1	1.9	1.8	1.6
57	1.8	2.0	2.2	2.4	2.7	2.9	3.2	3.5	3.8	4.2	4.6	5.0	5.5	6.1	6.8	6.4	6.1	5.9	5.6	5.5	5.3	5.0	4.7	4.3	4.0	3.6	3.3	3.0	2.8	2.5	2.3	2.1	1.9	1.7	1.6
58	1.8	2.0	2.2	2.4	2.6	2.9	3.1	3.4	3.8	4.1	4.5	4.9	5.4	6.0	6.9	6.3	6.0	5.7	5.5	5.3	5.1	4.8	4.5	4.2	3.9	3.6	3.3	3.0	2.7	2.5	2.3	2.1	1.9	1.7	1.6
59	1.8	2.0	2.2	2.4	2.6	2.8	3.1	3.4	3.7	4.0	4.4	4.9	5.4	5.9	6.6	6.2	5.9	5.6	5.4	5.2	4.9	4.7	4.4	4.1	3.8	3.5	3.2	2.9	2.7	2.5	2.2	2.0	1.9	1.7	1.6
60	1.8	1.9	2.1	2.3	2.5	2.8	3.0	3.3	3.6	4.0	4.3	4.8	5.3	5.8	6.4	6.1	5.7	5.5	5.2	5.0	4.8	4.6	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0	1.8	1.7	1.5
61	1.7	1.9	2.1	2.3	2.5	2.7	3.0	3.3	3.6	3.9	4.3	4.7	5.1	5.7	6.3	5.9	5.6	5.3	5.1	4.9	4.7	4.4	4.2	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0	1.8	1.7	1.5
62	1.7	1.9	2.1	2.2	2.5	2.7	2.9	3.2	3.5	3.8	4.2	4.6	5.0	5.6	6.4	5.8	5.5	5.2	5.0	4.7	4.5	4.3	4.0	3.8	3.5	3.2	3.0	2.8	2.5	2.3	2.1	1.9	1.8	1.6	1.5
63	1.7	1.8	2.0	2.2	2.4	2.6	2.9	3.1	3.4	3.7	4.1	4.5	4.9	5.4	6.0	5.6	5.3	5.0	4.8	4.6	4.4	4.2	3.9	3.7	3.4	3.2	2.9	2.7	2.5	2.3	2.1	1.9	1.7	1.6	1.5
64	1.7	1.8	2.0	2.2	2.4	2.6	2.8	3.1	3.3	3.6	4.0	4.3	4.8	5.3	5.8	5.4	5.1	4.9	4.7	4.5	4.2	4.0	3.8	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4
65	1.6	1.8	1.9	2.1	2.3	2.5	2.8	3.0	3.3	3.6	3.9	4.2	4.6	5.1	5.6	5.3	5.0	4.7	4.5	4.3	4.1	3.9	3.7	3.5	3.2	3.0	2.8	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.4
66	1.6	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.2	3.5	3.8	4.1	4.5	4.9	5.6	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.6	3.3	3.1	2.9	2.7	2.5	2.3	2.1	1.9	1.8	1.6	1.5	1.4
67	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8	3.1	3.4	3.7	4.0	4.3	4.7	5.2	4.9	4.6	4.4	4.2	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.2	2.1	1.9	1.7	1.6	1.5	1.3
68	1.5	1.7	1.8	2.0	2.2	2.3	2.6	2.8	3.0	3.3	3.5	3.8	4.1	4.5	4.8	4.6	4.4	4.2	4.1	3.9	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3
69	1.5	1.6	1.8	1.9	2.1	2.3	2.5	2.7	2.9	3.2	3.4	3.7	4.0	4.3	4.5	4.4	4.2	4.1	3.9	3.8	3.6	3.4	3.2	3.0	2.8	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3
70	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8	3.1	3.3	3.6	3.8	4.1	4.2	4.2	4.1	3.9	3.8	3.6	3.5	3.3	3.1	2.9	2.8	2.6	2.4	2.2	2.1	1.9	1.8	1.6	1.5	1.4	1.3
71	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.0	4.0	3.9	3.8	3.6	3.5	3.3	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.0	1.8	1.7	1.6	1.4	1.3	1.2
72	1.4	1.5	1.6	1.8	1.9	2.1	2.3	2.4	2.6	2.8	3.1	3.3	3.5	3.7	3.8	3.8	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.7	2.6	2.4	2.2	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
73	1.3	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.5	2.7	2.9	3.1	3.3	3.5	3.6	3.6	3.5	3.4	3.3	3.2	3.1	2.9	2.8	2.6	2.5	2.3	2.2	2.0	1.9	1.7	1.6	1.5	1.4	1.2	1.1
74	1.3	1.4	1.5	1.7	1.8	2.0	2.1	2.3	2.5	2.6	2.8	3.0	3.2	3.3	3.4	3.4	3.4	3.3	3.2	3.1	2.9	2.8	2.7	2.5	2.4	2.2	2.1	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1

Table 10a. Modeled Heads Within Trim Frame Shown on Map 5

60 Day Recovery Run at 0.5% Background Bleed, 1.0% Recovery Bleed at R39 C47, 1.5% Total Well Field Bleed
Initialized With Heads from the Previous 60-Day Operational Run

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
27	4608.2	4608.5	4608.8	4609.0	4609.2	4609.4	4609.5	4609.6	4609.8	4610.1	4610.5	4611.2	4612.1	4613.2	4614.2	4615.3	4616.4	4617.5	4618.5	4619.5	4620.5	4621.5	4622.5	4623.4	4624.4	4625.3	4626.2	4627.0	4627.9	4628.7	4629.5	4630.2	4630.9	4631.6	4632.3
28	4608.2	4608.5	4608.7	4609.0	4609.1	4609.3	4609.3	4609.4	4609.5	4609.7	4610.1	4610.9	4611.8	4612.9	4614.0	4615.2	4616.3	4617.3	4618.4	4619.4	4620.4	4621.4	4622.4	4623.4	4624.3	4625.3	4626.2	4627.0	4627.9	4628.7	4629.5	4630.2	4631.0	4631.7	4632.4
29	4608.2	4608.5	4608.7	4608.9	4609.1	4609.1	4609.2	4609.2	4609.2	4609.3	4609.7	4610.5	4611.5	4612.6	4613.8	4615.0	4616.1	4617.2	4618.3	4619.3	4620.3	4621.4	4622.4	4623.4	4624.3	4625.3	4626.2	4627.0	4627.9	4628.7	4629.5	4630.2	4631.0	4631.7	4632.4
30	4608.2	4608.5	4608.7	4608.9	4609.0	4609.0	4609.0	4609.0	4608.9	4608.9	4609.3	4610.1	4611.2	4612.4	4613.6	4614.8	4616.0	4617.1	4618.2	4619.2	4620.3	4621.3	4622.3	4623.3	4624.3	4625.2	4626.1	4627.0	4627.9	4628.7	4629.5	4630.3	4631.0	4631.7	4632.4
31	4608.2	4608.5	4608.7	4608.8	4608.9	4608.9	4608.9	4608.7	4608.6	4608.5	4608.7	4609.6	4610.8	4612.1	4613.4	4614.6	4615.8	4617.0	4618.1	4619.1	4620.2	4621.2	4622.3	4623.3	4624.3	4625.2	4626.1	4627.0	4627.9	4628.7	4629.5	4630.3	4631.0	4631.7	4632.4
32	4608.2	4608.5	4608.7	4608.8	4608.9	4608.9	4608.7	4608.5	4608.2	4608.0	4608.1	4609.1	4610.4	4611.8	4613.2	4614.5	4615.7	4616.9	4618.0	4619.1	4620.1	4621.2	4622.2	4623.2	4624.2	4625.2	4626.1	4627.0	4627.9	4628.7	4629.5	4630.3	4631.1	4631.8	4632.5
33	4608.2	4608.5	4608.7	4608.8	4608.8	4608.8	4608.6	4608.3	4607.9	4607.4	4607.4	4608.6	4610.1	4611.6	4613.0	4614.3	4615.6	4616.8	4617.9	4619.0	4620.0	4621.1	4622.2	4623.2	4624.2	4625.2	4626.2	4627.1	4627.9	4628.8	4629.6	4630.3	4631.1	4631.8	4632.5
34	4608.3	4608.5	4608.7	4608.8	4608.8	4608.7	4608.5	4608.1	4607.5	4606.9	4606.6	4608.0	4609.7	4611.3	4612.8	4614.2	4615.5	4616.7	4617.8	4618.9	4619.9	4621.0	4622.1	4623.2	4624.2	4625.2	4626.2	4627.1	4628.0	4628.8	4629.6	4630.4	4631.1	4631.8	4632.5
35	4608.3	4608.6	4608.7	4608.8	4608.8	4608.7	4608.4	4607.9	4607.2	4606.2	4605.6	4607.3	4609.3	4611.1	4612.6	4614.1	4615.4	4616.6	4617.8	4618.8	4619.8	4621.0	4622.1	4623.2	4624.2	4625.2	4626.2	4627.1	4628.0	4628.8	4629.6	4630.4	4631.2	4631.9	4632.6
36	4608.4	4608.6	4608.8	4608.8	4608.8	4608.7	4608.3	4607.7	4606.8	4605.5	4604.2	4606.6	4609.0	4610.9	4612.4	4614.0	4615.3	4616.5	4617.7	4618.8	4619.6	4620.9	4622.1	4623.1	4624.2	4625.2	4626.2	4627.1	4628.0	4628.9	4629.7	4630.5	4631.2	4631.9	4632.6
37	4608.4	4608.6	4608.8	4608.9	4608.8	4608.6	4608.3	4607.6	4606.6	4604.9	4602.4	4605.9	4608.7	4610.8	4612.2	4613.9	4615.2	4616.5	4617.7	4618.8	4619.7	4620.9	4622.0	4623.1	4624.2	4625.2	4626.2	4627.2	4628.1	4628.9	4629.7	4630.5	4631.2	4632.0	4632.7
38	4608.5	4608.7	4608.9	4608.9	4608.9	4608.7	4608.3	4607.6	4606.4	4604.3	4599.9	4605.4	4608.5	4610.7	4612.3	4613.9	4615.2	4616.4	4617.6	4618.8	4619.8	4620.8	4622.0	4623.1	4624.2	4625.3	4626.3	4627.2	4628.1	4628.9	4629.8	4630.5	4631.3	4632.0	4632.7
39	4608.6	4608.8	4608.9	4609.0	4608.9	4608.7	4608.3	4607.6	4606.3	4603.9	4596.1	4605.0	4608.5	4610.7	4612.3	4613.9	4615.2	4616.3	4617.6	4618.8	4619.8	4620.8	4622.0	4623.1	4624.2	4625.3	4626.3	4627.2	4628.1	4629.0	4629.8	4630.6	4631.3	4632.1	4632.8
40	4608.6	4608.9	4609.0	4609.0	4609.0	4608.8	4608.4	4607.6	4606.3	4604.3	4600.0	4605.4	4608.6	4610.7	4612.4	4613.9	4615.2	4616.2	4617.6	4618.8	4619.9	4620.7	4622.0	4623.1	4624.3	4625.3	4626.3	4627.3	4628.2	4629.1	4629.9	4630.7	4631.4	4632.1	4632.8
41	4608.7	4608.9	4609.1	4609.1	4609.1	4608.9	4608.5	4607.8	4606.5	4605.0	4602.6	4606.1	4608.8	4610.9	4612.5	4613.9	4615.2	4616.3	4617.7	4618.9	4619.9	4620.9	4622.0	4623.1	4624.3	4625.4	4626.4	4627.4	4628.3	4629.1	4629.9	4630.7	4631.5	4632.2	4632.9
42	4608.8	4609.0	4609.2	4609.2	4609.2	4609.0	4608.6	4608.0	4606.9	4605.7	4604.5	4606.8	4609.2	4611.1	4612.6	4614.0	4615.3	4616.4	4617.7	4618.9	4620.0	4621.0	4622.1	4623.0	4624.3	4625.4	4626.5	4627.4	4628.3	4629.2	4630.0	4630.8	4631.5	4632.2	4632.9
43	4608.9	4609.1	4609.3	4609.3	4609.3	4609.2	4608.8	4608.3	4607.4	4606.5	4605.9	4607.6	4609.6	4611.3	4612.7	4614.1	4615.3	4616.4	4617.8	4619.0	4620.1	4621.1	4622.2	4623.2	4624.4	4625.5	4626.5	4627.5	4628.4	4629.2	4630.1	4630.8	4631.6	4632.3	4633.0
44	4609.0	4609.2	4609.4	4609.5	4609.5	4609.3	4609.0	4608.6	4607.9	4607.3	4607.0	4608.3	4610.0	4611.5	4612.9	4614.2	4615.5	4616.5	4617.9	4619.1	4620.2	4621.2	4622.3	4623.3	4624.5	4625.6	4626.6	4627.6	4628.5	4629.3	4630.1	4630.9	4631.7	4632.4	4633.1
45	4609.1	4609.4	4609.5	4609.6	4609.6	4609.5	4609.3	4608.9	4608.4	4608.0	4607.9	4609.0	4610.4	4611.8	4613.1	4614.2	4615.6	4616.7	4618.1	4619.2	4620.3	4621.4	4622.4	4623.5	4624.6	4625.7	4626.7	4627.6	4628.5	4629.4	4630.2	4631.0	4631.7	4632.5	4633.1
46	4609.2	4609.5	4609.7	4609.8	4609.8	4609.7	4609.5	4609.2	4608.9	4608.6	4608.7	4609.6	4610.8	4612.1	4613.3	4614.3	4615.8	4616.9	4618.2	4619.4	4620.4	4621.5	4622.5	4623.6	4624.7	4625.8	4626.8	4627.7	4628.6	4629.5	4630.3	4631.1	4631.8	4632.5	4633.2
47	4609.4	4609.6	4609.8	4609.9	4610.0	4609.9	4609.8	4609.6	4609.3	4609.2	4609.4	4610.2	4611.3	4612.4	4613.5	4614.6	4616.0	4617.2	4618.4	4619.5	4620.6	4621.6	4622.5	4623.7	4624.8	4625.9	4626.9	4627.8	4628.7	4629.6	4630.4	4631.2	4631.9	4632.6	4633.3
48	4609.5	4609.8	4609.9	4610.1	4610.2	4610.1	4610.1	4609.9	4609.8	4609.8	4610.0	4610.7	4611.7	4612.7	4613.7	4614.9	4616.2	4617.4	4618.6	4619.7	4620.7	4621.7	4622.5	4623.8	4625.0	4626.0	4627.0	4627.9	4628.8	4629.7	4630.5	4631.2	4632.0	4632.7	4633.4
49	4609.6	4609.9	4610.1	4610.3	4610.4	4610.4	4610.3	4610.3	4610.2	4610.3	4610.6	4611.2	4612.1	4613.0	4613.8	4615.1	4616.4	4617.6	4618.7	4619.8	4620.8	4621.9	4622.8	4624.0	4625.1	4626.1	4627.1	4628.0	4628.9	4629.8	4630.6	4631.3	4632.1	4632.8	4633.5
50	4609.8	4610.0	4610.3	4610.4	4610.6	4610.6	4610.6	4610.6	4610.6	4610.8	4611.1	4611.7	4612.5	4613.4	4614.2	4615.4	4616.7	4617.8	4618.9	4620.0	4621.0	4622.0	4623.0	4624.2	4625.3	4626.3	4627.2	4628.2	4629.0	4629.9	4630.7	4631.4	4632.2	4632.9	4633.5
51	4609.9	4610.2	4610.4	4610.6	4610.8	4610.9	4610.9	4611.0	4611.0	4611.2	4611.6	4612.1	4612.9	4613.7	4614.5	4615.7	4616.9	4618.1	4619.2	4620.2	4621.1	4622.2	4623.3	4624.3	4625.4	4626.4	4627.4	4628.3	4629.1	4630.0	4630.8	4631.5	4632.3	4633.0	4633.6
52	4610.1	4610.4	4610.6	4610.8	4611.0	4611.1	4611.2	4611.3	4611.4	4611.7	4612.0	4612.6	4613.3	4614.0	4614.8	4616.0	4617.2	4618.3	4619.4	4620.4	4621.2	4622.4	4623.5	4624.5	4625.6	4626.6	4627.5	4628.4	4629.3	4630.1	4630.9	4631.6	4632.4	4633.1	4633.7
53	4610.2	4610.5	4610.8	4611.0	4611.2	4611.4	4611.5	4611.6	4611.8	4612.1	4612.5	4613.0	4613.6	4614.4	4615.1	4616.3	4617.4	4618.5	4619.6	4620.6	4621.5	4622.6	4623.7	4624.7	4625.7	4626.7	4627.6	4628.5	4629.4	4630.2	4631.0	4631.7	4632.5	4633.2	4633.8
54	4610.4	4610.7	4611.0	4611.2	4611.4	4611.6	4611.8	4612.0	4612.2	4612.5	4612.9	4613.4	4614.0	4614.7	4615.3	4616.5	4617.7	4618.8	4619.8	4620.8	4621.8	4622.8	4623.9	4624.9	4625.9	4626.9	4627.8	4628.7	4629.5	4630.3	4631.1	4631.8	4632.6	4633.3	4633.9
55	4610.6	4610.9	4611.2	4611.4	4611.7	4611.9	4612.1	4612.3	4612.6	4612.9	4613.3	4613.8	4614.4	4615.0	4615.7	4616.8	4617.9	4619.0	4620.1	4621.1	4622.0	4623.1	4624.1	4625.1	4626.1	4627.0	4627.9	4628.8	4629.6	4630.4	4631.2	4632.0	4632.7	4633.4	4634.0
56	4610.7	4611.1	4611.4	4611.7	4611.9	4612.2	4612.4	4612.6	4612.9	4613.2	4613.7	4614.2	4614.7	4615.4	4616.0	4617.1	4618.2	4619.3	4620.3	4621.3	4622.3	4623.3	4624.3	4625.3	4626.3	4627.2	4628.1	4628.9	4629.8	4630.6	4631.3	4632.1	4632.8	4633.5	4634.1
57	4610.9	4611.2	4611.6	4611.9	4612.1	4612.4	4612.7	4612.9	4613.3	4613.6	4614.0	4614.5	4615.1	4615.7	4616.3	4617.4	4618.5	4619.6	4620.6	4621.6	4622.5	4623.5	4624.5	4625.5	4626.4	4627.4	4628.2	4629.1	4629.9	4630.7	4631.5	4632.2	4632.9	4633.6	4634.2
58	4611.1	4611.4	4611.8	4612.1	4612.4	4612.7	4613.0	4613.3	4613.6	4614.0	4614.4	4614.9	4615.5	4616.0	4616.5	4617.7	4618.8	4619.8	4620.8	4621.8	4622.8	4623.8	4624.7	4625.7	4626.6	4627.5	4628.4	4629.2	4630.1	4630.8	4631.6	4632.3	4633.0	4633.7	4634.3
59	4611.2	4611.6	4612.0	4612.3	4612.6	4612.9	4613.2	4613.6	4613.9	4614.3	4614.8	4615.3	4615.8	4616.4	4616.9	4618.0	4619.1	4620.1	4621.1	4622.1	4623.0	4624.0	4625.0	4625.9	4626.8	4627.7	4628.6	4629.4	4630.2	4631.0	4631.7	4632.4	4633.1	4633.8	4634.5
60	4611.4	4611.8	4612.2	4612.5	4612.9	4613.2	4613.5	4613.9	4614.2	4614.7	4615.1	4615.6	4616.1	4616.7	4617.3	4618.3	4619.4	4620.4	4621.4	4622.3	4623.3	4624.2	4625.2	4626.1	4627.0	4627.9	4628.7	4629.6	4630.4	4631.1	4631.9	4632.6	4633.3	4633.9	4634.6
61	4611.6	4612.0	4612.4	4612.8	4613.1	4613.5	4613.8	4614.2	4614.6	4615.0	4615.5	4616.0	4616.5	4617.0	4617.6	4618.6	4619.7	4620.7	4621.6	4622.6	4623.5	4624.5	4625.4	4626.3	4627.2	4628.1	4628.9	4629.7	4630.5	4631.3	4632.0	4632.7	4633.4	4634.0	4634.7
62	4611.8	4612.2	4612.6	4613.0	4613.3	4613.7	4614.1	4614.5	4614.9	4615.3	4615.8	4616.3	4616.8	4617.4	4617.8	4618.9	4620.0	4621.0	4621.9	4622.9	4623.8	4624.7	4625.6	4626.5	4627.4	4628.2	4629.1	4629.9	4630.7	4631.4	4632.1	4632.8	4633.5	4634.2	4634.8
63	4612.0	4612.4	4612.8	4613.2	4613.6	4614.0	4614.4	4614.8	4615.2	4615.7	4616.1	4616.6	4617.2	4617.7	4618.2	4619.3	4620.3	4621.2	4622.2	4623.1	4624.0	4625.0	4625.8	4626.7	4627.6	4628.4	4629.3	4630.1	4630.8	4631.6	4632.3	4633.0	4633.6	4634.3	4634.9
64	4612.2	4612.6	4613.0	4613.4	4613.8	4614.2	4614.6	4615.1	4615.5	4616.0	4616.5	4617.0	4617.5	4618.1	4618.6	4619.6	4620.6	4621.5	4622.5	4623.4	4624.3	4625.2	4626.1	4626.9	4627.8	4628.6	4629.4	4630.2	4631.0	4631.7	4632.4	4633.1	4633.8	4634.4	4635.0
65	4612.3	4612.8	4613.2	4613.7	4614.1	4614.5	4614.9	4615.4	4615.8	4616.3	4616.8	4617.3	4617.9	4618.4	4618.9	4619.9	4620.9	4621.8	4622.8	4623.7	4624.6	4625.4	4626.3	4627.2	4628.0	4628.8	4629.6	4630.4	4631.2	4631.9	4632.6	4633.3	4633.9	4634.6	4635.2
66	4612.5	4613.0	4613.4	4613.9	4614.3	4614.8	4615.2	4615.6	4616.1	4616.6	4617.1	4617.7	4618.2	4618.7	4619.2	4620.3	4621.2	4622.1	4623.0	4623.9	4624.8	4625.7	4626.5	4627.4	4628.2	4629.0	4629.8	4630.6	4631.3	4632.0	4632.7	4633.4	4634.1	4634.7	4635.3
67	4612.7	4613.2	4613.7	4614.1	4614.6	4615.0	4615.5	4615.9	4616.4	4616.9	4617.4	4618.0	4618.5	4619.1	4619.7	4620.6	4621.5	4622.4	4623.3	4624.2	4625.1	4625.9	4626.8	4627.6	4628.4	4629.2	4630.0	4630.8	4631.5	4632.2	4632.9	4633.6	4634.2	4634.8	4635.4
68	4612.9	4613.4	4613.9	4614.3	4614.8	4615.3	4615.7	4616.2	4616.7	4617.2	4617.8	4618.3	4618.9	4619.5	4620.1	4621.0	4621.8	4622.7	4623.6	4624.5	4625.3	4626.2	4627.0	4627.8	4628.6	4629.4	4630.2	4630.9	4631.7	4632.4	4633.1	4633.7	4634.4	4635.0	4635.6
69	4613.1	4613.6	4614.1	4614.6	4615.0	4615.5	4616.0	4616.5	4617.0	4617.5	4618.1	4618.6	4619.2	4619.8	4620.5	4621.3	4622.2	4623.0	4623.9	4624.7	4625.6	4626.4	4627.2	4628.1	4628.9	4629.6	4630.4	4631.1	4631.8	4632.5	4633.2	4633.9	4634.5	4635.1	4635.7
70	4613.3	4613.8	4614.3	4614.8	4615.3	4615.8	4616.3	4616.8	4617.3	4617.8	4618.4	4619.0	4619.6	4620.2	4620.9	4621.6	4622.5	4623.3	4624.2	4625.0	4625.8	4626.7	4627.5	4628.3	4629.1	4629.8	4630.6	4631.3	4632.0	4632.7	4633.4	4634.0	4634.7	4635.3	4635.8
71	4613.5	4614.0	4614.5	4615.0	4615.5	4616.0	4616.5	4617.1	4617.6	4618.1	4618.7	4619.3	4619.9	4620.5	4621.2	4622.0	4622.8	4623.6	4624.5	4625.3	4626.1	4626.9	4627.7	4628.5	4629.3	4630.0	4630.8	4631.5	4632.2	4632.9	4633.5	4634.2	4634.8	4635.4	4636.0
72	4613.7	4614.2	4614.7	4615.2	4615.8	4616.3	4616.8	4617.3	4617.9	4618.4	4619.0	4619.6	4620.2	4620.9	4621.6	4622.3	4623.1	4623.9	4624.7	4625.6	4626.4	4627.2	4628.0	4628.8	4629.5	4630.3	4631.0	4631.7	4632.4	4633.1	4633.7	4634.4	4635.0	4635.6	4636.1
73	4613.9	4614.4	4614.9	4615.5	4616.0	4616.5	4617.1	4617.6	4618.2	4618.7	4619.3	4619.9	4620.6	4621.2	4621.9	4622.6	4623.4	4624.2	4625.0	4625.8	4626.6	4627.4	4628.2	4629.0	4629.7	4630.5	4631.2	4631.9	4632.6	4633.2	4633.9	4634.5	4635.1	4635.7	4636.3
74	4614.1	4614.6	4615.2	4615.7	4616.2	4616.8	4617.3	4617.9	4618.5	4619.0	4619.6	4620.2	4620.9	4621.5	4622.2	4623.0	4623.7	4624.5	4625.3	4626.1	4626.9	4627.7	4628.5	4629.2	4630.0	4630.7	4631.4	4632.1	4632.8	4633.4	4634.1	4634.7	4635.3	4635.9	4636.4

Table 10b. Modeled Drawdown Within Trim Frame Shown on Map 5

60 Day Recovery Run at 0.5% Background Bleed, 1.0% Recovery Bleed at R39 C47, 1.5% Total Well Field Bleed

Initialized With Heads from the Previous 60-Day Operational Run

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
27	2.0	2.3	2.5	2.8	3.2	3.5	3.9	4.3	4.6	4.8	4.8	4.6	4.2	3.6	3.1	2.6	2.1	1.7	1.4	1.1	0.8	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
28	2.1	2.3	2.6	2.9	3.3	3.6	4.1	4.5	4.9	5.1	5.2	4.9	4.4	3.8	3.2	2.7	2.2	1.7	1.4	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
29	2.2	2.4	2.7	3.0	3.4	3.8	4.2	4.7	5.2	5.5	5.6	5.3	4.7	4.0	3.3	2.7	2.2	1.8	1.4	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
30	2.2	2.5	2.8	3.1	3.5	3.9	4.4	4.9	5.5	5.9	6.0	5.6	5.0	4.2	3.4	2.8	2.2	1.8	1.4	1.0	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
31	2.3	2.5	2.8	3.2	3.6	4.0	4.6	5.2	5.8	6.3	6.5	6.0	5.2	4.4	3.5	2.8	2.2	1.8	1.4	1.0	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
32	2.3	2.6	2.9	3.2	3.7	4.2	4.7	5.4	6.1	6.8	7.1	6.5	5.5	4.5	3.6	2.9	2.3	1.8	1.3	1.0	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
33	2.3	2.6	2.9	3.3	3.7	4.3	4.9	5.6	6.5	7.3	7.8	7.0	5.9	4.7	3.6	2.9	2.2	1.7	1.3	0.9	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
34	2.4	2.7	3.0	3.4	3.8	4.3	5.0	5.8	6.8	7.9	8.6	7.6	6.2	4.8	3.7	2.9	2.2	1.7	1.3	0.9	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
35	2.4	2.7	3.0	3.4	3.9	4.4	5.1	6.0	7.2	8.6	9.6	8.2	6.5	4.9	3.6	2.8	2.2	1.7	1.2	0.8	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
36	2.4	2.7	3.1	3.4	3.9	4.5	5.2	6.2	7.5	9.2	10.9	8.9	6.8	5.0	3.5	2.8	2.2	1.6	1.2	0.8	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
37	2.4	2.7	3.1	3.5	3.9	4.5	5.3	6.2	7.8	9.9	12.7	9.5	7.0	5.1	3.3	2.7	2.1	1.5	1.1	0.7	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
38	2.5	2.8	3.1	3.5	4.0	4.5	5.3	6.3	8.0	10.5	15.3	10.1	7.2	5.1	3.3	2.7	2.0	1.4	1.1	0.7	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
39	2.5	2.8	3.1	3.5	4.0	4.5	5.3	6.2	8.1	10.9	19.1	10.5	7.2	5.1	3.1	2.6	2.0	1.3	1.0	0.7	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
40	2.5	2.8	3.1	3.5	4.0	4.5	5.2	6.1	8.0	10.5	15.3	10.1	7.1	5.1	3.3	2.6	1.9	1.1	0.9	0.6	0.3	-0.1	0.0	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
41	2.5	2.8	3.1	3.5	4.0	4.5	5.2	5.7	7.9	9.9	12.7	9.5	6.9	5.0	3.4	2.6	1.9	1.2	0.9	0.6	0.3	0.0	-0.1	-0.2	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
42	2.5	2.8	3.1	3.5	3.9	4.5	5.1	5.8	7.5	9.2	10.9	8.8	6.6	4.9	3.4	2.5	1.8	1.1	0.9	0.6	0.3	0.0	-0.1	-0.3	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
43	2.5	2.8	3.1	3.5	3.9	4.4	5.0	5.8	7.2	8.5	9.5	8.1	6.3	4.7	3.4	2.4	1.7	1.1	0.9	0.6	0.3	0.0	-0.1	-0.2	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
44	2.5	2.7	3.1	3.4	3.8	4.3	4.9	5.7	6.8	7.9	8.5	7.4	5.9	4.5	3.3	2.3	1.7	0.9	0.8	0.6	0.3	0.1	-0.1	-0.2	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
45	2.5	2.7	3.0	3.4	3.8	4.3	4.8	5.5	6.4	7.3	7.6	6.8	5.6	4.3	3.1	2.2	1.6	1.0	0.8	0.6	0.3	0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
46	2.4	2.7	3.0	3.3	3.7	4.2	4.7	5.3	6.1	6.7	6.9	6.3	5.2	4.1	3.0	2.0	1.6	1.1	0.8	0.6	0.3	0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
47	2.4	2.7	3.0	3.3	3.7	4.1	4.6	5.1	5.7	6.2	6.3	5.8	4.9	3.8	2.8	2.0	1.5	1.1	0.8	0.5	0.3	0.1	-0.2	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
48	2.4	2.6	2.9	3.2	3.6	4.0	4.4	4.9	5.4	5.8	5.8	5.4	4.5	3.6	2.6	1.9	1.5	1.1	0.8	0.5	0.3	0.0	-0.3	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
49	2.4	2.6	2.9	3.2	3.5	3.9	4.3	4.7	5.1	5.4	5.4	5.0	4.2	3.3	2.3	1.9	1.5	1.1	0.8	0.5	0.2	0.1	-0.2	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
50	2.3	2.6	2.8	3.1	3.4	3.7	4.1	4.5	4.8	5.0	5.0	4.6	3.9	3.1	2.3	1.8	1.4	1.1	0.8	0.5	0.2	0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
51	2.3	2.5	2.8	3.0	3.3	3.6	4.0	4.3	4.6	4.7	4.6	4.3	3.7	2.9	2.2	1.7	1.4	1.1	0.8	0.5	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
52	2.3	2.5	2.7	3.0	3.2	3.5	3.8	4.1	4.3	4.4	4.3	4.0	3.4	2.7	2.0	1.6	1.3	1.0	0.8	0.5	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
53	2.2	2.4	2.6	2.9	3.1	3.4	3.7	3.9	4.1	4.1	4.0	3.7	3.2	2.5	1.8	1.5	1.3	1.0	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
54	2.2	2.4	2.6	2.8	3.0	3.3	3.5	3.7	3.8	3.9	3.7	3.4	3.0	2.4	1.6	1.4	1.2	1.0	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
55	2.1	2.3	2.5	2.7	2.9	3.2	3.4	3.5	3.6	3.6	3.5	3.2	2.8	2.2	1.5	1.4	1.1	0.9	0.7	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
56	2.1	2.3	2.4	2.6	2.8	3.0	3.2	3.4	3.4	3.4	3.3	3.0	2.6	2.0	1.4	1.3	1.1	0.9	0.7	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
57	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.2	3.3	3.2	3.1	2.8	2.4	1.9	1.3	1.2	1.0	0.9	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
58	2.0	2.2	2.3	2.5	2.7	2.8	2.9	3.0	3.1	3.0	2.9	2.6	2.2	1.8	1.1	1.1	1.0	0.8	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
59	1.9	2.1	2.2	2.4	2.6	2.7	2.8	2.9	2.9	2.9	2.7	2.5	2.1	1.6	1.1	1.0	0.9	0.8	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
60	1.9	2.0	2.2	2.3	2.5	2.6	2.7	2.8	2.8	2.7	2.6	2.3	2.0	1.5	1.0	1.0	0.9	0.8	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
61	1.8	2.0	2.1	2.2	2.4	2.5	2.6	2.6	2.6	2.6	2.4	2.2	1.8	1.4	0.9	0.9	0.9	0.8	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
62	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.5	2.5	2.4	2.3	2.0	1.7	1.3	0.8	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
63	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.4	2.4	2.3	2.1	1.9	1.6	1.3	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
64	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.2	2.2	2.0	1.8	1.5	1.2	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
65	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.1	2.1	1.9	1.7	1.5	1.1	0.7	0.8	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
66	1.6	1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.0	2.0	1.8	1.6	1.4	1.1	0.6	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
67	1.5	1.6	1.7	1.8	1.9	1.9	2.0	2.0	1.9	1.9	1.7	1.6	1.3	1.1	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
68	1.5	1.6	1.7	1.7	1.8	1.8	1.9	1.9	1.8	1.8	1.6	1.5	1.3	1.0	0.8	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
69	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.7	1.7	1.6	1.4	1.2	1.0	0.8	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
70	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.5	1.3	1.2	1.0	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
71	1.3	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.4	1.3	1.1	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
72	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3	1.2	1.1	0.9	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
73	1.2	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
74	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
LOG-LOG PLOT
PUMPING WELL 7MW-14

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
7MW14lld.dwg	HCK	97-001	1-20-98

MM&E
(A Wyoming Limited Liability Company)

Sheridan Office
635 Park Street
Sheridan, WY 82801
(307) 674-6850

Golden Office
714 6th Street
Golden, CO 80403
(307) 674-6850

FIGURE 1

TIME (min)

DRAWDOWN (ft)

NONLEAKY ARTESIAN TYPE CURVE

r/B=0.001

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=104.61'
Q=40.2 gpm
r=0'
PUMP OFF: 1100, 21 Oct.' 97

MATCH POINT
W(u)=1.0
1/u=10,000
s=7.5'
t=4.61 minutes
=0.003 days

AQUIFER PARAMETERS

$T=114.6QW(u,r/B)/s$
$=(114.6)(40.2)(1)/7.5$
$=614$ gpd/ft

$K=T/m$
$=614/143$
$=4.3$ gpd/ft^2

FIGURES

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
LOG-LOG PLOT
OBSERVATION WELL 7AU114-2

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
AU114ld.dwg	HCK	97-001	1-20-98

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FIGURE 2

TIME (min)

DRAWDOWN (ft)

NONLEAKY ARTESIAN TYPE CURVE

PARTIAL PENETRATION CORRECTION
rw=0.21' (5" casing), let Pv/Ph=0.1
alpha=open interval/m=12'/40'=.30
rw/m(Pv/Ph)^.5=.21/40*(.1)^.5=.0017
Cpp=0.37 (from Walton 1969)

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=10.51'
Q=40.2 gpm
r=610'
PUMP OFF: 1100, 21 Oct.' 97

MATCH POINT
W(u)=1.0
1/u=1
s=1.7'
t=316.2 minutes
=0.220 days

AQUIFER PARAMETERS

$T=114.6QW(u,r/B)/s$
$=(114.6)(40.2)(1)/1.7$
$=2710$ gpd/ft

$S=uTt/1.87r^2$
$=(1.0)(2710)(0.220)/(1.87)(610)^2$
$=8.6*10^{-4}$

$K=T/m$
$=2710/40$
$=68$ gpd/ft^2

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
LOG-LOG PLOT
OBSERVATION WELL 7BD102-1

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
bd102ld.dwg	HCK	97-001	1-20-98

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FIGURE 3

TIME (min)

DRAWDOWN (ft)

PARTIAL PENETRATION CORRECTION
rw=0.21' (5" casing), let Pv/Ph=0.1
alpha=open interval/m=34'/170'=.20
rw/m(Pv/Ph)^.5=.21/170*(.1)^.5=.0004
Cpp=0.25 (from Walton 1969)

NONLEAKY ARTESIAN TYPE CURVE

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=15.87'
Q=40.2 gpm
r=445'
PUMP OFF: 1100, 21 Oct.' 97

MATCH POINT
W(u)=1.0
1/u=1
s=1.0'
t=50.3 minutes
=0.035 days

AQUIFER PARAMETERS

$T=114.6QW(u,r/B)/s$
$=(114.6)(40.2)(1)/10$
$=4610$ gpd/ft

$S=uTt/1.87r^2$
$=(1.0)(4610)(0.035)/(1.87)(445)^2$
$=4.4*10^{-4}$

$K=T/m$
$=4610/170$
$=27.1$ gpd/ft^2

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
LOG-LOG PLOT
OBSERVATION WELL NPHW-8

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
nphw8ld.dwg	HCK	97-001	1-20-98

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FIGURE 4

PARTIAL PENETRATION CORRECTION
rw=0.21' (5" casing), let Pv/Ph=0.1
alpha=open interval/m=19'/55'=.35
rw/m(Pv/Ph)^.5=.21/55*(.1)^.5=.0012
Cpp=0.41 (from Walton 1969)

NONLEAKY ARTESIAN TYPE CURVE

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=13.08'
Q=40.2 gpm
r=475'
PUMP OFF: 1100, 21 Oct.' 97

MATCH POINT
W(u)=1.0
1/u=1
s=1.9'
t=177.5 minutes
=0.120 days

AQUIFER PARAMETERS

$T=114.6QW(u,r/B)/s$
$=(114.6)(40.2)(1)/1.9$
$=2430$ gpd/ft

$S=uTt/1.87r^2$
$=(1.0)(2430)(0.120)/(1.87)(475)^2$
$=8.2*10^{-4}$

$K=T/m$
$=2430/55$
$=54$ gpd/ft^2

DRAWDOWN (ft)

TIME (min)

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
LOG-LOG PLOT
OBSERVATION WELL 7TW-6

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
tw8ld.dwg	HCK	97-001	1-20-98

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FIGURE 5

TIME (min)

DRAWDOWN (ft)

NONLEAKY ARTESIAN TYPE CURVE

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=12.69'
Q=40.2 gpm
r=495'
PUMP OFF: 1100, 21 Oct.' 97

MATCH POINT
W(u)=1.0
1/u=1
s=3.5'
t=79.5 minutes
=0.055 days

AQUIFER PARAMETERS

$T=114.6QW(u,r/B)/s$
$=(114.6)(40.2)(1)/3.5$
$=1320$ gpd/ft

$S=uTt/1.87r^2$
$=(1.0)(1320)(0.055)/(1.87)(495)^2$
$=1.2*10^{-4}$

$K=T/m$
$=1320/150$
$=8.8$ gpd/ft^2

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
LOG-LOG PLOT
OBSERVATION WELL 7MW-12

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
mw12ld.dwg	HCK	97-001	1-20-98

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FIGURE 6

TIME (min)

DRAWDOWN (ft)

NONLEAKY ARTESIAN TYPE CURVE

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=20.53'
Q=40.2 gpm
r=290'
PUMP OFF: 1100, 21 Oct.' 97

MATCH POINT
W(u)=1.0
1/u=1
s=3.8'
t=13.2 minutes
=0.009 days

AQUIFER PARAMETERS

$T=114.6QW(u,r/B)/s$
$=(114.6)(40.2)(1)/3.8$
$=1210$ gpd/ft

$S=uTt/1.87r^2$
$=(1.0)(1210)(0.009)/(1.87)(290)^2$
$=6.9*10^{-5}$

$K=T/m$
$=1210/153$
$=7.9$ gpd/ft^2

TIME (min)

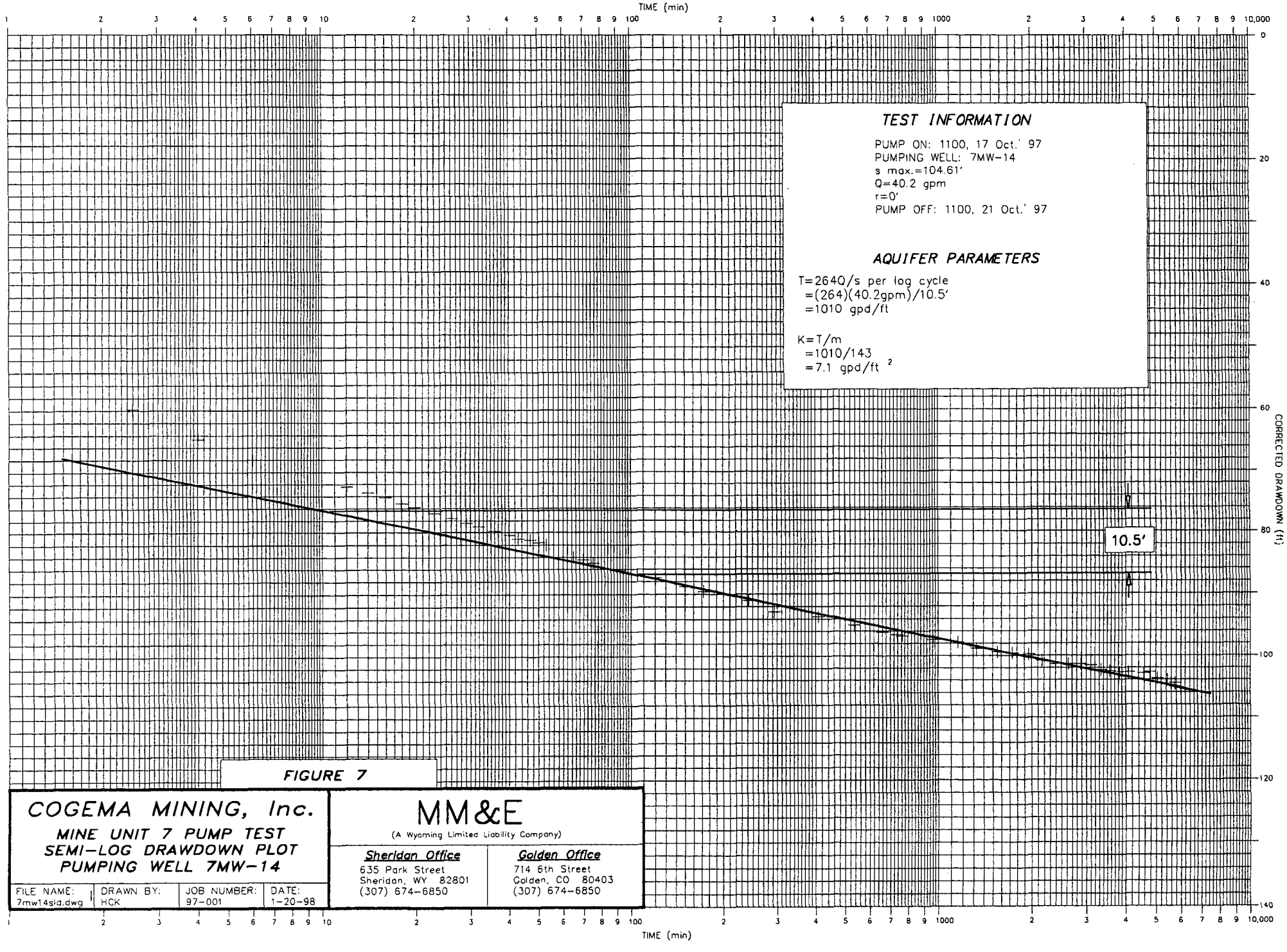

FIGURE 7

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
PUMPING WELL 7MW-14

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
7mw14sid.dwg	HCK	97-001	1-20-98

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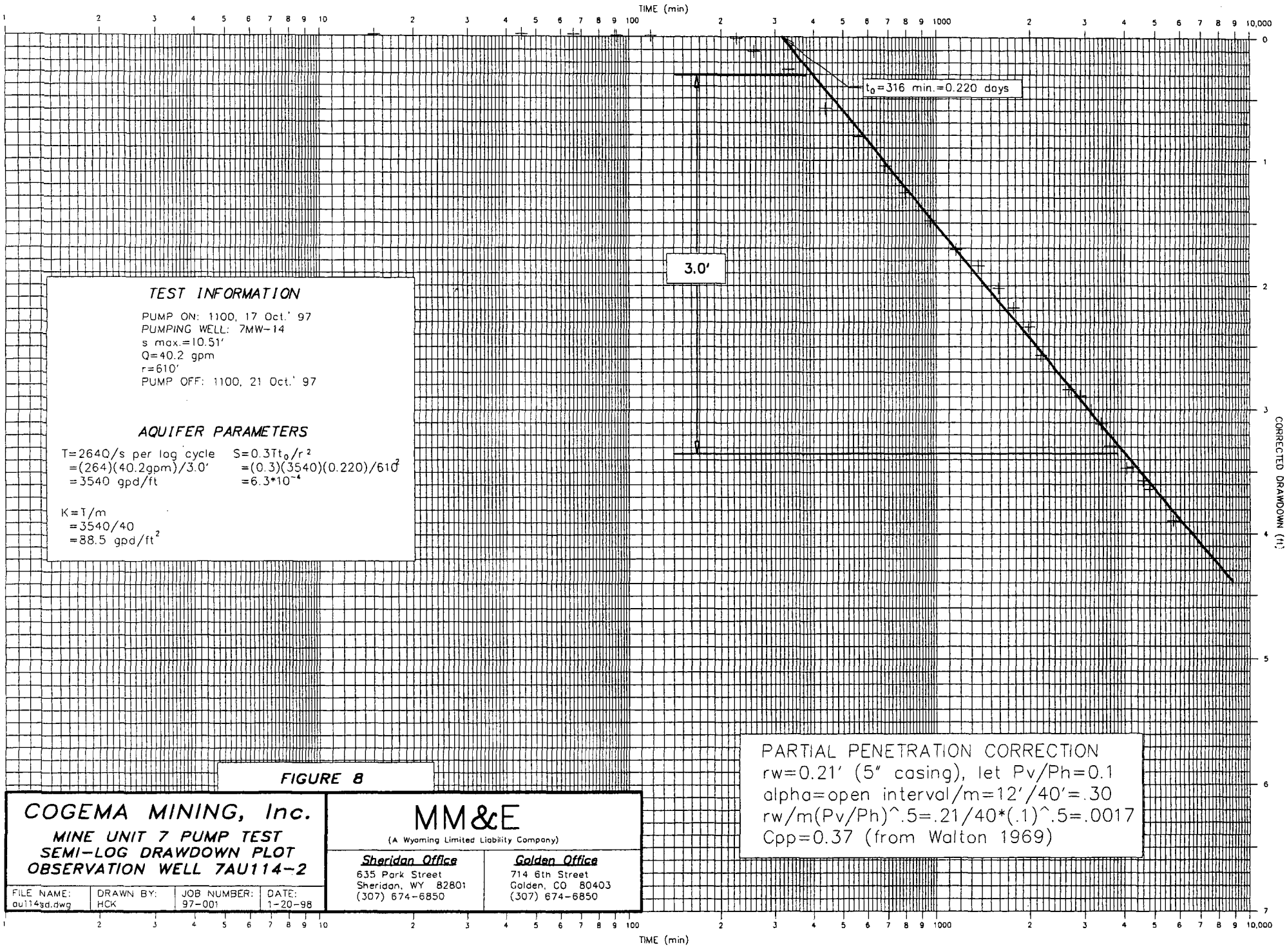

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=10.51'
Q=40.2 gpm
r=610'
PUMP OFF: 1100, 21 Oct.' 97

AQUIFER PARAMETERS

$T=2640/s$ per log cycle
$=(264)(40.2gpm)/3.0'$
$=3540$ gpd/ft

$S=0.3Tt_0/r^2$
$=(0.3)(3540)(0.220)/610^2$
$=6.3*10^{-4}$

$K=T/m$
$=3540/40$
$=88.5$ gpd/ft^2

PARTIAL PENETRATION CORRECTION
rw=0.21' (5" casing), let Pv/Ph=0.1
alpha=open interval/m=12'/40'=.30
rw/m(Pv/Ph)^.5=.21/40*(.1)^.5=.0017
Cpp=0.37 (from Walton 1969)

FIGURE 8

COGEMA MINING, Inc.
MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
OBSERVATION WELL 7AU114-2

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
au114sd.dwg	HCK	97-001	1-20-98

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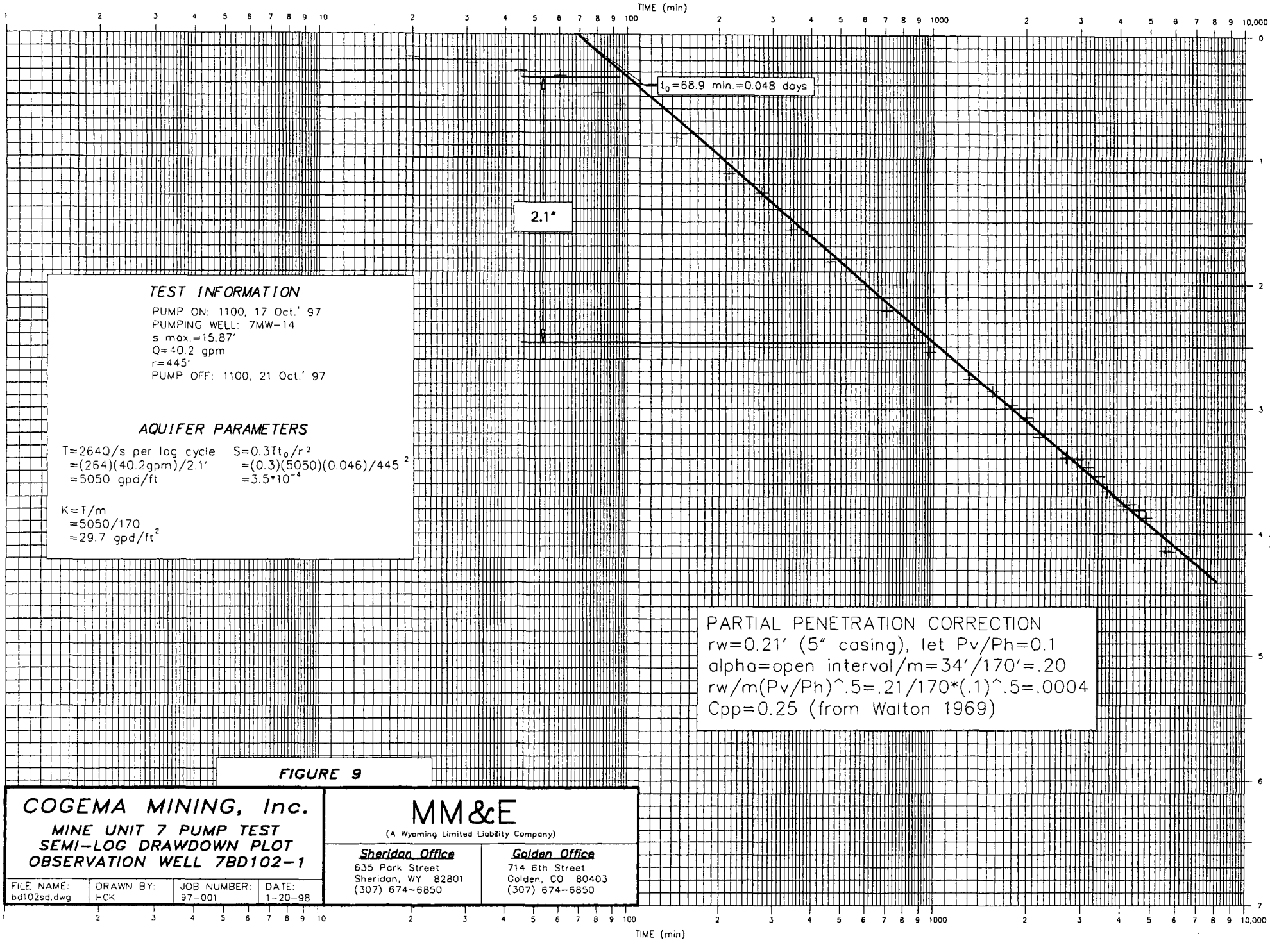

FIGURE 9

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
OBSERVATION WELL 7BD102-1

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
bd102sd.dwg	HCK	97-001	1-20-98

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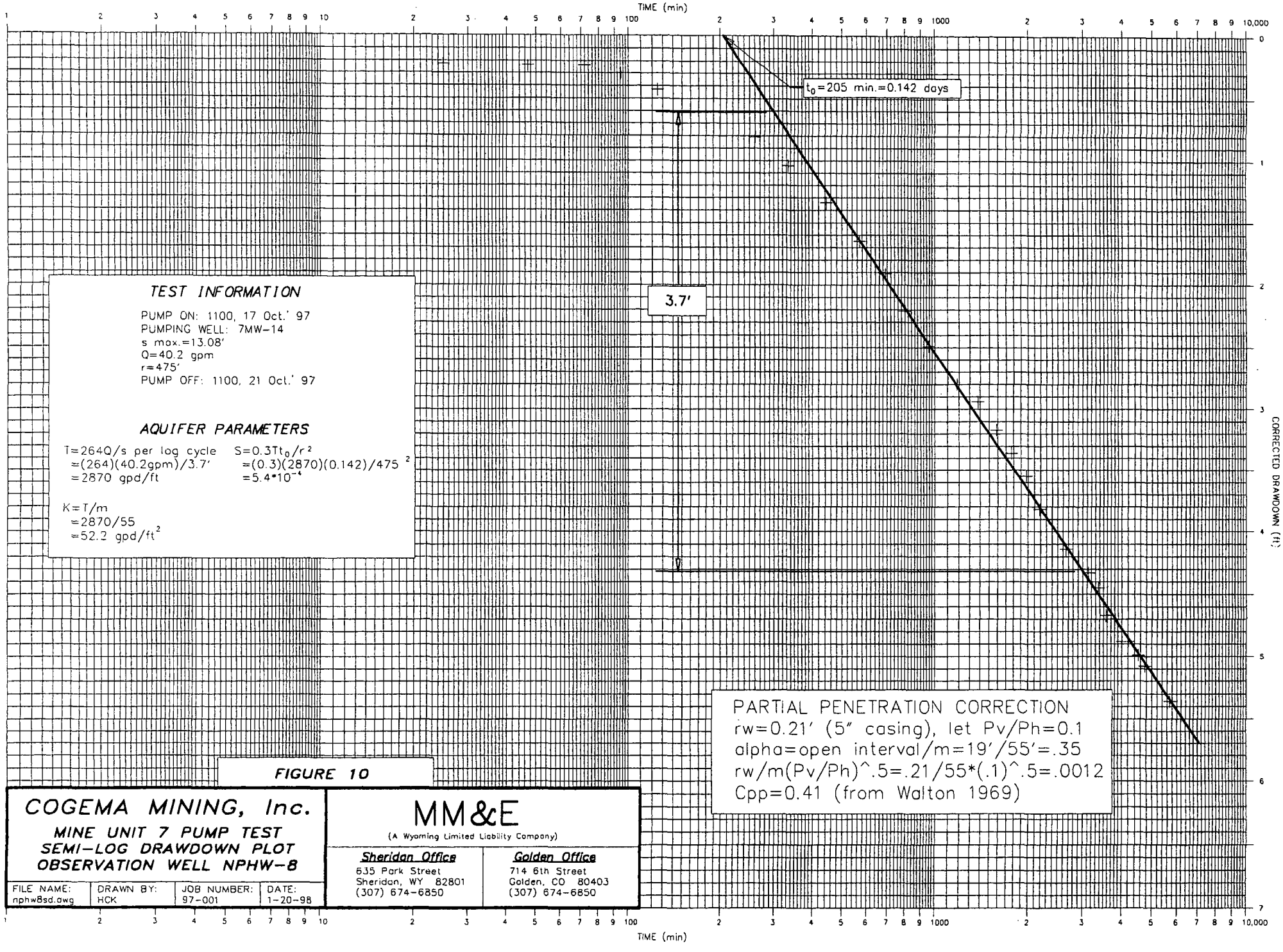

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=13.08'
Q=40.2 gpm
r=475'
PUMP OFF: 1100, 21 Oct.' 97

AQUIFER PARAMETERS

$T=264Q/s$ per log cycle
$=(264)(40.2gpm)/3.7'$
$=2870$ gpd/ft

$S=0.3Tt_0/r^2$
$=(0.3)(2870)(0.142)/475^2$
$=5.4*10^{-4}$

$K=T/m$
$=2870/55$
$=52.2$ gpd/ft^2

PARTIAL PENETRATION CORRECTION
rw=0.21' (5" casing), let Pv/Ph=0.1
alpha=open interval/m=19'/55'=.35
rw/m(Pv/Ph)^.5=.21/55*(.1)^.5=.0012
Cpp=0.41 (from Walton 1969)

FIGURE 10

COGEMA MINING, Inc.
MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
OBSERVATION WELL NPHW-8

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
nphw8sd.dwg	HCK	97-001	1-20-98

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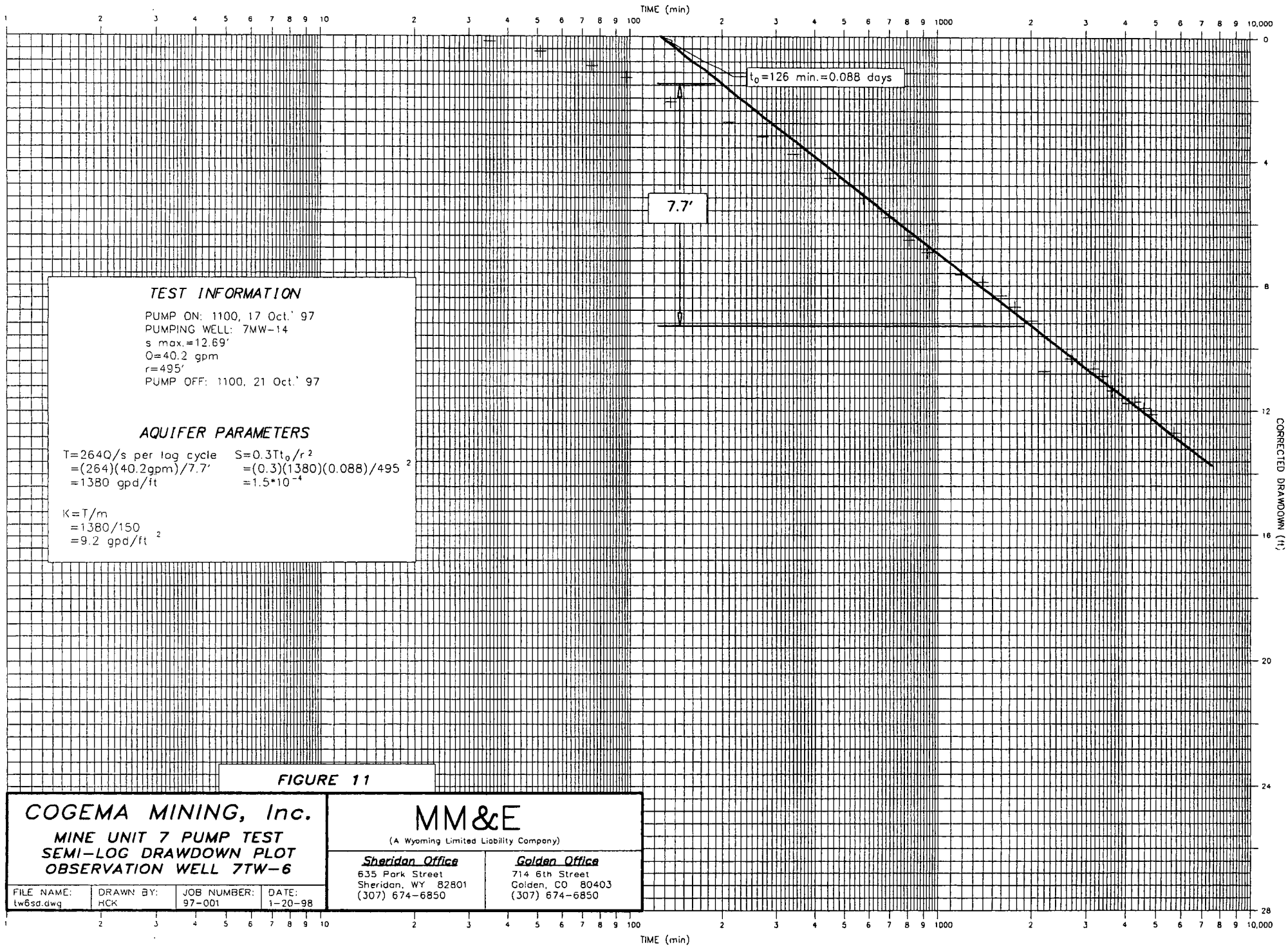

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=12.69'
Q=40.2 gpm
r=495'
PUMP OFF: 1100, 21 Oct.' 97

AQUIFER PARAMETERS

$T=264Q/s$ per log cycle
$=(264)(40.2gpm)/7.7'$
$=1380$ gpd/ft

$S=0.3Tt_0/r^2$
$=(0.3)(1380)(0.088)/495^2$
$=1.5*10^{-4}$

$K=T/m$
$=1380/150$
$=9.2$ gpd/ft^2

FIGURE 11

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
OBSERVATION WELL 7TW-6

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
tw6sd.dwg	HCK	97-001	1-20-98

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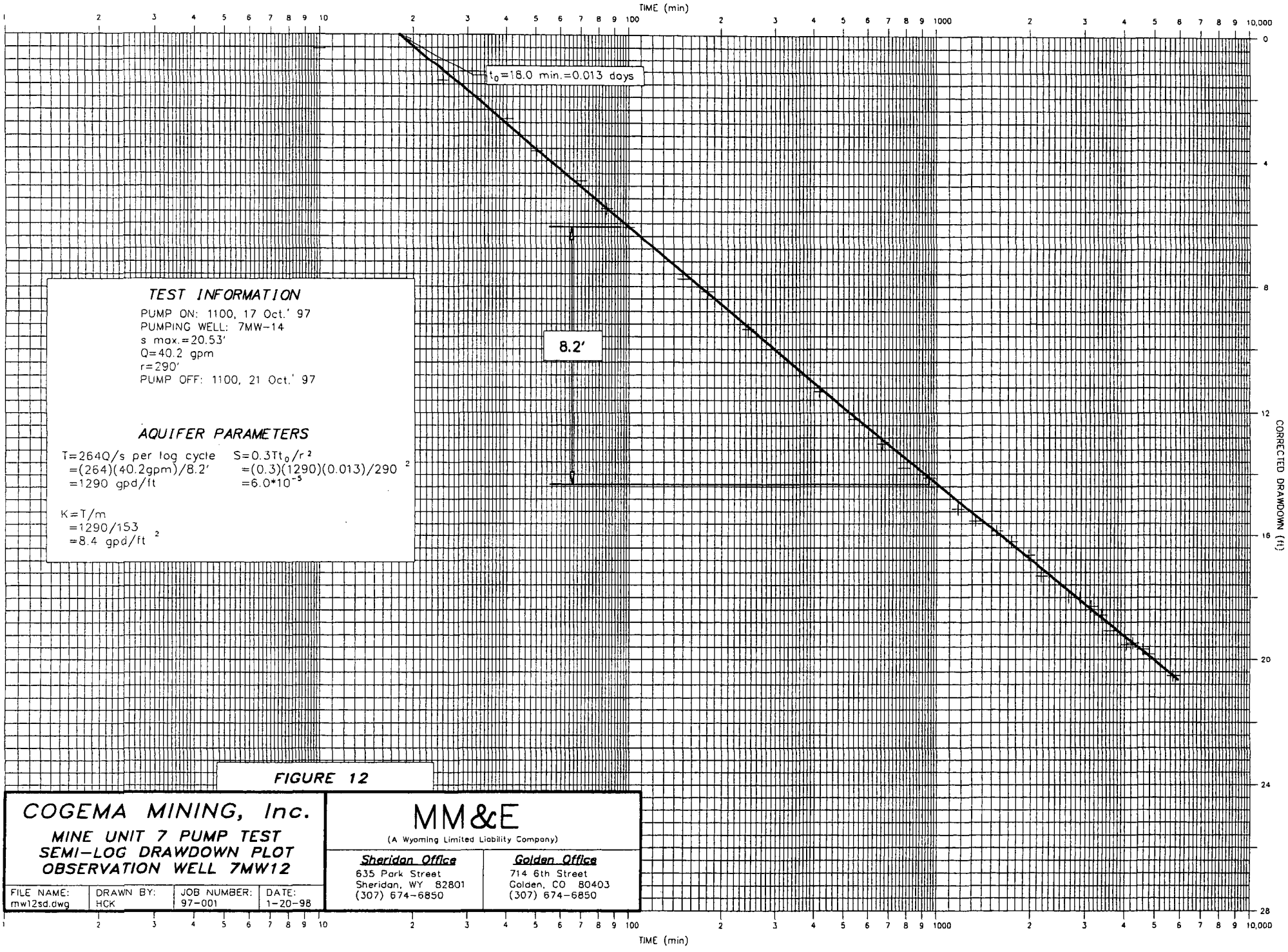

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=20.53'
Q=40.2 gpm
r=290'
PUMP OFF: 1100, 21 Oct.' 97

AQUIFER PARAMETERS

$T=264Q/s$ per log cycle
$=(264)(40.2gpm)/8.2'$
$=1290$ gpd/ft

$S=0.3Tt_0/r^2$
$=(0.3)(1290)(0.013)/290^2$
$=6.0*10^{-5}$

$K=T/m$
$=1290/153$
$=8.4$ gpd/ft^2

FIGURE 12

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
OBSERVATION WELL 7MW12

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
mw12sd.dwg	HCK	97-001	1-20-98

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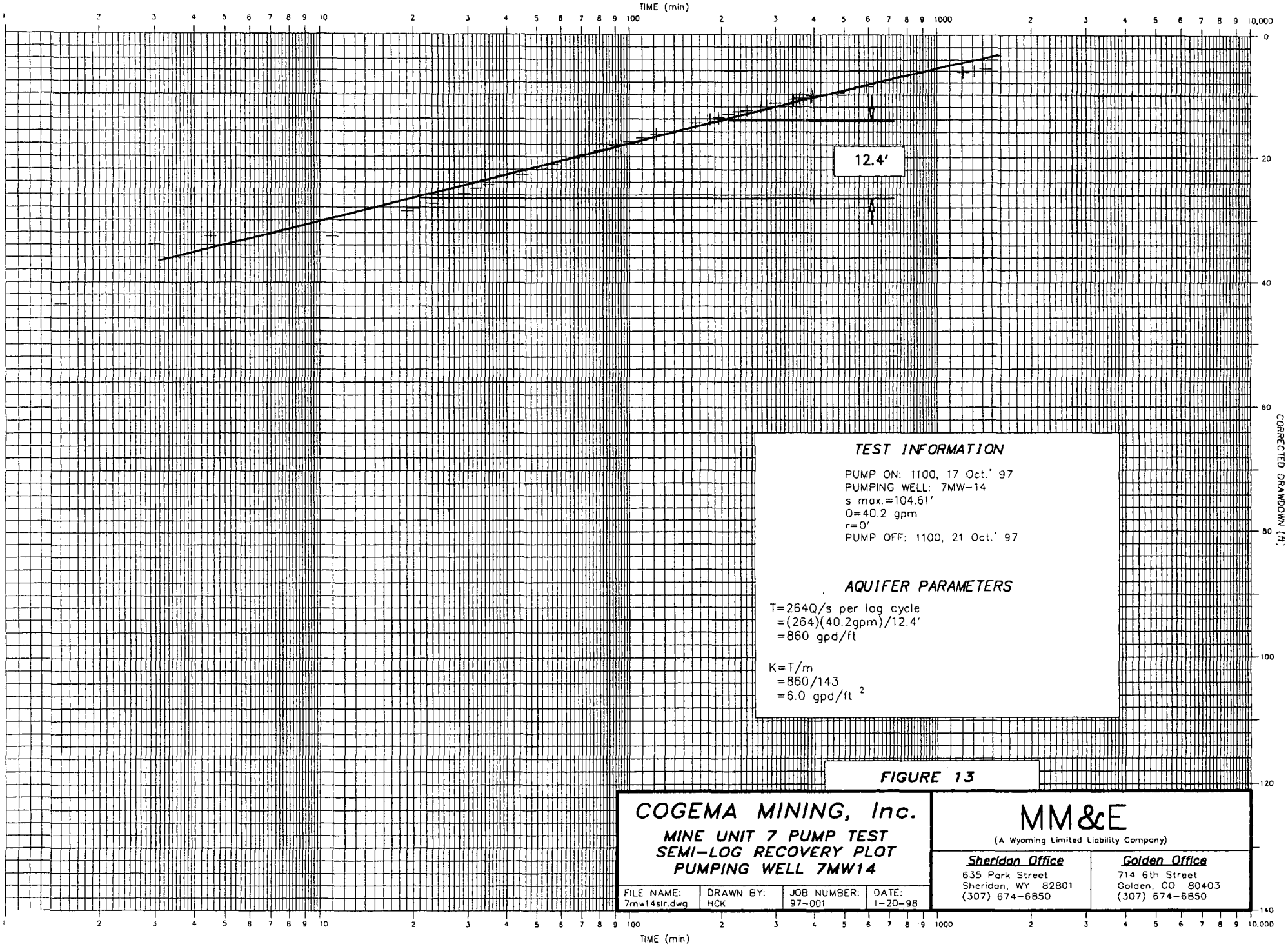

TEST INFORMATION

PUMP ON: 1100, 17 Oct.' 97
PUMPING WELL: 7MW-14
s max.=104.61'
Q=40.2 gpm
r=0'
PUMP OFF: 1100, 21 Oct.' 97

AQUIFER PARAMETERS

T=264Q/s per log cycle
=(264)(40.2gpm)/12.4'
=860 gpd/ft

K=T/m
=860/143
=6.0 gpd/ft^2

FIGURE 13

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG RECOVERY PLOT
PUMPING WELL 7MW14

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
7mw14slr.dwg	HCK	97-001	1-20-98

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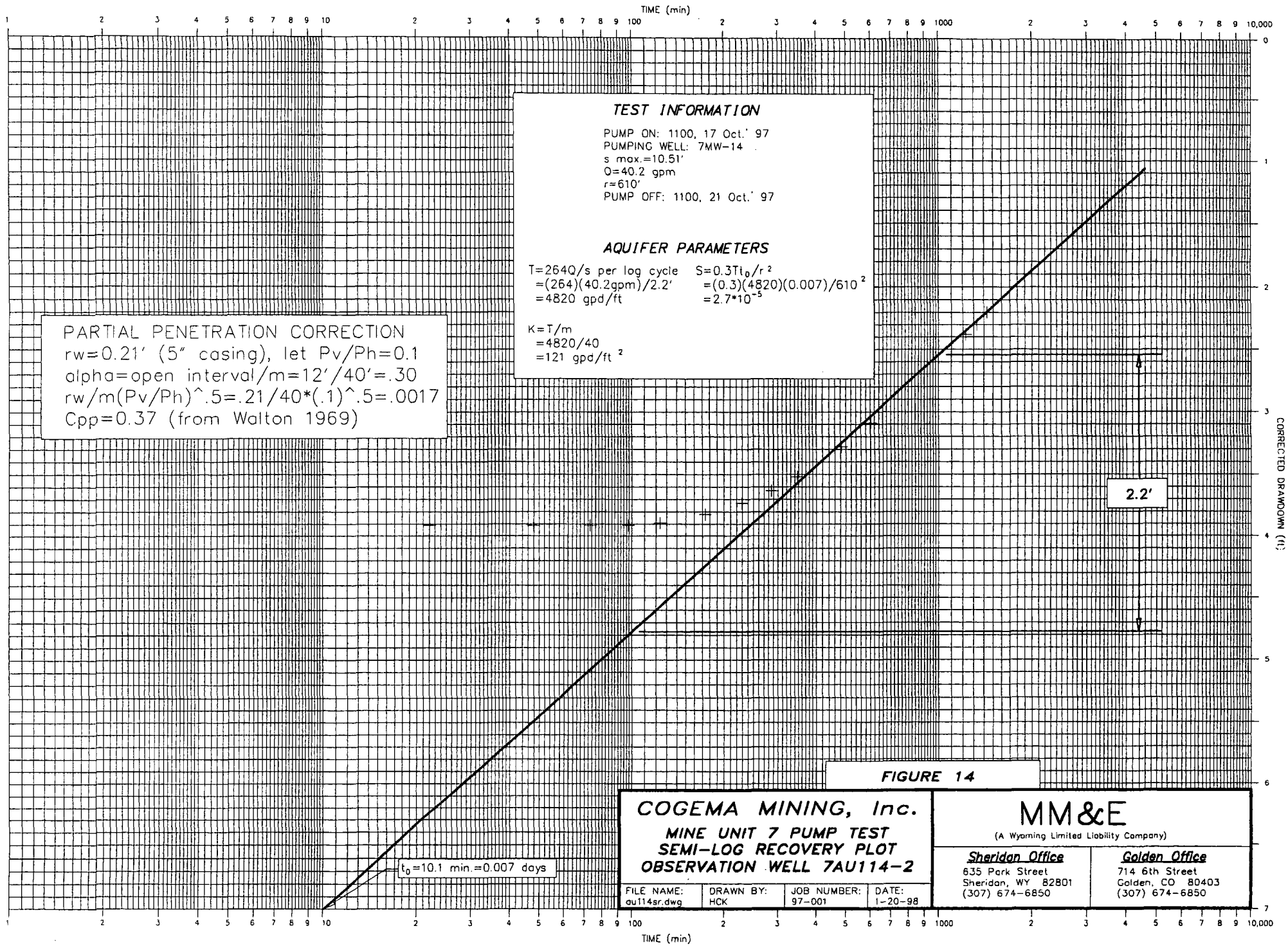

FIGURE 14

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG RECOVERY PLOT
OBSERVATION WELL 7AU114-2

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
au114sr.dwg	HCK	97-001	1-20-98

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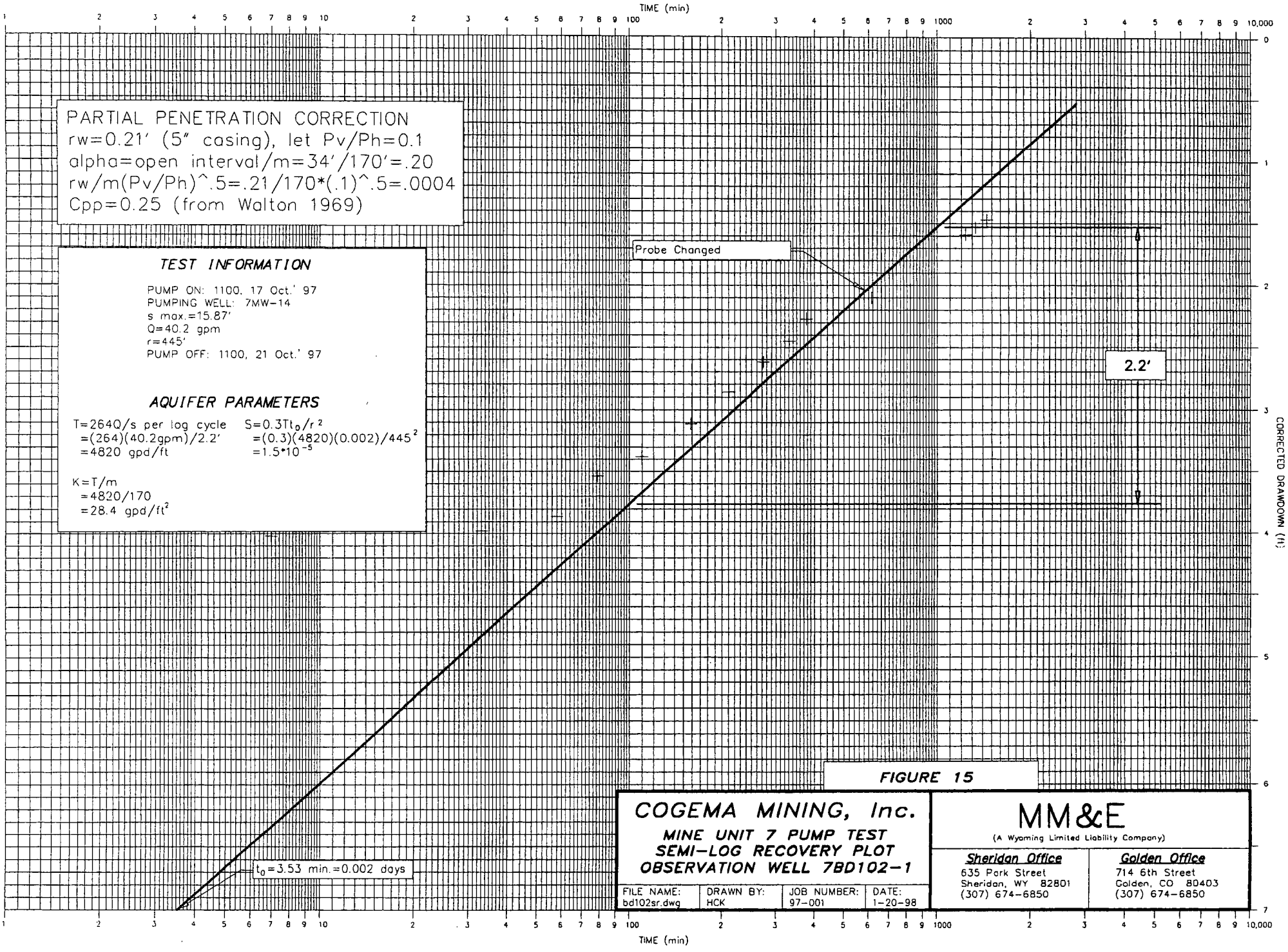

FIGURE 15

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG RECOVERY PLOT
OBSERVATION WELL 7BD102-1

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
bd102sr.dwg	HCK	97-001	1-20-98

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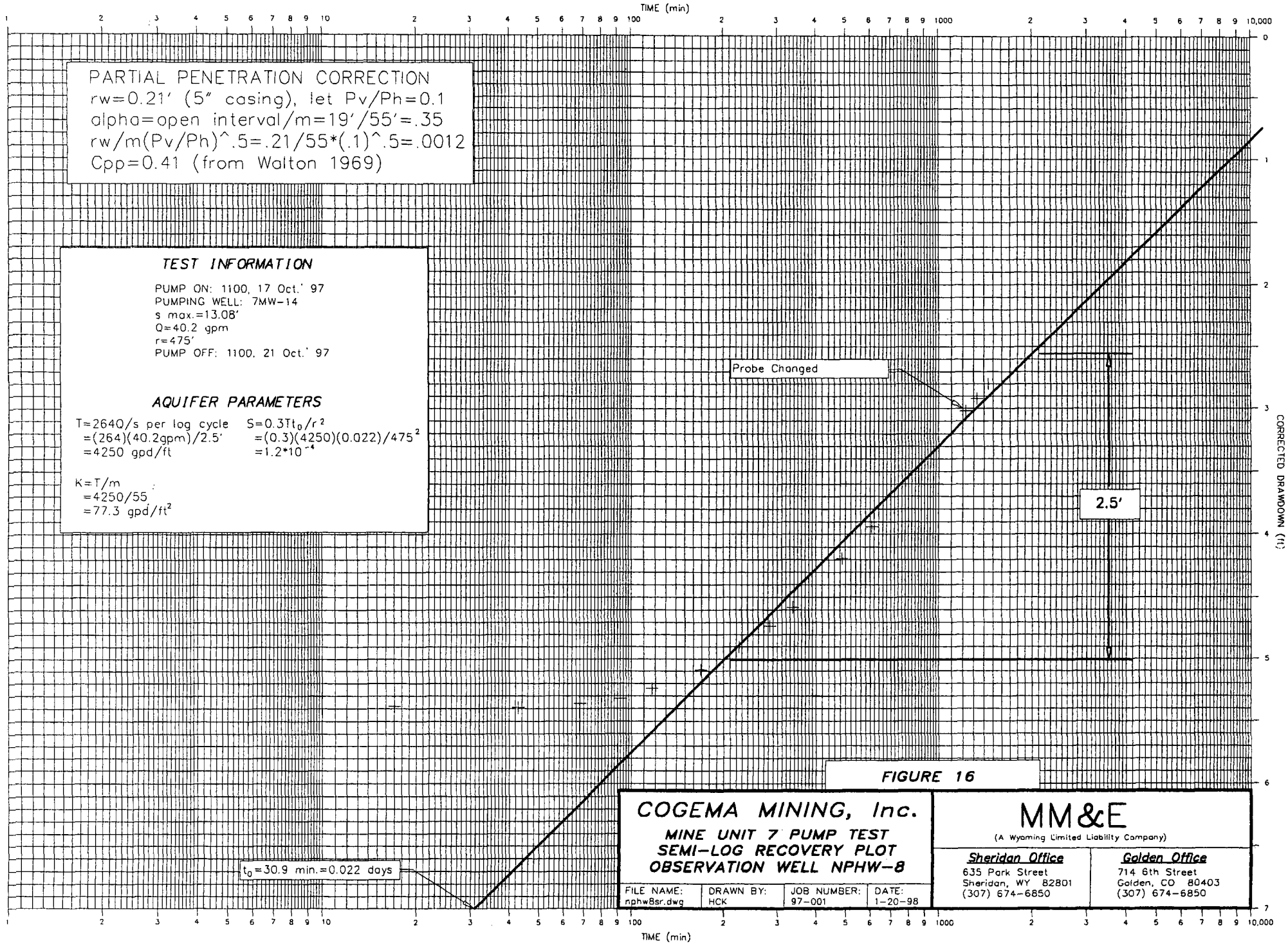

FIGURE 16

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG RECOVERY PLOT
OBSERVATION WELL NPHW-8

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
nphw8sr.dwg	HCK	97-001	1-20-98

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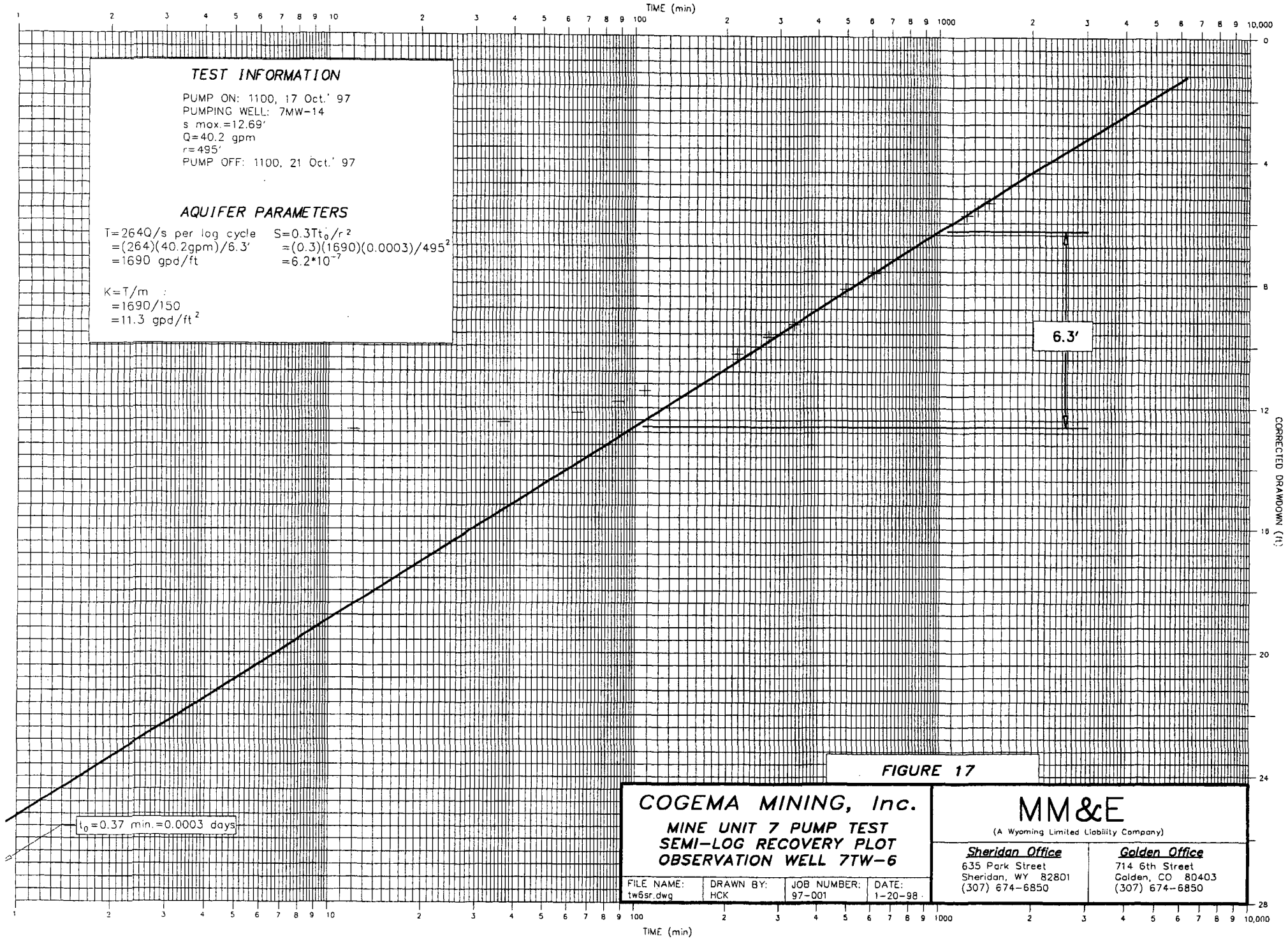

FIGURE 17

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG RECOVERY PLOT
OBSERVATION WELL 7TW-6

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
tw6sr.dwg	HCK	97-001	1-20-98

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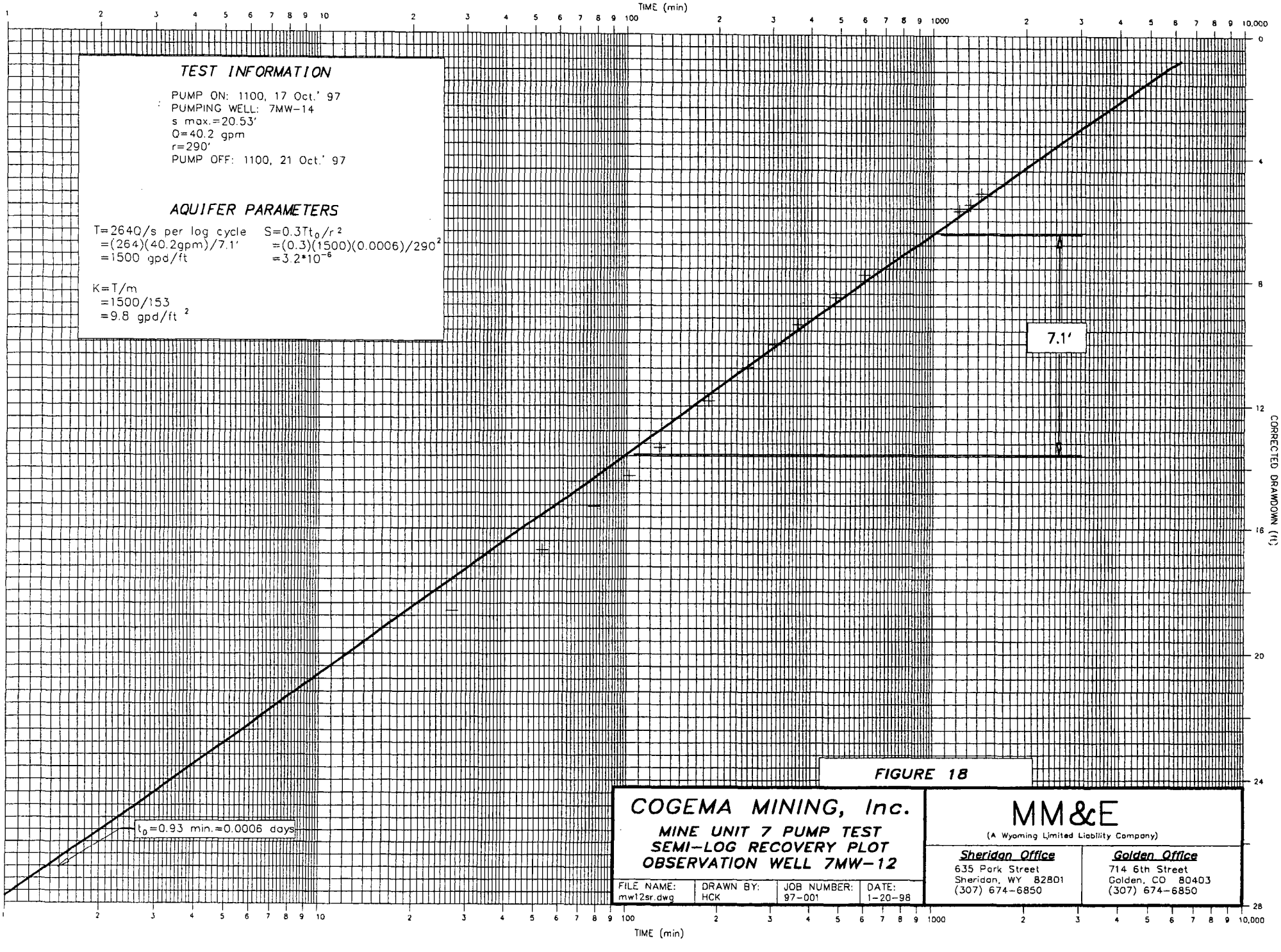

FIGURE 18

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG RECOVERY PLOT
OBSERVATION WELL 7MW-12

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
mw12sr.dwg	HCK	97-001	1-20-98

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COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
DRAWDOWN VERSUS DISTANCE PLOT AT TIME = 48 HOURS

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
U7S-D.DWG	HCK	97-001	1-20-98

Aqua Terra Consultants INC.

Taylor Place
1030 N. Main #201A
Sheridan, Wy.
(307) 672-7133

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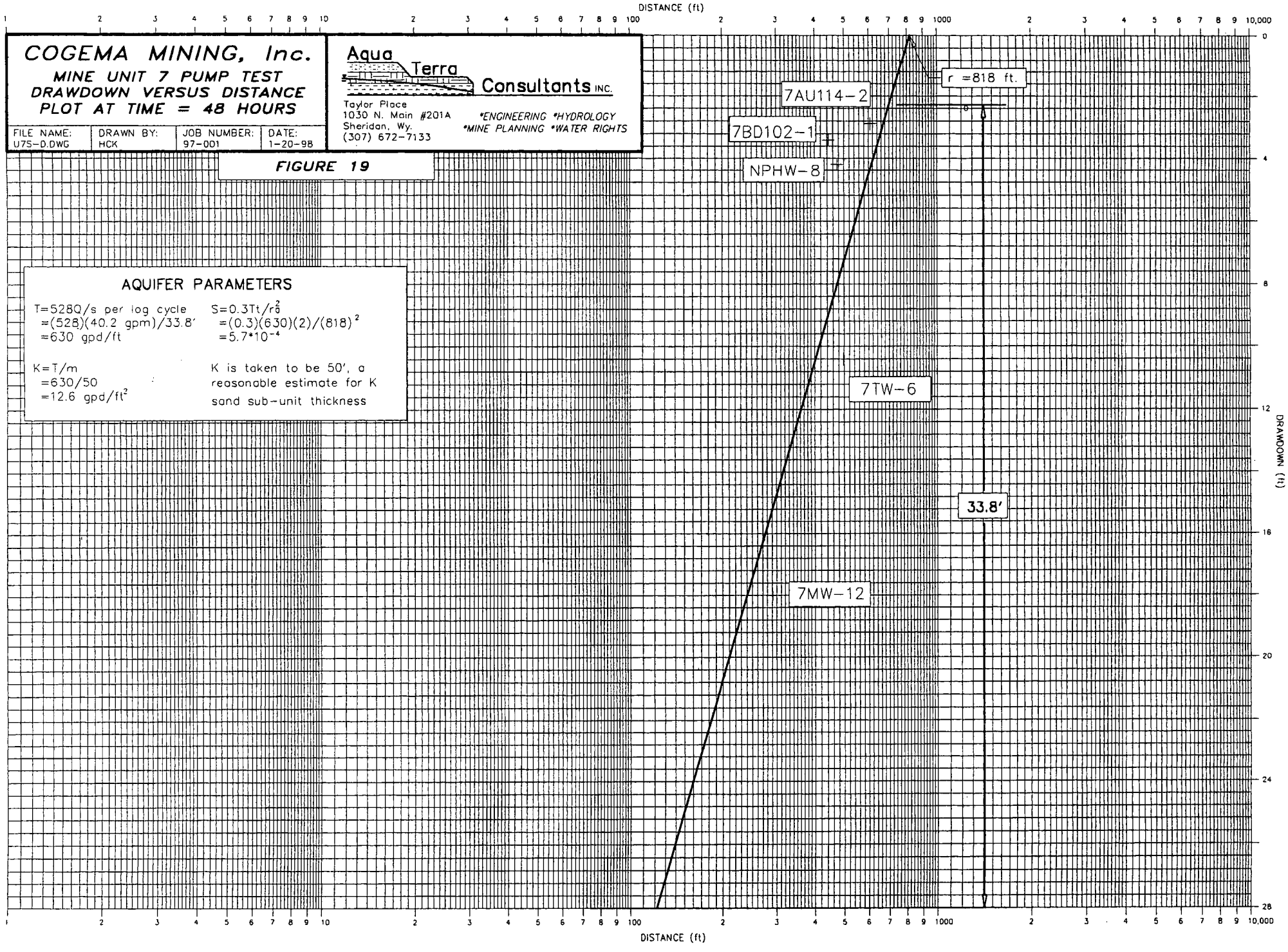
*MINE PLANNING *WATER RIGHTS

FIGURE 19



AQUIFER PARAMETERS

$T = 528Q/s$ per log cycle
$= (528)(40.2\ gpm)/33.8'$
$= 630\ gpd/ft$

$S = 0.3Tt/r^2$
$= (0.3)(630)(2)/(818)^2$
$= 5.7*10^{-4}$

$K = T/m$
$= 630/50$
$= 12.6\ gpd/ft^2$

K is taken to be 50', a reasonable estimate for K sand sub-unit thickness

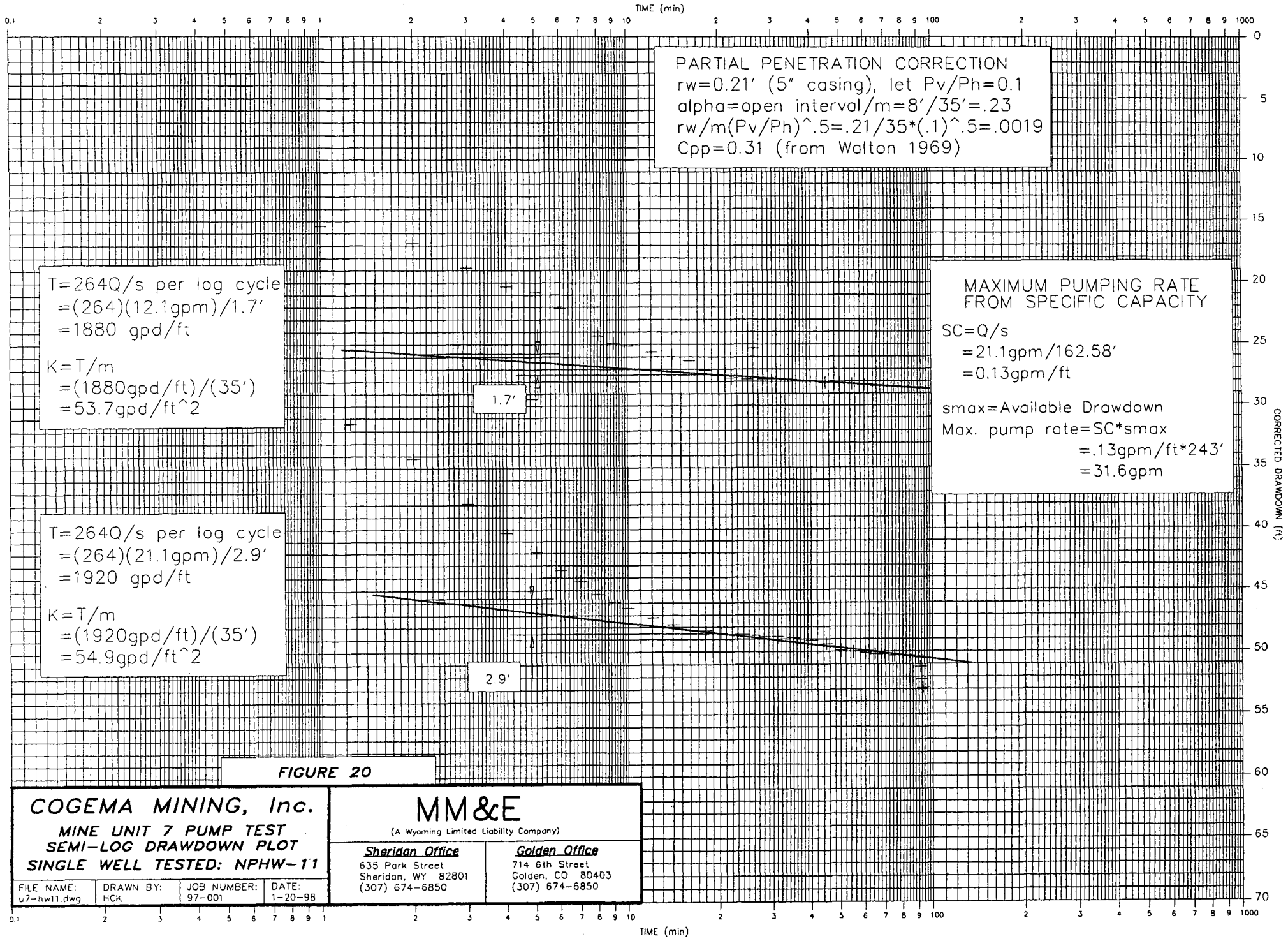


FIGURE 20

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-11

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw11.dwg	HCK	97-001	1-20-98

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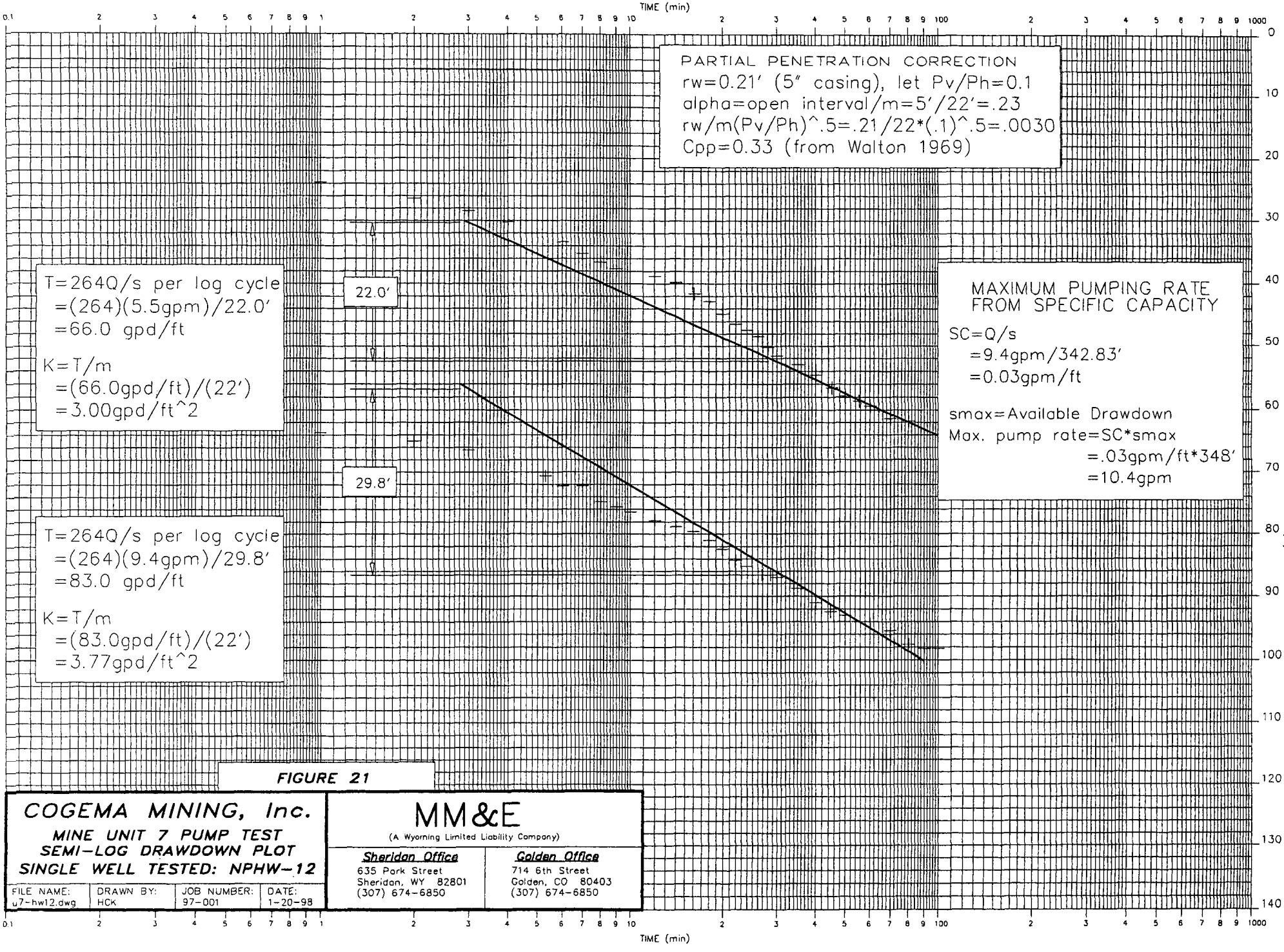

FIGURE 21

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-12

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw12.dwg	HCK	97-001	1-20-98

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(307) 674-6850

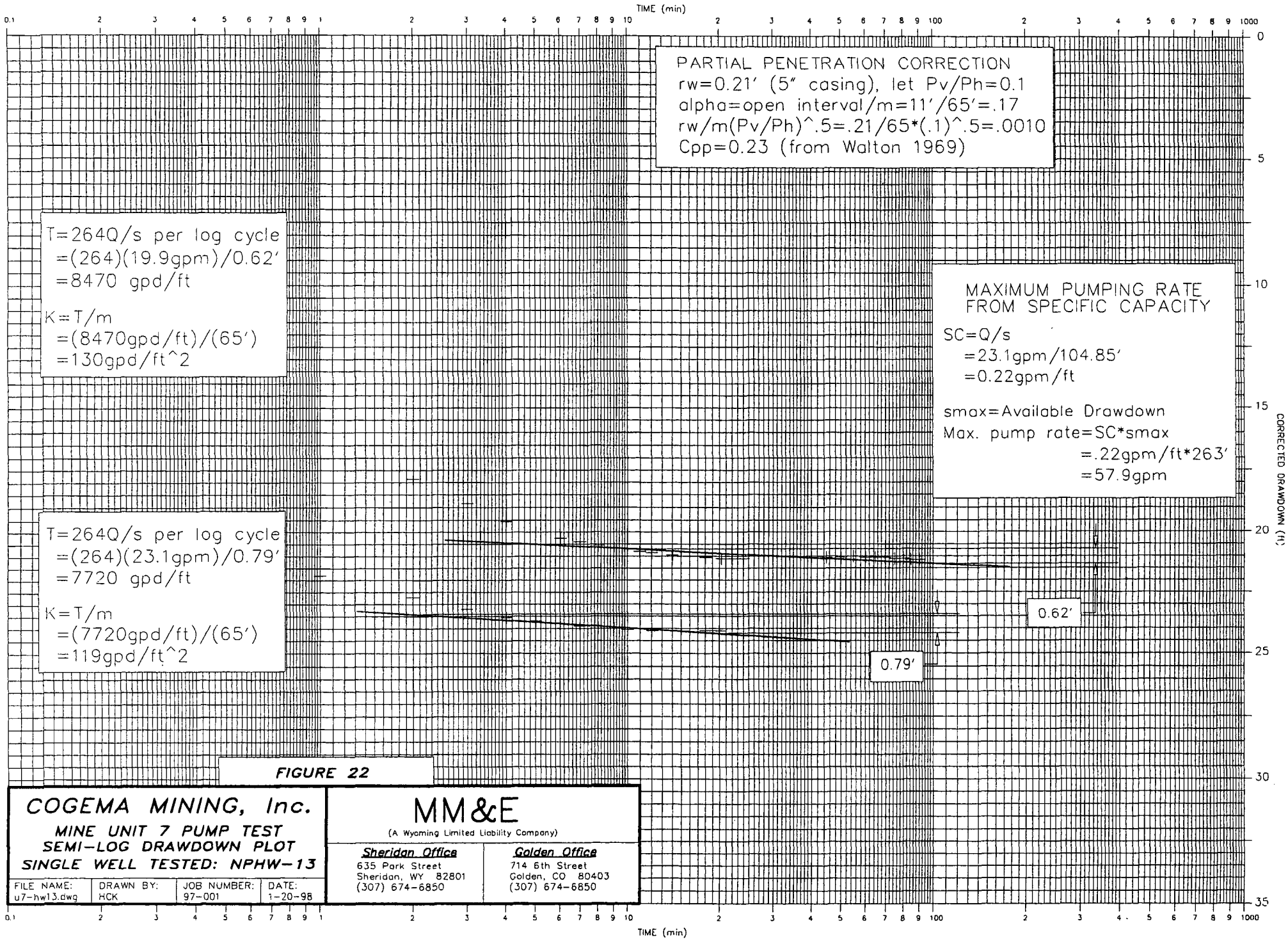

FIGURE 22

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-13

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw13.dwg	HCK	97-001	1-20-98

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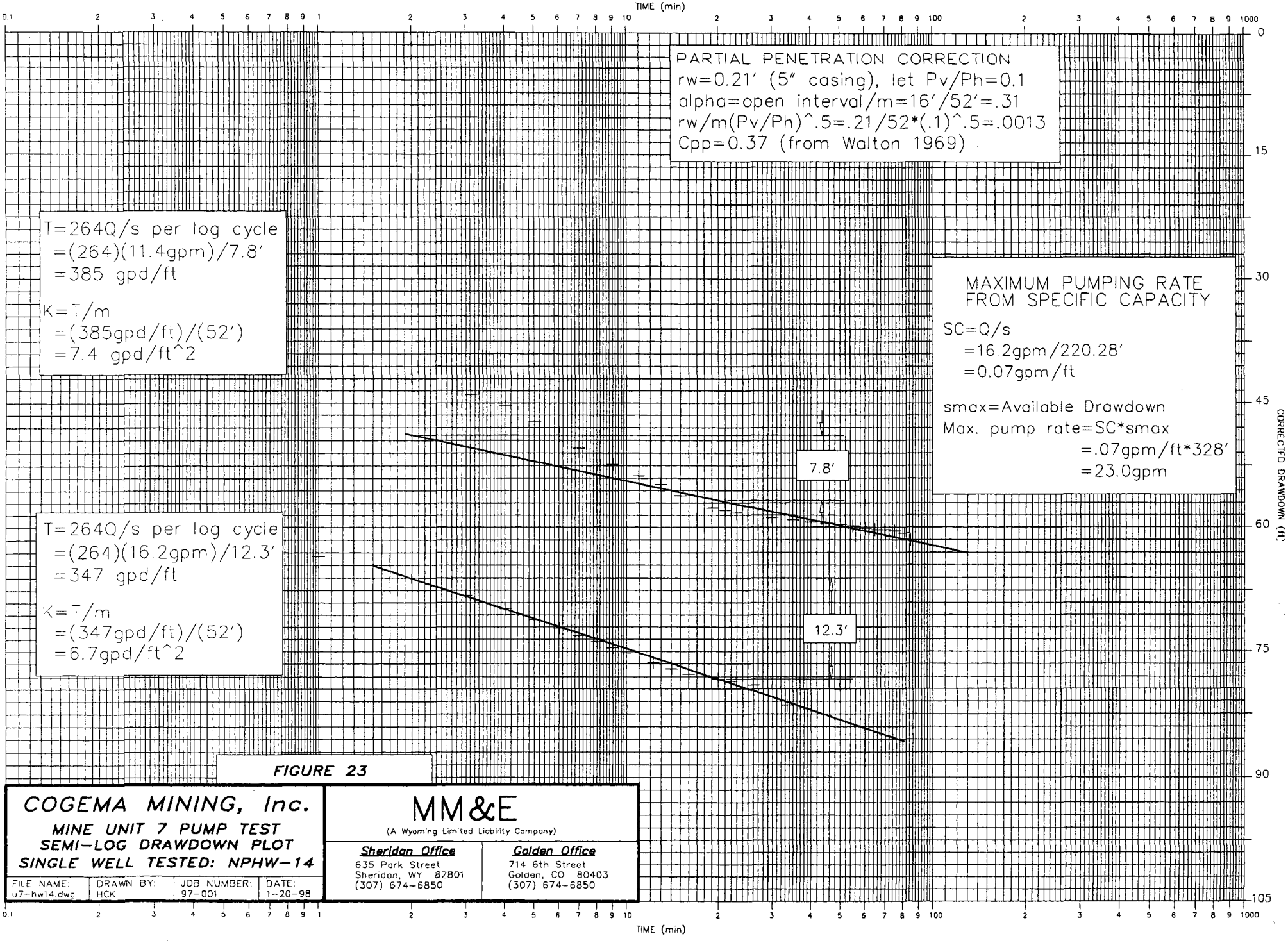

FIGURE 23

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-14

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw14.dwg	HCK	97-001	1-20-98

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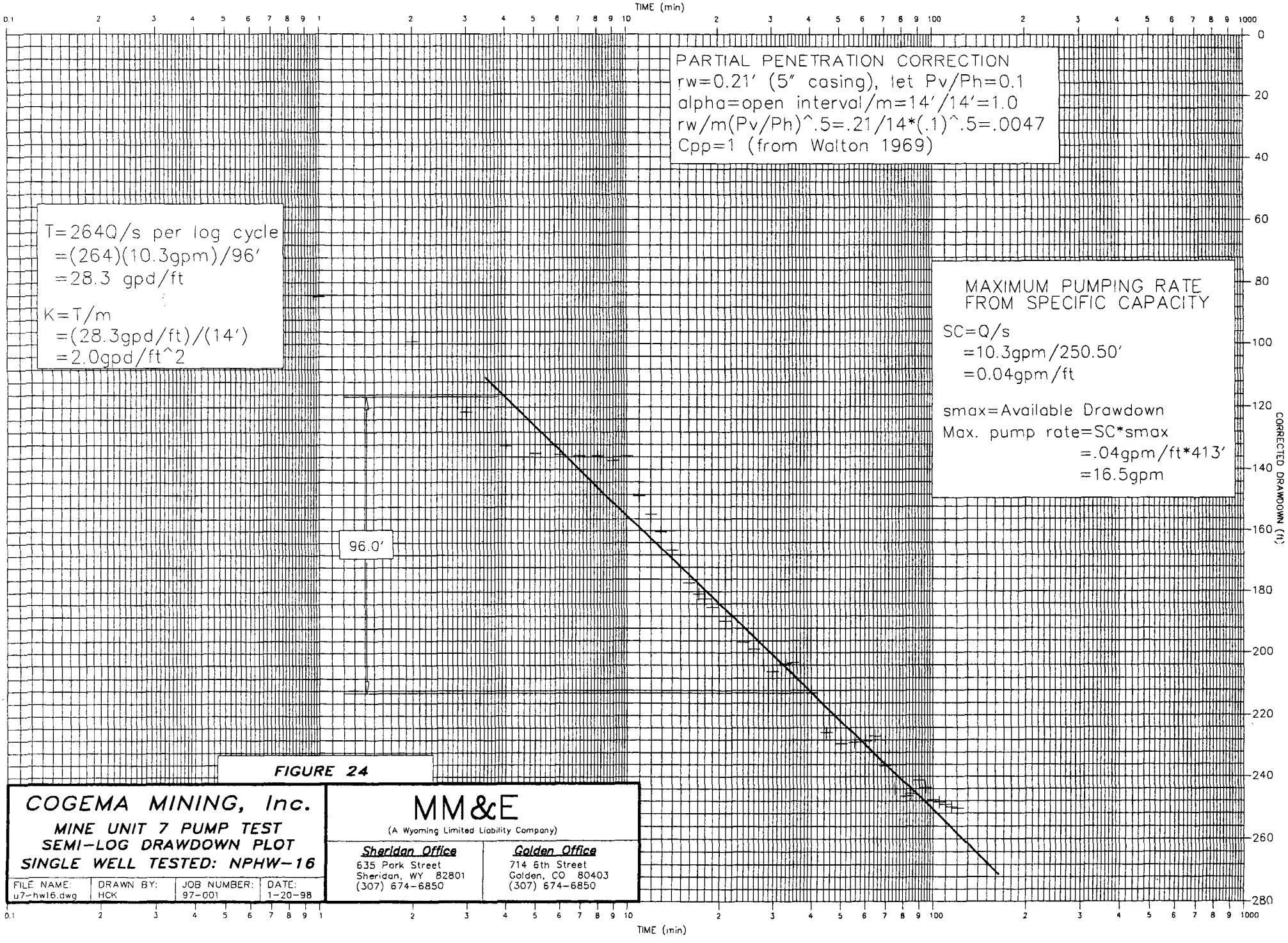

FIGURE 24

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-16

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw16.dwg	HCK	97-001	1-20-98

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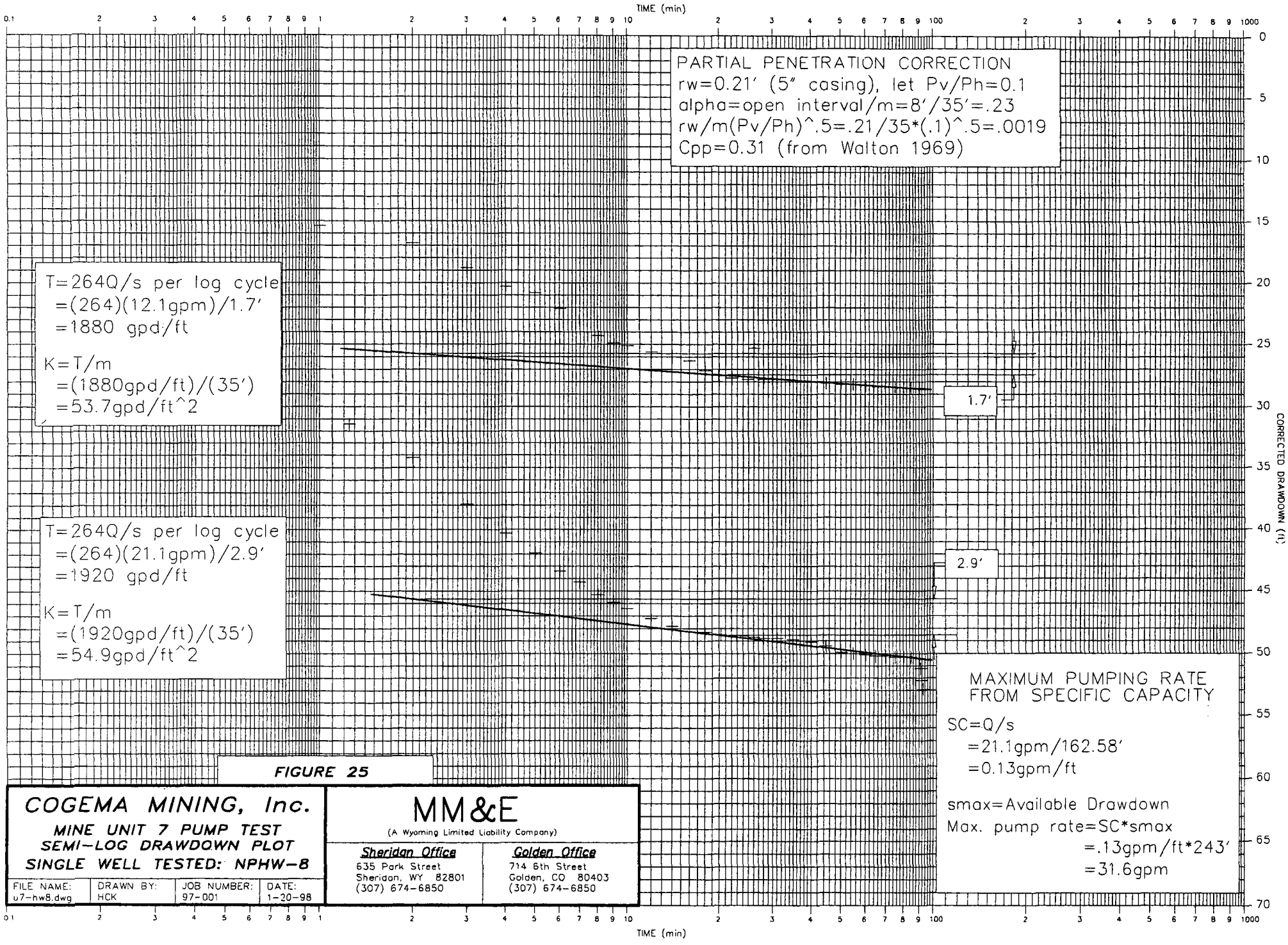

FIGURE 25

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-8

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw8.dwg	HCK	97-001	1-20-98

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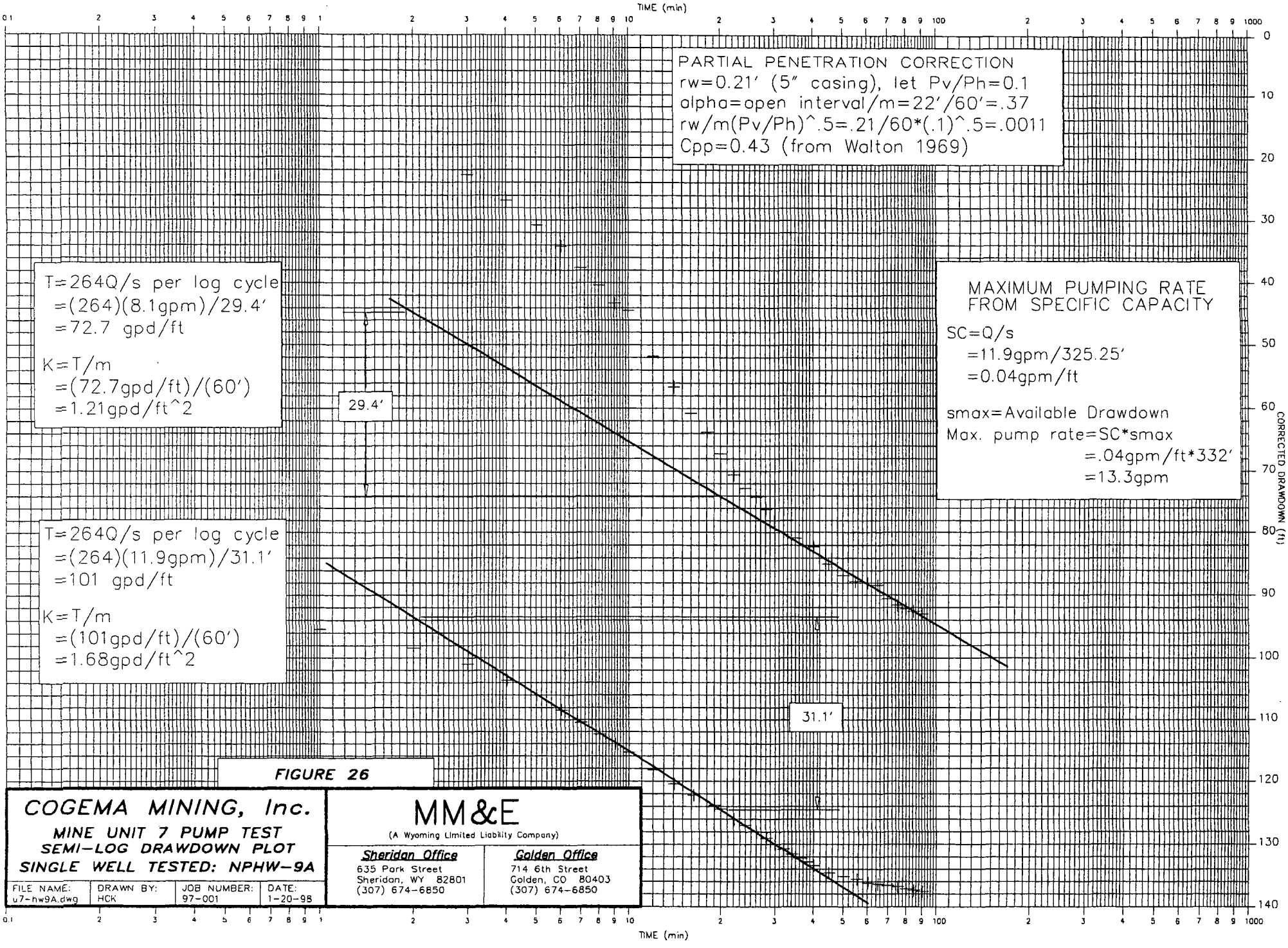

FIGURE 26

COGEMA MINING, Inc.

MINE UNIT 7 PUMP TEST
SEMI-LOG DRAWDOWN PLOT
SINGLE WELL TESTED: NPHW-9A

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
u7-hw9A.dwg	HCK	97-001	1-20-98

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Figure 27

Well 7SM-10 -- Drawdown and Barometer

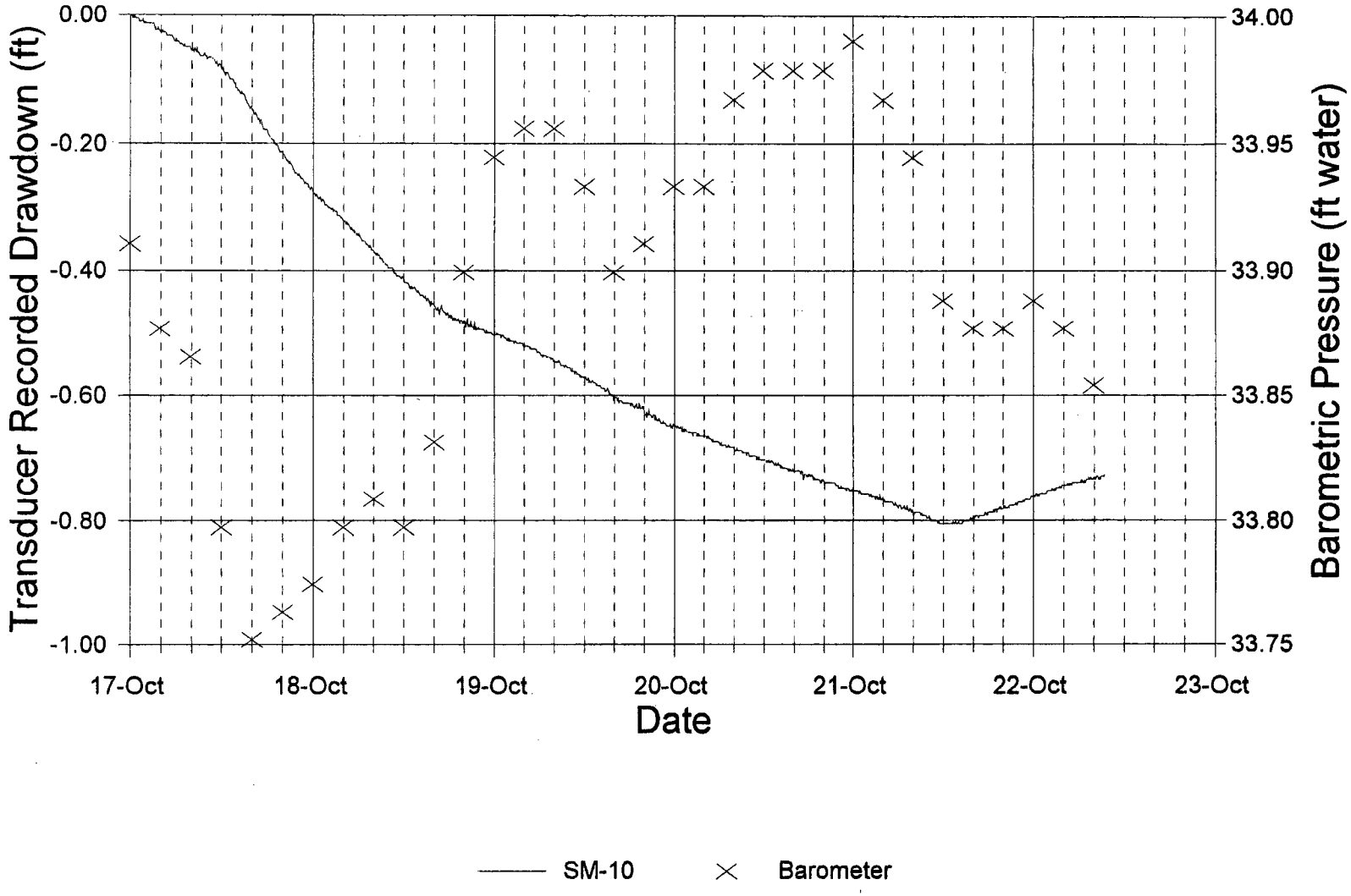


Figure 28

Well DM-3A -- Drawdown and Barometer

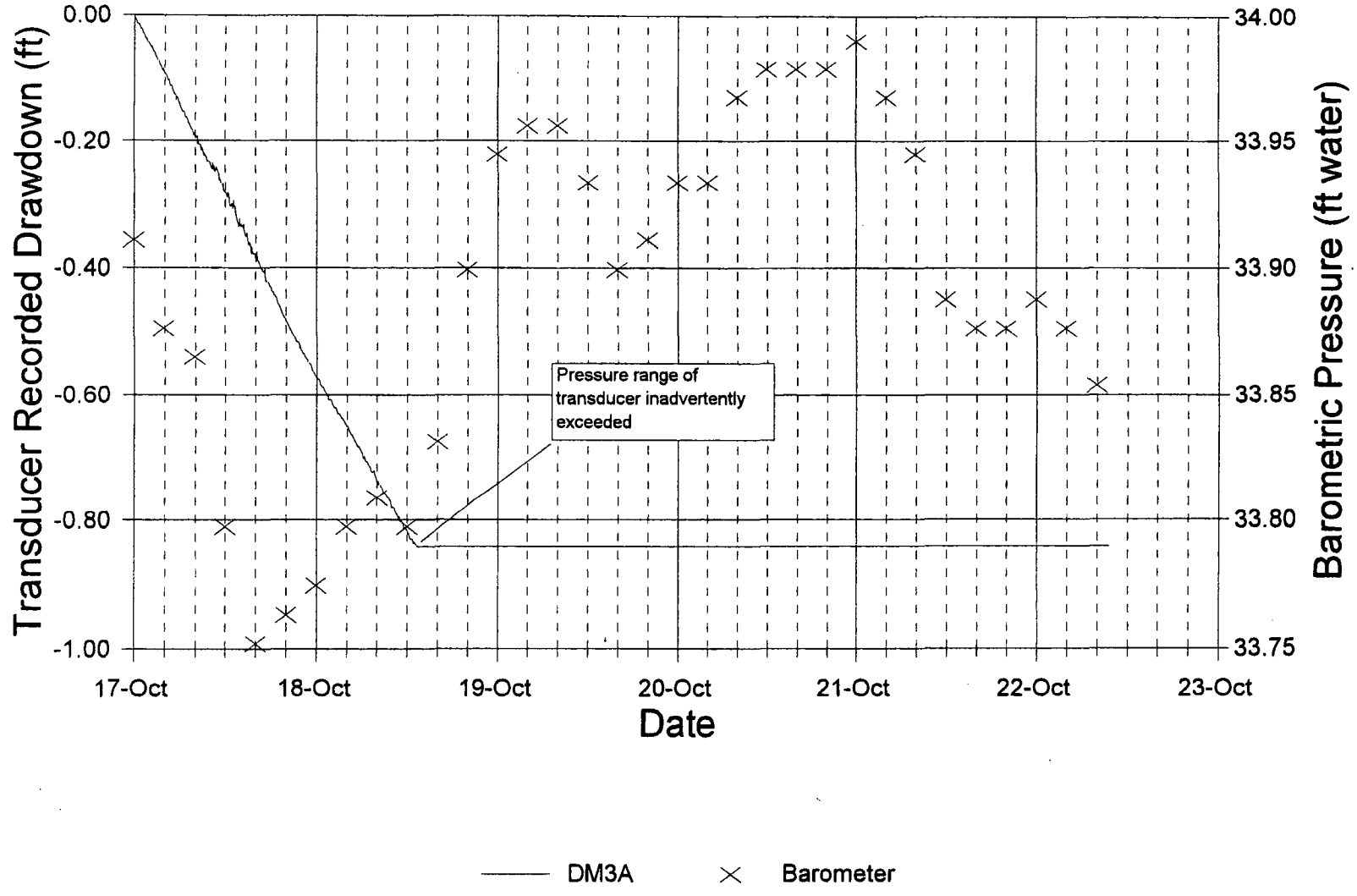
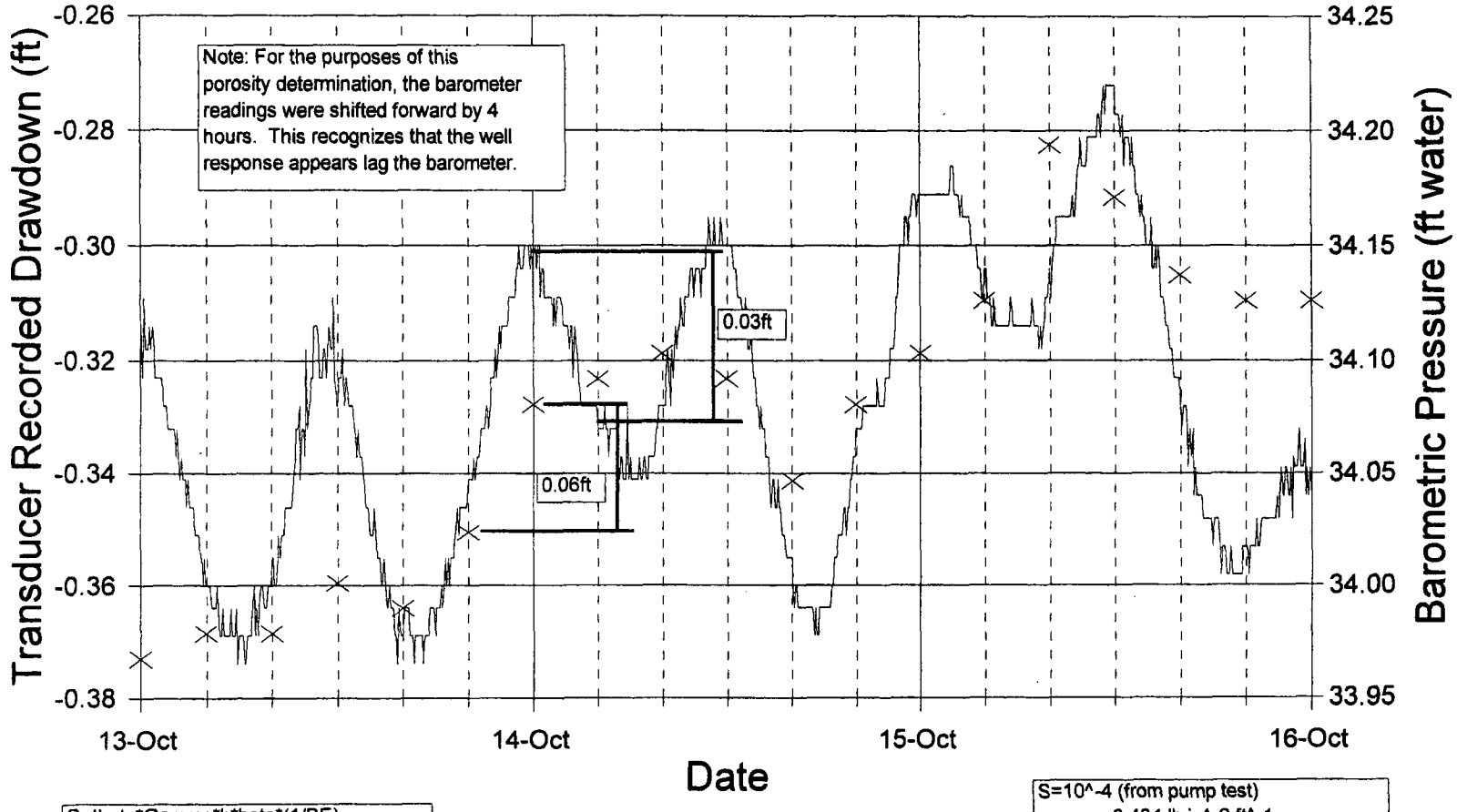


Figure 29

Well BC107-2 -- Drawdown and Barometer



S=theta*Gamma*b*beta*(1/BE)
theta=S*BE/gamma*b*beta
theta=10^-4*0.50/0.434*150*3.3^-6
theta=0.23 Porosity=23%

S=10^-4 (from pump test)
gamma=0.434 lb in^-2 ft^-1
beta=3.3E-6 in^2 lb^-1
b=150 ft (K sand average)
BE=0.03ft/0.06ft = 0.50 (see above)
(Lohman 1979)

37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71

27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73

853000 854000 855000 856000 857000

1150000 1149000 1148000 1147000 1146000 1145000

7MW43 4622.7
7MW42
7MW41 4621.0
4619.3
7MW40 4618.8
7MW39 4620.7
7MW38 4610.5
7MW37 4607.3
7MW36 4612.4
7MW35 4617.3
7MW34 4616.7
7MW33 4617.9
7MW32 4620.7
7MW31 4621.3
7MW30 4622.1
7MW29 4620.2
7MW28 4618.5
7MW27 4621.8
7MW26 4621.1
7MW25 4622.8
7MW24 4624.4
7MW23 4624.8
7MW22 4625.8
7MW21 4629.8
7MW20 4630.7
7MW19 4624.3
7MW17 4625.4
7MW15 4628.2
7MW13 4629.5
7MW11 4630.3
7MW9 4632.7
7MW7 4632.2
7MW5 4632.2
7MW3 4630.9
7MW1 4632.8
7MW2 4633.0
7MW4 4632.9
7MW6 4629.8
7MW8 4628.1
7MW10 4628.2
7MW12 4627.3
7MW14 4625.9
7MW16 4628.9
7MW18 4630.7
7AZ59-1 4627.4
7BD60-1 4627.5
7BE61-1
7AU63-1 4620.6
7TW1 4625.8
NPHW-11 4622.3
7AT72-1 4620.4
7AX75-1 4623.1
NPHW-16 4623.0
7AW84-1 4621.7
7AU88-1 4621.9
7AY88-1 4622.3
NPHW-9A 4620.7
7TW5 4626.0
7AU96-1 4620.9
7TW6 4623.3
7AU102-1 4621.8
NPHW-8 4621.9
7AU114-2 4623.9
7AV122-1 4625.1
7AT129-1 4622.8
7AU130-1 4626.4
7AU138-1 4627.0
7AT142-1 4626.4
7AU146-1 4629.2
7TW2 4627.8
7TW3 4629.0
7TW4 4632.4
NPHW-14 4629.8
7BG92-1 4629.8
7BH92-2 4630.3
7BF96-1 4629.8
7BG100-1 4631.1
NPHW-13 4630.6
7BC107-2 4625.4
7BG112-1 4630.9
7BH118-1 4631.8
7BH120-1 4630.4
7BF74-1
7BE68-2
7BJ82-1 4630.8

LEGEND

4635 — POTENTIOMETRIC SURFACE CONTOURS

WELL FIELD BOUNDARY

7MW22 4625.8 — POTENTIOMETRIC SURFACE DATA POINT

N

1" = 600'

Cogema Mining, Inc.

FIGURE 30
TRIMMED MODFLOW MODEL GRID AND POTENTIOMETERIC SURFACE IN THE K SAND ON OCTOBER 11, 1997

REVISIONS	
DATE	BY

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Sheridan, WY 82801
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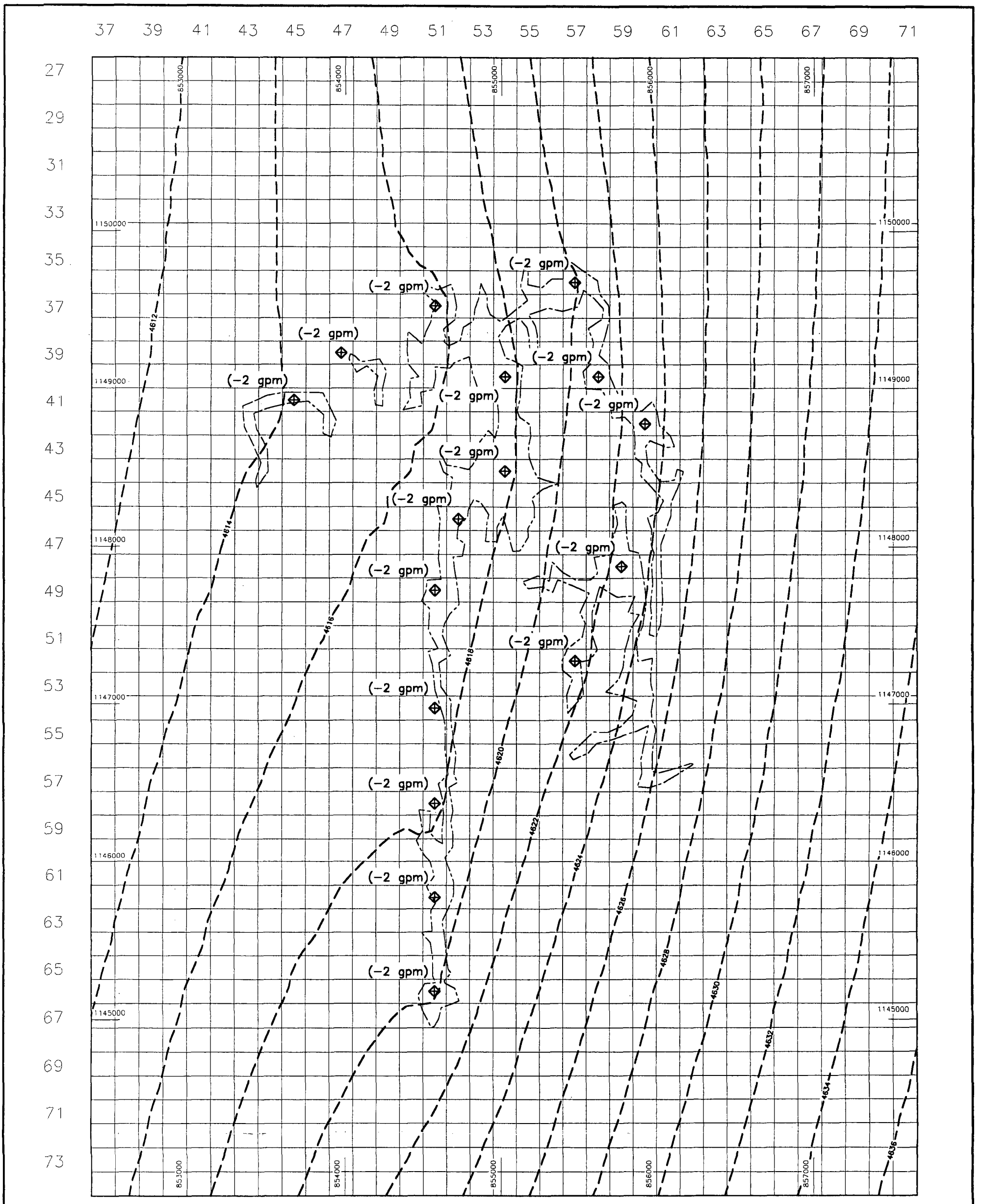
Golden, CO 80403
(307) 674-6850

FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
mod-y7-1.dwg	2-15-98	MCK	MCK	DW	1"=600'



LEGEND

4636 — POTENTIOMETRIC SURFACE CONTOURS

WELL FIELD BOUNDARY

(-2 gpm) — WELL FIELD SIMULATION WELLS WITH PUMPING RATE

1" = 600'

NOTES

- BLEED RATE = 1.0% (32 gpm) UNIFORMLY DISTRIBUTED OVER THE 16 WELLS USED TO SIMULATE THE WELL FIELD.
- NEGATIVE VALUES FOR PUMP RATE DENOTE WITHDRAWALS, POSITIVE VALUES WOULD DENOTE INJECTION.

Cogema Mining, Inc.

FIGURE 31

TRIMMED MODFLOW MODEL GRID AND MODELED POTENTIOMETERIC SURFACE IN THE K SAND AFTER A 60 DAY PRE PRODUCTION CONDITIONING RUN

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FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
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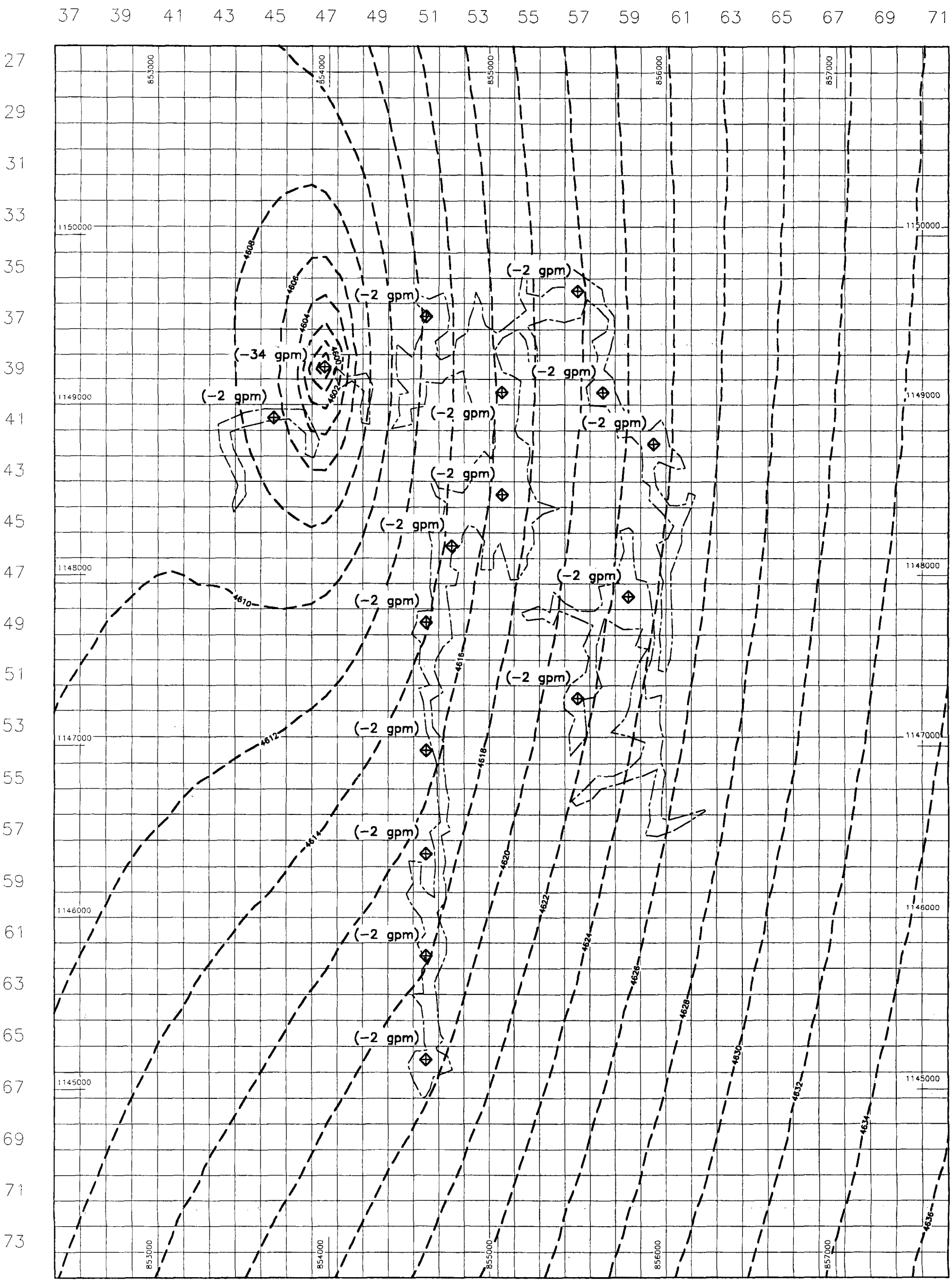

LEGEND

4610 — POTENTIOMETRIC SURFACE CONTOURS

WELL FIELD BOUNDARY

(−2 gpm) — WELL FIELD SIMULATION WELLS WITH PUMPING RATE

1" = 600'

NOTES

- BLEED RATE = 0.5% (16 gpm) UNIFORMLY DISTRIBUTED OVER THE 16 WELLS USED TO SIMULATE THE WELL FIELD PLUS 1.0% (32 gpm) EXCURSION RECOVERY PUMPING AT WELL R39 C45 FOR A TOTAL BLEED RATE OF 1.5% (48 gpm).
- NEGATIVE VALUES FOR PUMP RATE DENOTE WITHDRAWALS, POSITIVE VALUES WOULD DENOTE INJECTION.

Cogema Mining, Inc.

FIGURE 32

TRIMMED MODFLOW MODEL GRID AND MODELED POTENTIOMETERIC SURFACE IN THE K SAND AFTER A 60 DAY EXCURSION RECOVERY RUN

REVISIONS	
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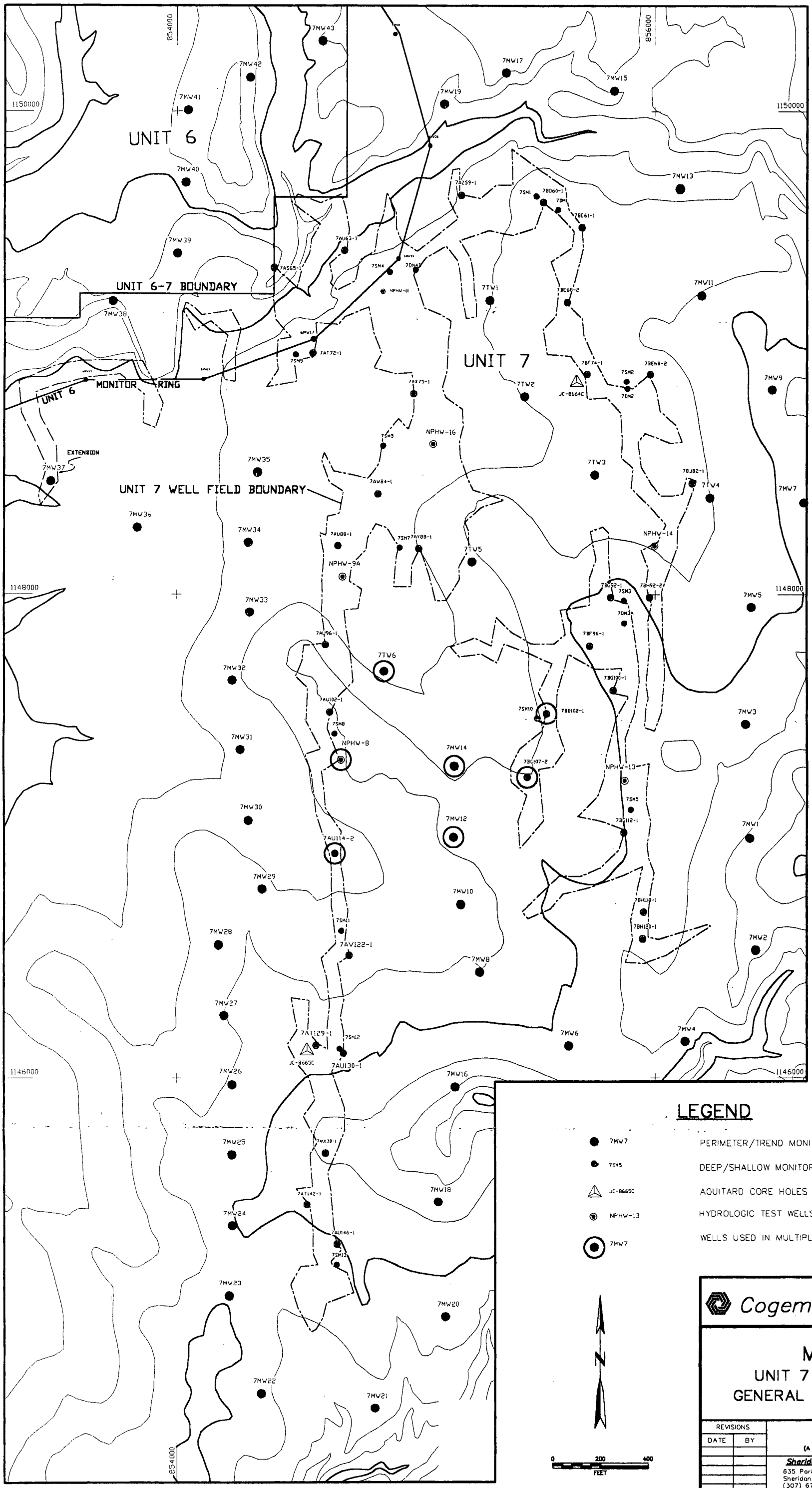
(307) 674-6850

FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
mod-u7-3.dwg	2-15-98	HCK	HCK	DW	1"=600'

MAPS



LEGEND

7MW7	PERIMETER/TREND MONITOR WELLS
7SM5	DEEP/SHALLOW MONITOR WELLS
JC-8665C	AQUITARD CORE HOLES
NPHW-13	HYDROLOGIC TEST WELLS
7MW7	WELLS USED IN MULTIPLE WELL PUMP TEST

Cogema Mining, Inc.

MAP 1
UNIT 7 PUMP TEST
GENERAL LOCATION MAP

REVISIONS	
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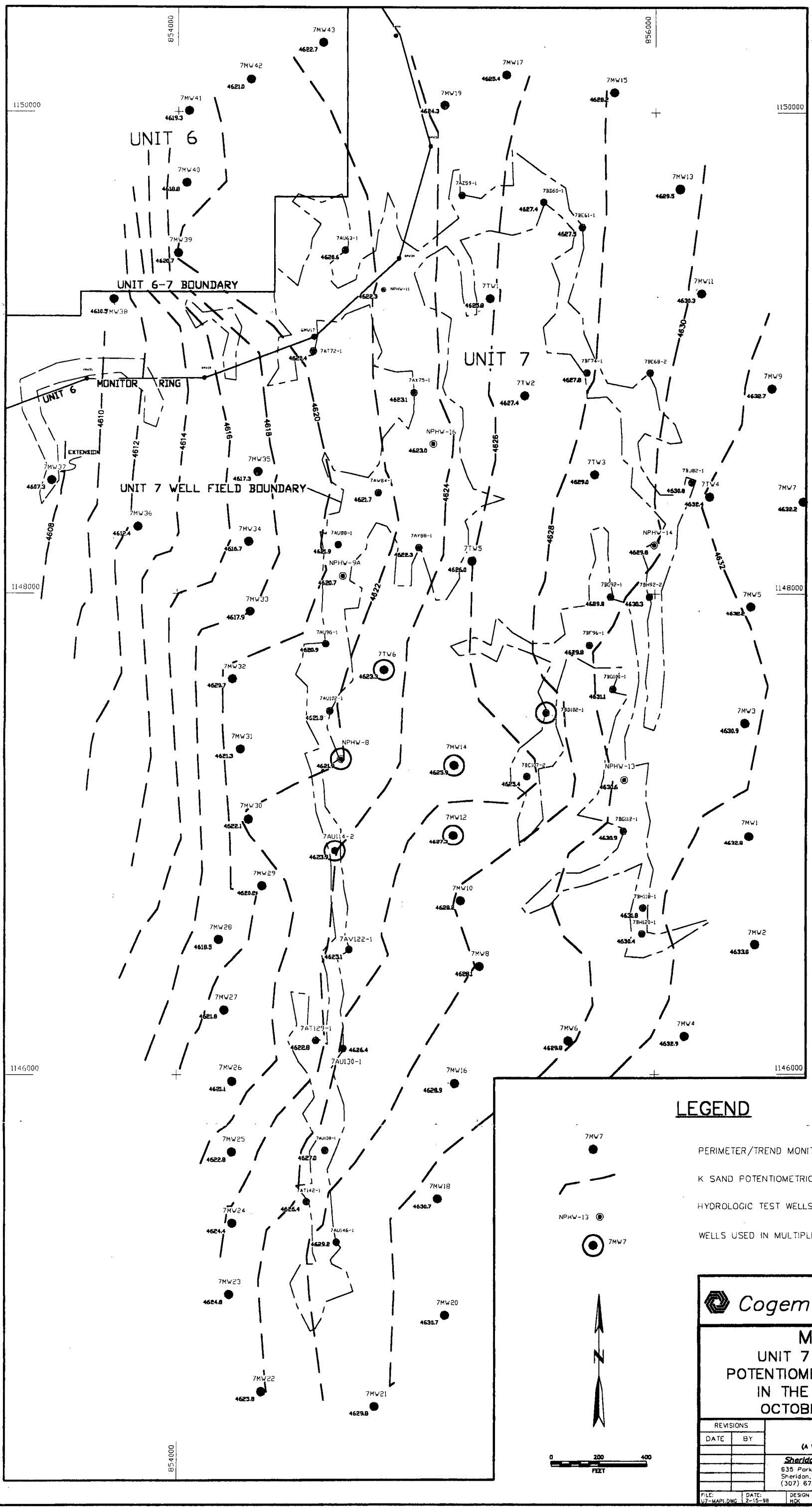
Golden, CO 80403
(307) 674-6850

FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
U7-MAP1.DWG	2-15-98	HCK	HCK	DW	1"=400'



Cogema Mining, Inc.

MAP 2
UNIT 7 PUMP TEST POTENTIOMETERIC SURFACE IN THE K SAND ON OCTOBER 11, 1997

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DATE	BY

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Golden Office
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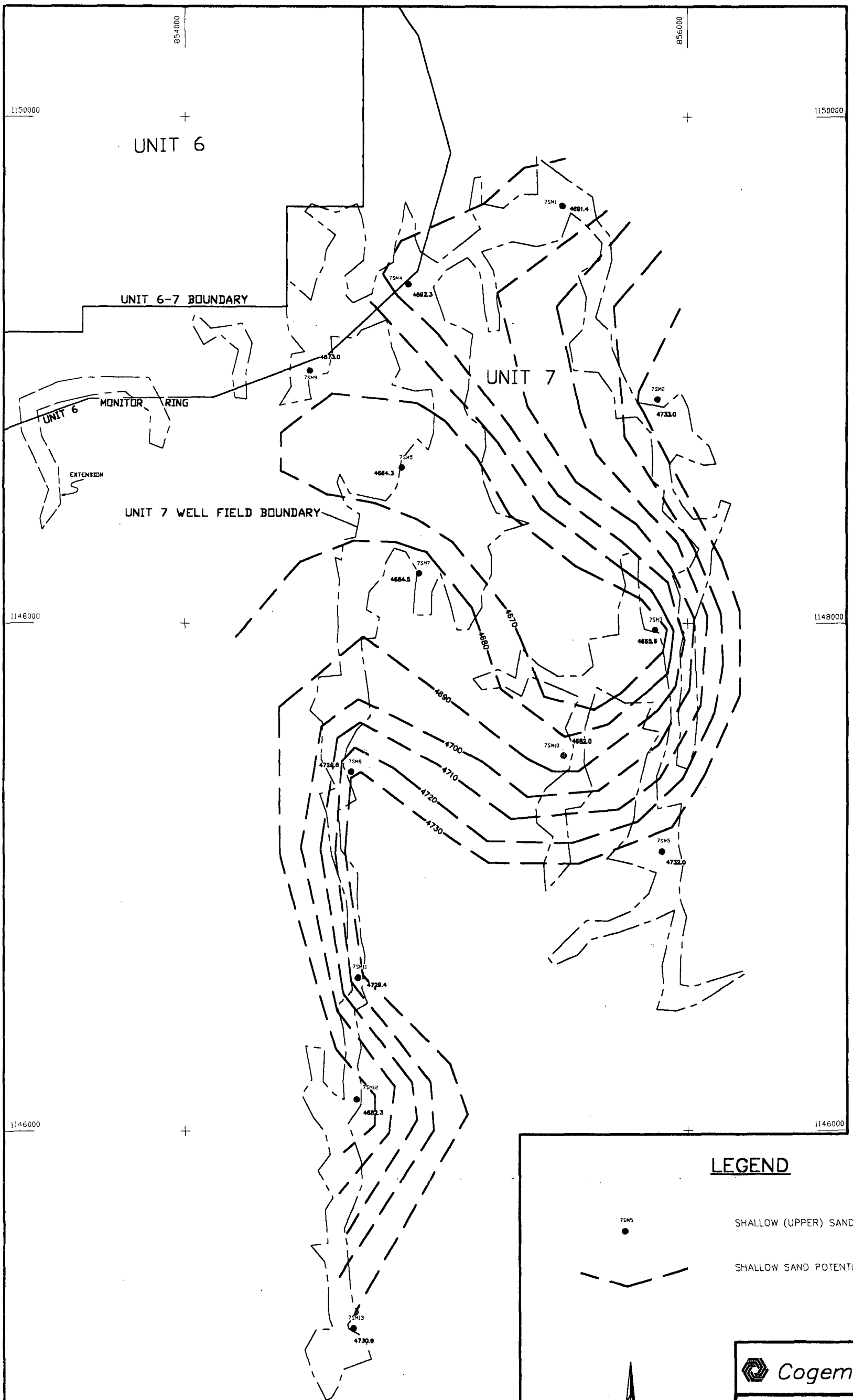
Golden, CO 80403
(307) 674-6850

FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
U7-MAP1.DWG	2-15-98	HCK	HCK	DW	1"=400'



Cogema Mining, Inc.

MAP 3
UNIT 7 PUMP TEST POTENTIOMETERIC SURFACE IN THE SHALLOW SAND ON OCTOBER 11, 1997

REVISIONS	
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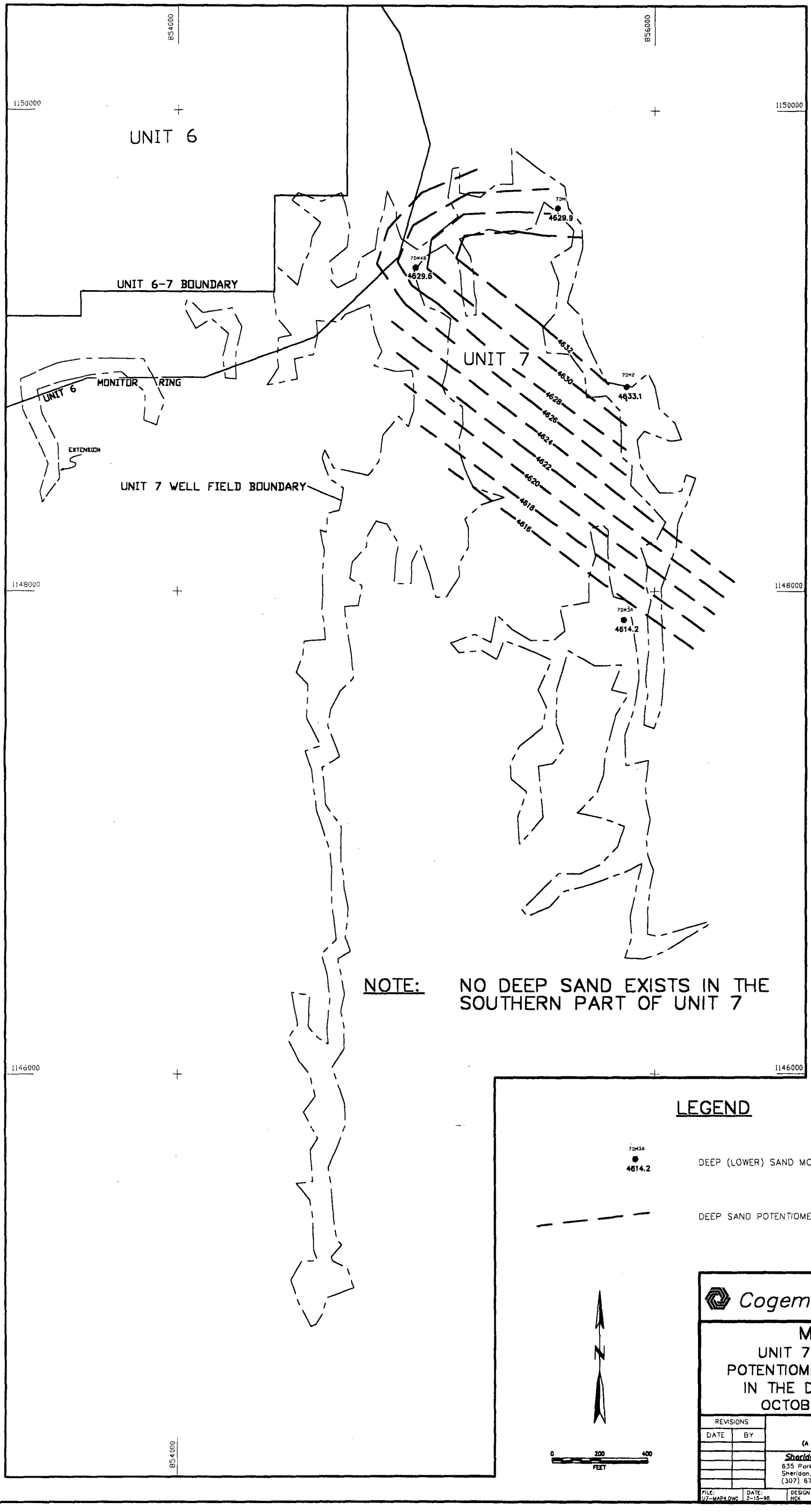
FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
U7-MAP3.DWG	2-15-98	HCK	HCK	DW	1"=400'



Cogema Mining, Inc.

MAP 4
UNIT 7 PUMP TEST POTENTIOMETERIC SURFACE IN THE DEEP SAND ON OCTOBER 11, 1997

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Golden Office
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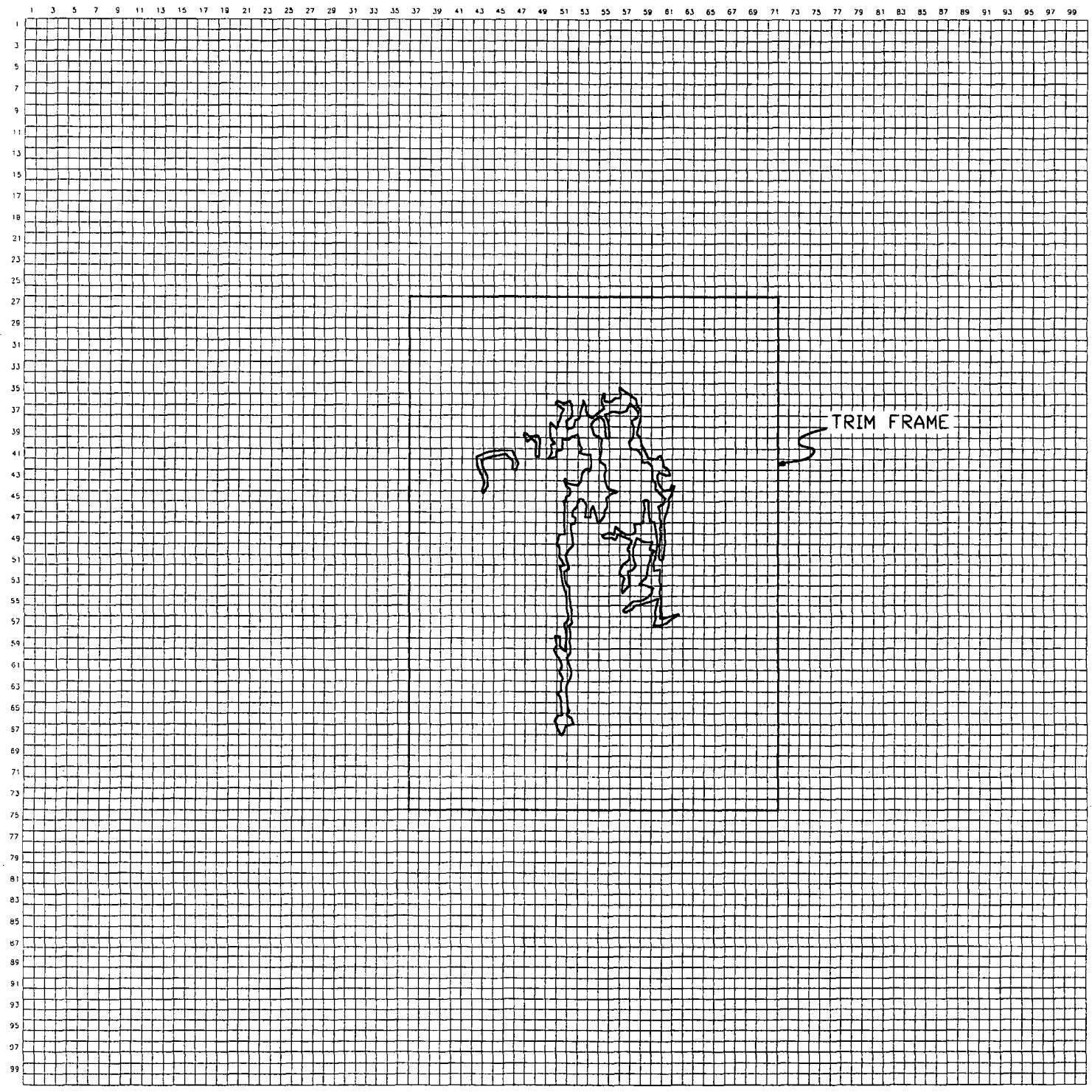
Golden, CO 80403
(307) 674-6850

FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
U7-MAP4.DWG	2-15-98	HCK	HCK	DW	1"=400'

NOTE: All grid cells are 150' X 150'



LEGEND

UNIT 7 WELL FIELD OUTLINE

MODFLOW MODEL GRID

1" = 2000'

Cogema Mining, Inc.

MAP 5
MODFLOW MODEL GRID SHOWING WELL FIELD OUTLINE AND TRIM FRAME USED FOR FIGURES 30 THROUGH 32

REVISIONS	
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Golden, CO 80403
(307) 674-6850

FILE:	DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:	SCALE:
u7-pmap.dwg	2-15-98	HCK	HCK	DW	1"=2000'

REFERENCES

Aqua Terra Consultants, Inc. (ATC), 1995, North Prong and Table Mountain Pump Tests Results and Analysis

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McDonald, M. G., and Harbaugh, A. W., 1988, A Modular Three-Dimensional Finite-Difference Ground-Water Flow Model, USGS, Book 6, Modeling Techniques

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ATTACHMENT A

Typical Unit 7 Cross Sections

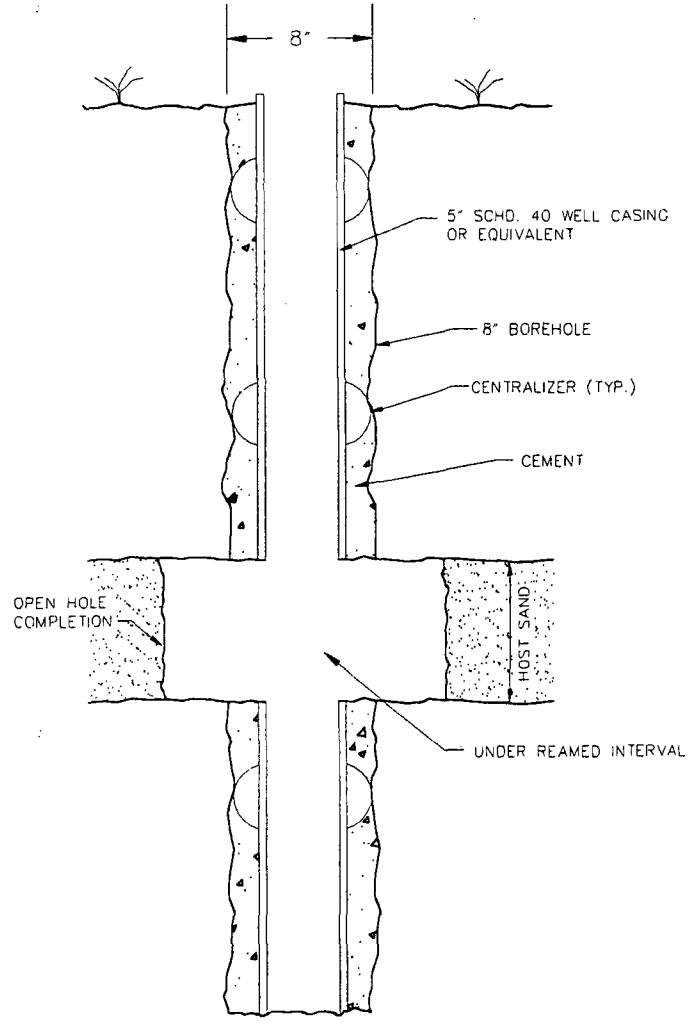
INSERT UNIT ~~&~~ 7 CROSS SECTIONS HERE AND REMOVE THIS SHEET

ATTACHMENT B

Typical Well Completion Details

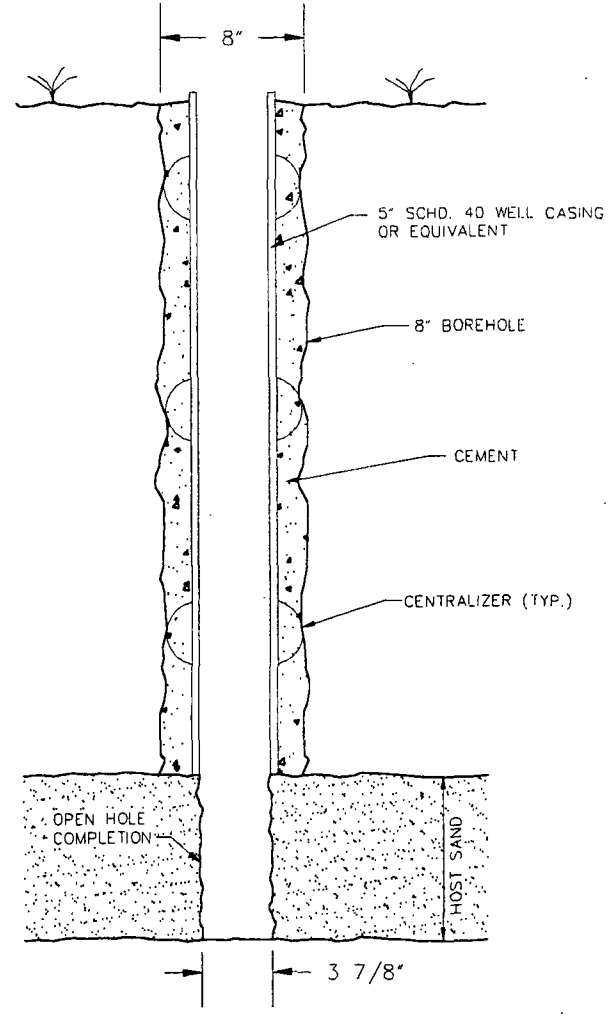
B-1

TYPICAL MONITOR OR PUMP WELL



(NOT TO SCALE)

ALTERNATE COMPLETION METHOD



(NOT TO SCALE)

COGEMA MINING, Inc.	MM&E (A Wyoming Limited Liability Company)	
MINE UNIT 7 COMPLETION DETAILS FOR PUMP AND MONITOR WELLS	*Sheridan Office* 635 Park Street Sheridan, WY 82801 (307) 674-6850	*Golden Office* 714 6th Street Golden, CO 80403 (307) 674-6850

FILE NAME:	DRAWN BY:	JOB NUMBER:	DATE:
ATTCH_B.DWG	HCK	97-001	1-20-98

ATTACHMENT C

Raw Field Data

Aquifer Testing Data

Well No.: 7 MW14 Project: MINE UNIT 7 PUMP TEST Page 1 of 6

Personnel: RD, ED, HK Type of Test: DISCHARGE & RECOVERY

Total Depth: _____ Hole Dia.: _____ How Drilled: ROTARY Aquifer: K SAND 143'

Casing Dia.: _____ Casing Type: PVC Screen Type: OPEN Open Interval: _____

Pump Depth: 460 Pump Type: 7½ HP GRUNDFOS Drop Pipe: _____

SWL: 246.50 MP: 1.21' Ground El.: _____ Equipment: r =

Notes: @40 V=0

P=20

PQ4 TOTAL 13 RD

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/17/97 0908	0	246.49	0		
1100	0	246.50	0		intial Q = 51 gpm
1102½	2½	306.34	59.84	40.3	110
1104	4	311.19	64.69	40.3	160
1106	6	314.58	68.08	40.4	Qbucket = 40 5g in 7.5 sec
1112	12	318.85	72.35	40.04	
1114	14	319.93	73.43	39.9	
1116	16	320.69	74.19	40.2	
18	18	321.74	75.24	40.0	
20	20	322.40	75.90	39.9	TOT = 800 gal @ 11:21:20 @ ~~t = 32 min~~
23	23	323.40	76.90	39.9	
26	26	324.14	77.64	40.0	
29	29	324.82	78.32	39.7	
32	32	325.44	78.94	39.9	TOT = 1200 gal @
36	36	326.21	79.71	39.7	TOT = 1270 gal @ 11:32:58 TOT = 1460 gal @ 11:37:45
41	40	326.85	80.35	39.7	TOT = 1590 @ 11:41:02
43	43	327.42	80.92	39.7	
47	47	327.73	81.23	39.5	TOT = 1860 @ 11:47:52
50	50 ~~8~~	328.13	81.63	39.3	TOT = 1990 @ 11:51:09 (39.1 - 42.3 gpm range)
53	53	328.54	82.04	39.7	TOT = 2080 gal @ 11:53:23
1205	65	330.51	84.01	40.0	AD J, Q @ 1202 hr TOT = 2590 @ 12:06:12
1210	70	330.96	84.46	40.0	BUCKET Q = 5 gal in 7.3 sec @ 1209 41.1 gal/min

Aquifer Testing Data

Well No.: 7MW 14 Project: MINE UNIT 7 PUMP TEST Page 2 of 6

Notes: ~~346.50~~ 246.50

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/17/97 1215	75	331.59	85.09	40.0	TOT = 3020 gal 12:16:55
1232	92	332.72	86.22	40.0	TOT = 3650 gal @ 12:32:40
1245 ~~44~~	105	333.21	86.71	39.9	TOT = 4180 gal @ 12:45:57 BUCKET = 5/7.6 sec = @1250
1300	120	333.92	87.42	39.7	TOT = 4800 @ 13:01:30
13 30 ~~1327~~	150	335.25	88.75	40.0	TOT = 5860 @ 13:28:02
1352	172	336.04	89.54	39.7	TOT = 6850 @ 13:52:53
1503 ~~14~~	243	337.41	90.91	39.5	TOT = 9690 @ 15:04:19 BUMP TO 40
1555	295	339.24	92.74	40.0	TOT = 11750 15:55:56 BUCKET = 7.4 sec / 5gal
1750	410	340.11	93.61	39.85	TOT = 16390 17:53:55
1955	535	341.52	95.02	40.0	TOT = 21220 19:54:25
2200	660	342.70	96.20	40.0	TOT = 26320 22:01:25
2320	740	343.11	96.61	40.0	TOT = 29540 @ 23:21:02
2348	768	343.24	96.74	39.9	TOT = 30570 @ 23:46:44 BUCKET = 5gal / 7.4SEC @ 23:44
10/18/97 0303	963	343.89	97.39	40.0	TOT = 38520 @ 0305:16
0614	1154	344.53	97.83	39.9	TOT = 46750 @ 06:15:44
0906	1326	345.38	98.88	40.0	TOT = 52910 @ 09:04:37 BUCKET = 7.2 sec / 5gal
1250	1550	345.88	99.38	40.2	TOT = 61900 @ 12:49:10 Bucket = 7.3 sec / 5 gal
1600	1740	346.18	99.68	40.0	TOT = 69530 15:59:17
1945	1965	346.22	99.72	40.0	TOT = 78600 19:46:03
2300	2160	347.20	100.70	40.0	TOT = 86530 @ 23:02:23 WINDY
10/19/97 0250	2390	347.89	101.39	40.2	TOT = 95270 @ 02:51:44
0654	2634	347.94	101.44	40.2	TOT = 105780 @ 07:00:02 CALM

Aquifer Testing Data

Well No.: 7MW-14 Project: UNIT 7 PUMP TEST

Notes: P. WELL

246.50' MP = +1.21 @ 10/19/97

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/19/97 0654	2634	347.94	101.44	40.2	TOT = 105780 @ 07:00:02 SLIGHT BREEZE
1058	2878	347.98	101.48	40.0	TOT = 115350 10:58:47
1456	3116	348.10	101.60	40.0	TOT = 124850 @ 14:55:58
1853	3353	348.86	102.36	40.2	TOT = 134890 @ 18:52:10 184500 18:55:10
2237	3577	349.05	102.55	40.2	TOT = 143520 @ 22:37:57
10/20/97 0258	3838	349.25	102.75	40.0	TOT = 154090 @ 03:00:06
0705	4085	349.35	102.85	40.0	TOT = 164020 @ 07:06:46
1452	4552	349.55	103.05	40.2	TOT = 182730 @ 14:54:50
1853	4793	349.30	102.80	39.9	TOT = 192350 @ 18:52:43
2330	5070	350.30	103.80	40.2	TOT = 203760 @ 23:34:23
10/21/97 0547	5447	350.49	103.99	40.2	TOT = 218830 @ 05:48:38
1055	5755	351.11	104.61	40.2	TOT = 231100 @ 10:53:44
					Pump OFF @ 11:00 hr
				—	t = 5760 min
				Q = 40.2	max s = 104.61'

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1 REC

AQUIFER RECOVERY TEST DATA

Well No. 7MW-14

PUMP WELL NO. 7MW-14

OBSERVATION WELL NO. _____

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ Altitude MP _____

SWL from MP 246.50 How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 11	00	5760	0	319.08	--		Pump OFF
			0.5	319.08	72.58 ?		FINAL TOT = 231,350 gal
			1.5	290.12	43.62 ?		
	03		3	280.26	33.76 ?		NO CHECK VALVE ??
			4 1/2	279.07	32.57 ?	→	280@1106 PULLED & DRIED PROBE
	11		11	279.00	32.50 ?		OK ?
	19		19	275.15	28.65 ?		OK ?
	20		20	274.79	28.29		SEEM REASONABLE
	23		23	273.83	27.33		
	26		26	272.95	26.45		
	29		29	272.23	25.73		
	32		32	271.53	25.03		
	35		35	270.94	24.44		
	45		45	269.22	22.72		
	52		52	268.23	21.73		
	56		56	267.74	21.24		
12	06		66	266.68	20.18		

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AQUIFER RECOVERY TEST DATA

Well No. 7MW-14

PUMP WELL NO. 7MW-14

OBSERVATION WELL NO. _____

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ Altitude MP _____

SWL from MP 246.50 How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 12	12		72	266.18	19.68		
	20		80	265.49	18.99		
	30		90	264.70	18.20		
	40		100	264.07	17.57		
	50		110	263.46	16.96		
13	03		123	262.83	16.33		
13	45		165	261.10	14.60		
14	03			260.57			
	15			260.22			
	30			259.78			
	48			259.38			
15	02		242	259.05			
	29		269	258.54			
16	00		300	257.97			
	42		342	257.37			
17	00		360	257.13			
	34			256.78			

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AQUIFER RECOVERY TEST DATA

Well No. 7MW-14

PUMP WELL NO. —

OBSERVATION WELL NO. _____

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 3. Drawdown with obs. well 5. Other (specify) _____
2. Single well recovery 4. Recovery with obs. well

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ Altitude MP _____

SWL from MP 246.50 How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
21 Oct 1900	00		480	256.05			Hrly
2053			593	255.20			
22 Oct 712				252.70			
859				252.45			
1051				252.15			

Aquifer Testing Data

Well No.: 7MW12 Project: Mine Unit 7 Pump Test Page 1 of 3

Notes: $C_{pp}=1$ $I=290$ $P=4$

INITIAL SWL= 254.39' MP = 1.53' Underrun = 1.53'

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/17/97 10:25	0	254.39	0		
10/17/97 11:10	0:10	254.81	0.42		
10/17/97 11:25	0:25	255.87	1.48		
10/17/97 11:40	0:40	257.06	2.67		
10/17/97 11:50	0:50	258.09	3.70		
10/17/97 12:10	~~1:00~~ 70	259.01	4.62		
10/17/97 12:25	~~1:15~~ 85	259.91	5.52		
10/17/97 12:40	~~1:30~~ 100	260.50	6.11		
13:30	150	262.15	7.76		
14:00	180	262.56	8.17		
1505	245	263.76	9.37		
1620	320	264.80	10.41		
1758	418	265 22	11.33		
2000	540	266 58	12.19		
2205	665	267 38	12.89		
2357	777	268.21	13.82		
10/18/97 0244	944	268.50	14.11		
0630	1170	269.52	15.13		
0914	1334	269.90	15.51		
1302	1562	270.24	15.85		
1605	1745	270.60	16.21		
1955	1975	271.03	16.64		
2308	2168	271.72	17.33		
10/19/97 0707	2647	272.37	17.98		

Aquifer Testing Data

Well No.: 7MW-12 Project: UNIT 7 PUMP TEST Page 2 of 3

Notes:

SWL = 254.39 MP = 1.53' (TOP OF PIPE) (TOP OF PLATE = 1.24')

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/19/97 0707	2647	272.37	17.98		
1104	2884	272.40	18.01		
1506	3126	272.66	18.27		
1904	3364	272.96	18.57		
2243	3583	273.45	19.06		
10/20/97 0638	4058	273.91	19.52		
0957	4257	273.85	19.46		
1459	4559	274.08	19.69		
1900	4800	274.22	19.83		
10/21/97 0948	5688	274.92	20.53		

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AQUIFER RECOVERY TEST DATA

Well No. 7MW-12

PUMP WELL NO. 7MW-14

OBSERVATION WELL NO. 7MW-12

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ ~~Altitude~~ MP +1.53

SWL from MP 254.39 How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 1100			0	274.97			P. OFF
1127			27	273.02			
1153			53	271.07			
1218			78	269.62			
1242			102	268.65			
1308			128	267.72			
1406			186	266.24			
1508			248	265.14			
1604			304	264.44			
1704			364	263.80			
1903			483	262.89			
2057			597	262.20			
				5			
2200 716				26005			
903				259.88			
1054				259.53			

3.2

Aquifer Testing Data

Well No.: TW-6 Project: Mine Unit 7 Page 1 of 3

Personnel: _____ Type of Test: _____

Total Depth: _____ Hole Dia.: _____ How Drilled: _____ Aquifer: Upper

Casing Dia.: _____ Casing Type: _____ Screen Type: _____ Open Interval: 150'

Pump Depth: _____ Pump Type: _____ Drop Pipe: _____

SWL: 223.07 MP: +1.5 Ground El.: _____ Equipment: _____

Notes: r=495

p=4

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/17/97 958	0	223.07	0		
1135	35	223.24	0.17		
1151	51	223.55	0.48		
1215	75	224.04	0.97		
1237	97	224.41	1.34		
1315	135	225.19	2.12		
1430	210	225.81	2.74		
1530	270	226.32	3.25		
1640	340	226.89	3.82		
1830	450	227.63	4.56		
2035	575	228.28	5.21		
2240	700	228 BC	5.79		
10/18/97 0030	810	229.58	6.51		
0232	932	230.00	6.93		
0647	1167	230.71	7.64		
1010	1390	230.94	7.87		
1335	1595	231.40	8.33		
1637		231.74	8.67		
2010		232.18	9.11		
2346		233.77	10.70 ?		
10/19/97 0730		233.40	10.33		«OK

Aquifer Testing Data

Well No.: TW-6 Project: UNIT 7 PUMP TEST

Notes: 223.07' MP = 1.5 (TOP OF PIPE; +0.29' TO PLATE)

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/19/97 0730	2670	233.40	10.33		
1128	2908	233.46	10.39		
1531	3151	233.72	10.65		
1924	3384	233.95	10.88 ~~108~~		
2335	3635	234.44	11.37		
10/20/97 0659	4079	234.84	11.77		
1014	4274	234.79	11.72		
1514	4574	235.00	11.93		
1915	4815	235.18	12.11		
10/21/97 1004	5704	235.76	12.69		

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AQUIFER RECOVERY TEST DATA

Well No. TW-6

PUMP WELL NO. 7MW-14

OBSERVATION WELL NO. TW-6

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ ~~Altitude~~ MP +1.50'

SWL from MP 233.07 How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 1100			0				Pump off
1112			12	235.78			
1137			37	235.55			
1204			64	235.25			
1228			88	234.88			
1248			108	234.47			
1340			160	233.88			
1436			216	233.31			
1536			276	232.76			
1634			334	232.36			
1912			492	231.24			
2109			609	230.69			
22oct 728				228.84			
912				228.66			
1104				228.43			

Aquifer Testing Data

Well No.: 7B0102-1 Project: UNIT 7 Pump Test Page 1 of 3

Notes: 0935hr DTW = 246.09' underflow = 34

MP = 1.33' P on @1100 10/17/97 K2-K3 = 170'

r = 445 ρ = 1

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/17/97 11:20	0:20	246.82	0.73		TOP OF DISCHARGE PIPE
10/17/97 11:31	0:31	247.02	0.93		"
10/17/97 11:45	0:45	247.24	1.15		"
10/17/97 12:00	~~1:00~~ 60	247.41	1.32		"
10/17/97 12:20	~~1:20~~ 80	247.98	1.89		"
10/17/97 12:35	~~1:35~~ 95	248.39	2.30		"
10/17/97 13:25	145	249.45	3.36		"
14:35	215	250.58	4.49		"
1535	275	251.18	5.09		"
1645	345	252.34	6.25		"
1840	460	253.36	7.27		"
2040	580	254.24	8.15		"
2245	705	254.92	8.83		"
10/18/97 0041	821	255.68	9.59		
0317	977	256.25	10.16		
0556	1136	257.72	11.63 ?		(could be 256.72 ??) ← PROBABLY READING IS CRAP
0850	1310	257.13	11.04		OK
1255	1555	257.53	11.44		
1643	1783	257.97	11.88		
2021	2001	258.38	12.29		
2357	2217	259.00	12.91		
10/19/97 0739	2679	259.66	13.57		

Aquifer Testing Data

Well No.: 730 102 -1 Project: UNIT 7 PUMP TEST Page 2 of 3

Notes: SWL = 246.82'

MP (TOP) = +1.34 (GUESS)

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/19/97 0739	2679	259.66	12.84		
1135	2915	259.72	12.90		
1536	3156	259.96	13.14		
1931	3391	260.23	13.41		
2344	3644	260.73	13.91		
10/20/97 0714	4094	261.17	14.35		
1024	4284	261.13	14.31		
1520	4580	261.39	14.52		
1922	4822	261.55	14.73		
10/21/97 0703	5523	262.66	15.84		184.69@0708
1009	5709	262.69	15.87		

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AQUIFER RECOVERY TEST DATA

Well No. 780102-1

PUMP WELL NO. 7MW14

OBSERVATION WELL NO. 780102-1

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ ~~Altitude~~ MP +1.33'

SWL from MP 246.09' How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 1100			0				P. OFF
1107			7	262.17			
1133			33	262.03			
1158			58	261.52			
1219			79	260.24			
1250			110	259.62			
1338			158	258.53			
1431			211	257.52			
1532			272	256.58			
1630			330	255.91			
1717			497	255.19			
2112			612	254.49			
2201 732				252.46			
916				252.22			
1107				251.98			

Aquifer Testing Data

Well No.: UPHW-8 Project: Mine Unit 7 Page 1 of 3

Personnel: _____ Type of Test: _____

Total Depth: _____ Hole Dia.: _____ How Drilled: _____ Aquifer: m=55

Casing Dia.: _____ Casing Type: _____ Screen Type: _____ Open Interval: 19'

Pump Depth: _____ Pump Type: _____ Drop Pipe: _____

SWL: 248.20 MP: +2.3 Ground El.: _____ Equipment: _____

Notes: Cpp=0.41 r=475

p=1

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/7/97 1058	0	248.20	0		
1125	25	248.75	0.55		
1147	47	248.78	0.58		
1212	72	248.79	0.59		
1235	95	248.92	0.72		
1305	125	249.26	1.06		
1420	200	249.91	1.71		
1520	260	250.17	1.97		
1635	335	250 73	2.53		
1825	445	251 46	3.26		
2030	570	252 22	4.02		
2230	690	252 86	4.66		
10/8/97 0020	800	253.60	5.40		EOT
0258	958	254.28	6.08		
0638	1178	255.02	6.82		
1000	1380	255.37	7.17		
1326	1586	255.93	7.73		
1630	1770	256.39	8.19		
2005	1985	256.87	8.67		
2327	2187	257.51	9.31		
10/9/97 0718	2658	258.30	10.10		

Aquifer Testing Data

Well No.: NPHW-8 Project: UNIT 7 PUMP TEST Page 2 of 3

Notes: 248.20' MP = +2.30 ?

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/19/97 0718	2658	258.30	10.10		
1121	2901	258.45	10.25		
1524	3144	258.77	10.57		
1918	3378	259.06	10.86		
2325	3565	259.60	11.40		
10/20/97 0646	4004	260.10	11.90		
1010	4210	260.10	11.90		
1509	4504509	260.36	12.16		
1910	4750	260.58	12.38		
10/21/97 0958	5698	261.28	13.08		

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AQUIFER RECOVERY TEST DATA

Well No. NPHW-8

PUMP WELL NO. 7MW14

OBSERVATION WELL NO. NPHW-8

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above / Below LSD _____ ~~Altitude~~ MP +2.30'

SWL from MP 248.20 How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 1100			0				Pump OFF
1117			17	261.32			
1143			43	261.34			
1208			68	261.28			
1232			92	261.18			
1257			117	260.98			
1349			169	260.61			
1445			225	260.16			
1542			282	259.73			
1638			338	259.37			
1908			488	258.42			
2106			606	257.81			
22 Oct 724				255.57			
908				255.31			
1101				255.02			

Aquifer Testing Data

Well No.: 7AV/14-2 Project: Mint Unit 7 Page 1 of 73

Personnel: _____ Type of Test: _____

Total Depth: _____ Hole Dia.: _____ How Drilled: _____ Aquifer: Ka = 40'

Casing Dia.: _____ Casing Type: _____ Screen Type: _____ Open Interval: 12'

Pump Depth: _____ Pump Type: _____ Drop Pipe: _____

SWL: 219.67 MP: +1.85 Ground El.: _____ Equipment: _____

Notes: r=610

P=1

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
17 Oct 10:50	0	219.67	0		Top of Prop Pipe
11:15	15	219.65	+0.02		"
1145	45	219.61	+0.06		"
12:06	66	219.62	+0.05		"
12:31	91	219.65	+0.02		"
12:58	118	219.65	+0.02		"
14:45	225	219.70	0.03		"
15:15	255	219.98	0.31		"
16:30	330	220.38	0.71		"
18:15	435	221.27	1.57		Top of Pipe
20:20	560	221.86	2.19		"
2225	685	224.25	4.58 ?		S=2.58?? "
12/13/97 0012	792	223.08	3.41		OK
0251	951	223.67	4.00		
0623	1163	224.29	4.62		
0952	1372	224.65	4.98		
1320	15 [illegible]	225.13	5.46		
1624	1764	225.57	5.90		
1958	1978	226.00	6.33		
2316	2176	226.62	6.95		
10/19/97 0712	2652	227.34	7.67		

Aquifer Testing Data

Well No.: 7AV114-2 Project: UNIT 7 PUMP TEST

Notes:

219.67' MP = +1.85'

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10/19/97 0712	2652	227.34	7.67		
1114	2894	227.47	7.80		
1516	3136	227.79	8.12		
1910	3370	228.08	8.41		
2250	3590	228.55	8.88		
10/20/97 0630	4050	229.06	9.39		
1004	4264	229.03	9.36		
1504	4564	229.32	9.65		
1905	4805	229.51	9.84		
10/21/97 0954	5694	230.18	10.51		

Aqua Terra Consultants INC.
Taylor Place
1030 N. Main
Sheridan, Wy.
(307) 672-7133
•ENGINEERING •HYDROLOGY
•MINE PLANNING •WATER RIGHTS

AQUIFER RECOVERY TEST DATA

Well No. FAU 114-2

PUMP WELL NO. FMW-14

OBSERVATION WELL NO. FAU 114-2

State _____ County _____ T. ____ N. S. R. ____ E. W. Sec. _____ Tract _____

Personnel _____ Test type: 1. Single well drawdown 2. Single well recovery 3. Drawdown with obs. well 4. Recovery with obs. well 5. Other (specify) _____

Well Owner _____ Address _____

Driller _____ Method drilled: A. Air-rotary B. Bored or augered C. Cable-tool D. Dug H. Hyd-rotary J. Jetted P. Air-percussion R. Rev.-rotary T. Trenching V. Driven W. Drive-wash Z. Other

Total well depth _____ ft. Well diameter _____ in.

Casing diameter _____ in. Casing type _____

Type of screen or perforation _____ Interval of screen or perforation _____ Pump hp. & type _____ Pump depth ____ ft.

Aquifer _____ Aquifer lithology _____

Altitude of land surface _____ How determined _____ MP Above Below LSD _____ Altitude MP _____

SWL from MP _____ How Measured _____

Date and Hour	Time (minutes)	Time After Pump ON, t (minutes)	Time Since Pump OFF, t' (minutes)	Water Level (ft)	Residual Drawdown (ft)	Ratio t/t'	Comments
10/21/97 1100			0				P. OFF
1122			22	230.23			
1148			48	230.23			
1213			73	230.23			
1237			97	230.23			
1304			124	230.19			
1353			173	230.00			
1449			229	229.76			
1547			287	229.48			
1647			347	229.17			
1905			485	228.53			
2101			601	228.02			
2200 720				226.11			
905				225.89			
1057				225.61			

- Summary -

MM&E

Mine Unit 7 Perimeter Monitor Wells

Well	Date/Time 10/17	SWL	Date/Time 10/18	SWL	Date/Time 10/19	SWL	Date/Time 10/20	SWL
7MW-1			1240	323.00	1254	324.82	1122	325.96
7MW-2			1230	327.67	1245	329.35	1130	330.47
7MW-3			1408	284.52	1218	286.24	1124	287.71
7MW-4			1220	283.95	1235	285.61	1136	286.75
7MW-5			1417	259.97	1325	261.41	1131	262.20
7MW-6	1945	281.00			1145	284.68	1142	286.03
7MW-7			1445	284.91	1333	285.64	1139	286.59
7MW-8	1045	250.41	1315	255.65			1148	259.00
7MW-9			1454	282.64	1343	283.08	1146	283.87
7MW-10	1035	235.96	1310	243.43			1153	246.94
7MW-11			1501	246.82	1350	247.23	1154	247.82
7MW-12	OBSERVATION WELL							
7MW-13			1510	215.68	1358	215.91	1201	216.35
7MW-14	PUMP WELL							
7MW-15			1540	194.19	1412	194.40	1217	194.71
7MW-16			1200	317.49	1226	319.01	1159	320.16
7MW-17			1532	221.72	1420	222.06	1226	222.43
7MW-18			1115	306.34	1155	307.55	1205	308.54
7MW-19			1520	182.55	1405	182.96	1211	183.35
7MW-20			1120	259.82	1200	260.82	1211	261.67
7MW-21			1150	233.20	1216	234.46	1218	235.20
7MW-22	-							
7MW-23			1135	276.08	1210	276.78	1224	277.55
7MW-24			1015	272.47	1803	273.12	1229	274.57
7MW-25	1007	268.59	1755	269.25			1236	271.05
7MW-26	0958	259.22	1747	260.37			1241	262.44
7MW-27	0938	255.15	1735	257.27			1246	259.77
7MW-28	0948	244.20	1740	246.37			1251	248.17
7MW-29	0926	237.85	1727	241.47			1258	244.28
7MW-30	1610	212.47	1722	217.13			1303	220.84
7MW-31	1605	205.49	1717	210.23			1308	213.96
7MW-32	1600	222.16	1710	226.00			1313	229.60
7MW-33	1550	216.60	1810	219.70			1317	222.53
7MW-34	1730	208.69	1820	210.27			1322	212.60
7MW-35	1735	207.64	1825	210.72			1327	212.83
7MW-36			1830	203.55	1644	204.69	1332	205.48
7MW-37			1838	200.39	1638	201.33	1336	201.97
7MW-38					1629	136.39	1330	137.20
7MW-39	1440	144.29			1620	145.63	1312	146.03
7MW-40	1455	180.89			1450	181.63	1306	182.06
7MW-41	1538	209.32			1444	210.28	1301	210.41
7MW-42	1546	210.38			1436	211.27	1250	211.63
7MW-43	1521	197.53			1427	198.08	1242	198.35

	Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
3.24	7MW-1	1024	326.24						
2.99	7MW-2	1041	330.66						
4	7MW-3	0831	288.52						
3.56	7MW-4	0015	287.51						
3.46	7MW-5	0825	263.43						
5.81	7MW-6	0023	286.81						
2.2	7MW-7	0815	287.11						
9.39	7MW-8	0035	259.80						
1.64	7MW-9	0748	284.23						
11.75	7MW-10	0041	247.71						
1.35	7MW-11	0730	248.17						
	7MW-12	OBS							
0.91	7MW-13	0740	216.59						
	7MW-14	P. WELL							
0.63	7MW-15	0524	194.92	1327	194.93	10/21 1712	194.82			-0.2' in 17 hrs
3.13	7MW-16	0927	320.62						
0.97	7MW-17	0515	222.69						
2.91	7MW-18	0933	309.25						
1.45	7MW-19	0536	183.80						
2.48	7MW-20	0120	262.30						
2.55	7MW-21	0940	235.75			1748	235.89	2028	235.98
2.81	7MW-22					1740	257.02	2023	257.15
2.08	7MW-23	0149	278.16		MW21	747	236.05	11:18	236.02
2.83	7MW-24	0206	275.25	2200	MW22	742	257.31	11:14	257.30
3.18	7MW-25	0213	271.72						
3.97	7MW-26	0235	263.19						
5.43	7MW-27	0241	260.58						
5.33	7MW-28	0246	249.53						
7.22	7MW-29	0303	245.07						
9.32	7MW-30	0258	221.79						
9.38	7MW-31	0252	214.87						
8.36	7MW-32	0326	230.54						
6.64	7MW-33	0333	223.24						
4.22	7MW-34	0338	213.31						
4.3	7MW-35	0343	213.54						
2.61	7MW-36	0405	206.16						
2.21	7MW-37	0358	202.60						
1.41	7MW-38	0418	137.80						
1.77	7MW-39	0412	146.56						
1.58	7MW-40	0429	182.47						
1.49	7MW-41	0435	210.80						
1.64	7MW-42	0445	212.02						
1.35	7MW-43	0506	198.67						

10/21/97

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
7DM-1	915	225.47	~~1001~~	~~220.15~~			10/18/97 0836	225.78
7DM-2	935	226.94					10/18/97 0911	227.11
7DM-3A	1017	282.14	1626	282.24			10/18/97 0938	281.87
7DM-4B	921	213.32	1429	213.53			10/18/97 0202	213.55
7DM-5								
7DM-6								
Northern 7SM-1	~~912~~	161.75					10/18/97 0141	161.95
7SM-2	937	128.63					10/18/97 0116	128.75
7SM-3	1027	243.65	1618	243.87			10/18/97 0730	243.86
7SM-4	923	149.05	1426	149.13			10/18/97 0208	149.19
7SM-5	1032	170.40	1633	170.39			10/18/97 1040	170.35
7SM-6	930	177.38	1416	177.47			10/18/97 0826	177.36
7SM-7	13:09	156.96	1605	157.09			10/18/97 0658	157.08
7SM-8	1050	140.47	1720	140^{45}			10/18/97 1005	140^{44}
7SM-9	936	159.86	1740	159^{93}			10/18/97 0217	160.08
7SM-10	1009	185.26					10/18/97 0608	185.04
7SM-11	1253	132.21	1455	132^{21}	1930	132^{21}	10/18/97 1102	132^{17}
7SM-12	1256	209.81					10/18/97 1107	209^{78}
7SM-13	1300	164.02					10/18/97 1130	164^{06}
7TW-1	919	221.67					10/18/97 0130	221.72
7TW-2	933	219.91					10/18/97 0101	220.15
7TW-3	944	225.00	1915	225.^{10}			10/18/97 0752	225.93
7TW-4	941	243.72					10/18/97 0202	244.64
7TW-5	955	243.22	1608	243.34	1910	242^{97}	10/18/97 0709	244.30
7TW-6	958	223.07	1135	223.24	1451	223.55	Dwell	
NPHW-8								
NPHW-9A								
NPHW-11								
NPHW-13								
NPHW-14								
NPHW-16								

7AW-114 - 210.55 219.67

282.24

7MW-17? 319.95 @ 1645

7BC 107-2 10/18/97 @ 0958 = 264.33'

Mine Unit 7 Other Monitor Wells

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
7OM-1			0048	225.83	10/19/97 1810	225.53		
7OM-2			0041	227.15	10/19/97 1735	226.83		
7OM-3A			0016	281.58	10/19/97 1750	281.12		
7OM-4B	10/18/97 1902	213.33	0101	213.63	10/20/97 0035	213.57		
7SM-1			0053	162.09	10/19/97 1725	161.95		
7SM-2			0035	128.83	10/19/97 1731	128.65		
7SM-3			0012	243.98	10/19/97 1745	243.68		
7SM-4	10/18/97 1910	199.08	0108	149.26	10/20/97 0030	149.26		
7SM-5			0758	170.51	10/20/1997 0009	170.53		
7SM-6			0135	177.33	10/20/97 0044	177.13		
7SM-7			0141	157.04	10/20/97 0051	156.98		
7SM-8	10/18/97 2333	140.63	0724	140.61	2329	140.62		
7SM-9			0123	160.11	10/20/97 0021	160.02		
7SM-10			0743	184.93	2352	184.81		MP = 0.67'
7SM-11			0806	132.35	2300	132.38		
7SM-12			0820	209.93	2309	209.87		
7SM-13			0834	164.22	2317	164.19		
7TW-1	10/18/97 1917	222.13	0116	222.65	10/19/97 1720	222.94		
7TW-2			0030	221.31	10/19/97 1714	221.85		
7TW-3			0159	227.20	10/19/97 1708	227.23		
7TW-4			0213	245.76	10/19/97 1705	246.17		
7TW-5			0147	245.84	10/19/97 1655	246.53		
7TW-6				[illegible]				
			ALL ↑					
			10/19/97					
7BC 107-2			0750	266.89	2358	267.96		MP = 1.75'
					↑			
					ALL 10/19/97 UNLESS			
					MARKED OTHERWISE			

Mine Unit 7 Other Monitor Wells

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
7DM-1	0852	225.77	10/20 1539	225 58				
7DM-2	0859	227.12	10/20 1555	226 97				
7DM-3A	0816	281.11	10/20 1628	280 76	0945	280.77	22oct 945	280.29
7DM-4B			10/20 1639	213 42				
7SM-1	0856	162.12	10/20 1535	161 98				
7SM-2	0841	128.74	10/20 1550	128 74				
7SM-3	0811	243.94	10/20 1623	243 87				
7SM-4			10/20 1636	149 17				
7SM-5	0730	170.55	10/20 1731	170 48				
7SM-6	0756	177.13	10/20 1651	176 96				
7SM-7	0752	157.02	10/20 1613	156 93				
7SM-8	0651	140.64	10/20 1659	140 55				
7SM-9			10/20 1646	159 88				
7SM-10	0718	184.79	10/20 1724	184 63	0708	184.69	22oct 921	184.62
7SM-11	0623	132.40	10/20 1705	132 31				
7SM-12	0612	209.86	10/20 1710	209 70				
7SM-13	0602	164.23	10/20 1715	164 13				
7TW-1	0900	223.56	10/20 1530	223 60	0929	224.29		
7TW-2	0804	222.64	10/20 1545	222 23	0923	223.47		
7TW-3	0930	228.66	10/20 1600	228 67	0934	229.47		
7TW-4	0830	247.00	10/20 1606	247 07	0756	247.70		
7TW-5	0910	247.61	10/20 1617	247 69	0959	248.57		
7TW-6	0825	247.03						
7BC107-2	0722	268.38			0717	269.50	20oct 1009	254.67
	↑	↑			10/21/97			
	ALL 10/20/97				↑			
					ALL			

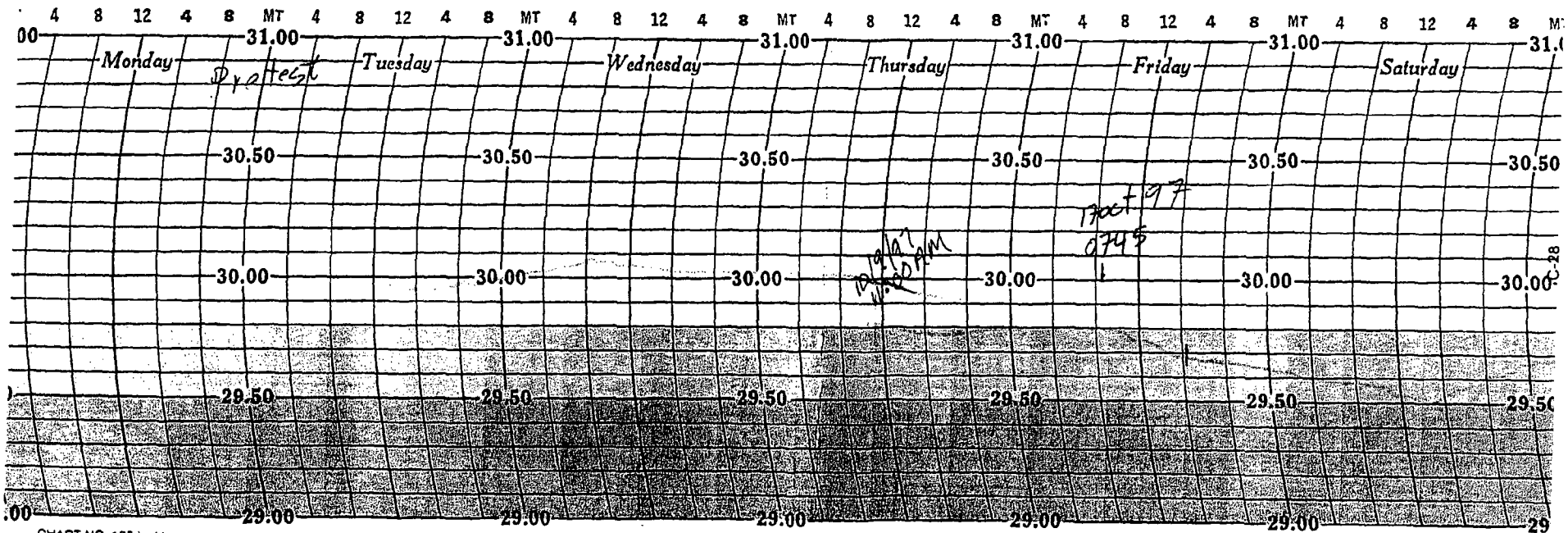
MM&E 10/22 Mine Unit 7 Other Monitor Wells Page 1 of 2

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
MW9	12:28	283.55	14:12	283.52	15:37	283.65	16:30	283.78
MW11	12:19	246.86	14:16	247.14	15:42	248.67	16:34	249.62
MW13	12:02	216.12	14:20	216.37	15:45	220.26	16:37	221.72
MW15	12:38	194.41	14:03	194.49	15:30	197.01	16:22	198.20
MW17	12:41	221.57	14:00	221.57	15:26	222.42	16:25	223.11
MW19	12:35	183.62	14:06	183.65	15:33	183.85	16:20	183.87
MW38	12:33	137.62	14:01	137.68	15:14	137.58	16:24	137.42
MW39	12:30	146.42	13:58	146.35	15:10	146.37	16:20	146.22
MW40	12:26	182.54	14:03	182.55	15:16	182.56	16:27	182.42
MW41	12:21	210.71	14:06	210.70	15:19	210.69	16:30	210.57
MW42	12:16	211.99	14:10	212.02	15:23	211.92	16:34	211.84
MW43	12:11	198.51	14:14	198.55	15:26	198.50	16:39	198.41
W.L.	START	TOTALIZER						
BEU-1	12:55	0	13:54	1220	15:50	3370	No Reading	
A259-1	12:55	0	13:56	*	15:37	RESTART 0	No Reading	
SM1	12:10	161.39	14:16	161.39	15:15	161.42	16:01	161.37
DM1	12:15	224.76	14:19	225.05	15:12	224.98	16:14	224.92

* SHUT DOWN FROM INSUFFICIENT POWER FROM GENERATOR AND MICE CLOGGING TURBINE OF FLOW METER. DISMANTLED AND REPAIRED TURBINE AND GOT KABOTA GENERATOR FROM UNIT 8.

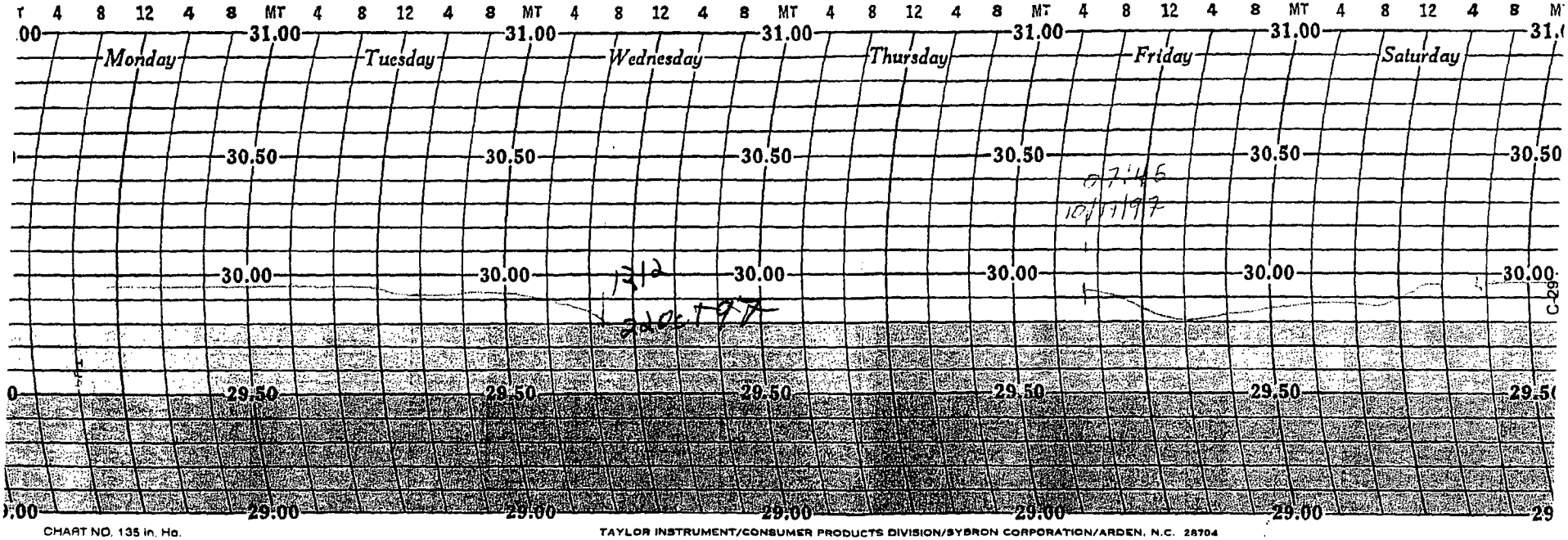
→ BOTH PUMP WELLS FLOWING AT 20.6 G.P.M.

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
MW9	7:43	286.82						
MW11	7:49	259.49						
MW13	7:54	235.28						
MW15	8:01	213.01						
MW17	8:05	238.01						
MW19	8:05	186.96						
MW38	7:45	137.68						
MW39	7:48	147.78						
MW40	7:51	184.15						
MW41	7:54	212.25						
MW42	7:58	214.01						
MW43	8:01	201.65						
		Tamarizer						
BE61-1	7:34	23130	END					
AZ59-1	7:40	19310	END					
SM-1	8:09	160.98						
DM-1	8:09	224.62						



MM&E, llc

April 10, 1998



MM&E, llc

April 10, 1998

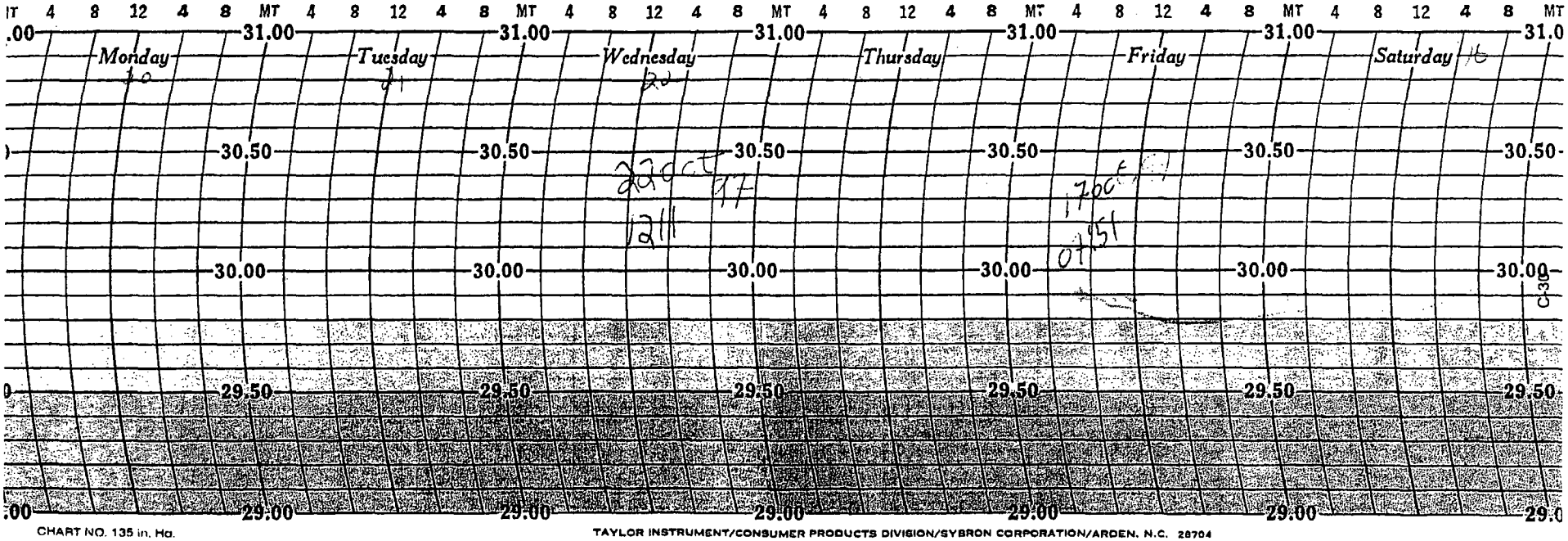


CHART NO. 135 in. Hg.

TAYLOR INSTRUMENT/CONSUMER PRODUCTS DIVISION/SYBRON CORPORATION/ARDEN, N.C. 28704

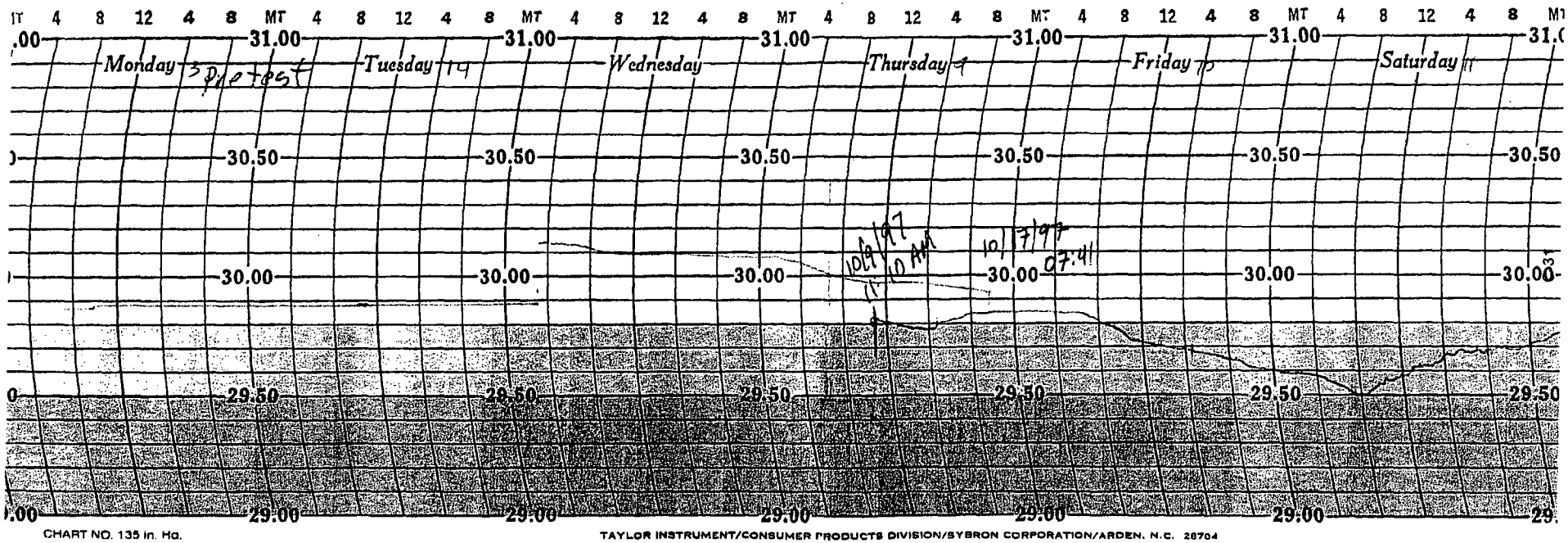


CHART NO. 135 In. Hg.

TAYLOR INSTRUMENT/CONSUMER PRODUCTS DIVISION/SYBRON CORPORATION/ARDEN, N.C. 28704

Aquifer Testing Data

Well No.: MW-14 Project: Mine Unit 7 Page 1 of 1

Personnel: Hush, Joe Type of Test: Pump test - multi well (pretest)

Total Depth: _____ Hole Dia.: _____ How Drilled: _____ Aquifer: K-Sand

Casing Dia.: _____ Casing Type: _____ Screen Type: _____ Open Interval: _____

Pump Depth: _____ Pump Type: 10 HP Drop Pipe: _____

SWL: 247.02 10 oct MP: steel lip on drop pipe +1.3 Ground El.: _____ Equipment: _____

Notes: N_2 gauge reads 93.5 PSI so pump should be @ 463'.

C.F.: 16

Date and Time	Time Since Pump On	~~Water Level~~ PSI (ft)	Drawdown (ft)	Discharge (gpm)	Comments
Pretest					
11 oct 1450	0	94		0	N_2 gauge zeros
1452	2	72		35.5	Q_i = 50 gpm Q_{bucket} = 37 gpm
1455	5	69		34.7	
1500	10	68		35.1	Q_{tot} = 330 gal
1502.5	12.5	68		35.1	q = 420
1505	15	67		35.1	510 Q_{bucket} = 35 gpm
1510	20	67		35.1	680
1513	23	66.5		35.1	786
1515	25	66		35.1	860
1520	30	65.5		35.1	1030 open flow control valve
1522.5	32.5	58		48.8	1140
1525	35	55.5		48.3	1260
1527.5	37.5	54.5		48.1	1380
1530	40	54.0		47.9	1500 pump off

Aquifer Testing Data

Well No.: 7DM3A Project: Mine unit 7 Page 1 of 1

Personnel: _____ Type of Test: _____

Total Depth: _____ Hole Dia.: _____ How Drilled: _____ Aquifer: _____

Casing Dia.: _____ Casing Type: _____ Screen Type: _____ Open Interval: _____

Pump Depth: _____ Pump Type: _____ Drop Pipe: _____

SWL: 302.55 MP: _____ Ground El.: _____ Equipment: _____

Notes: lower monitor sandwell w/ Troll set 10 oct @ ~~11~~ 16:45 reads 50.51
so set @ 353.06

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10 oct 17:10	Test	confirmed	running	on Troll	
11 oct 1415		291.37			no sign of stir 10 oks. OK. Probe reads 61.069

Aquifer Testing Data

Well No.: 7BC107-2 Project: Mine Unit 7 Page 1 of 1

Personnel: Hugh, Joe, Ron, Jeff Type of Test: pump test, multi-well

Total Depth: _____ Hole Dia.: ≥ 8" How Drilled: rotary Aquifer: K Sand

Casing Dia.: 4½ Casing Type: pvc Screen Type: open Open Interval: _____

Pump Depth: — Pump Type: — Drop Pipe: —

SWL: 249.61 MP: _____ Ground El.: _____ Equipment: Slope (Cosema 500')

Notes: observation well w/Troll data collector set 1540, 100ct reads 58.95'
50 probe is @ 308.56'

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
14:34	249.40				disturbed by cows, may have stirred about 0.1' probe reads 59.422

Aquifer Testing Data

Well No.: 7SM-10 Project: mine unit 7 Page 1 of 1

Personnel: Hugh Type of Test: multi-well Pump

Total Depth: _____ Hole Dia.: _____ How Drilled: _____ Aquifer: (upper sand)

Casing Dia.: _____ Casing Type: _____ Screen Type: _____ Open Interval: _____

Pump Depth: _____ Pump Type: _____ Drop Pipe: _____

SWL: 191.85 MP: _____ Ground El.: _____ Equipment: Troll, slope 500'

Notes: upper monitor zone well w/ troll transducer set 10oct @ 16:15 reads 30.49
50 set @ 222.34

Date and Time	Time Since Pump On	Water Level (ft)	Drawdown (ft)	Discharge (gpm)	Comments
10oct 1714	Test confirmed running on Troll				
11oct 1421		187.50			no sign of SLIP. looks OK probe reads 34.295

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
7BC107-2	10oct/1443	249.61	11oct/					
7BH1201		~~288.56~~	743	288.56				
7BH1181			747	280.60				
7BG112-1			756	269.32				
BE61-1			840	230.72				
BD60-1			846	226.34				
AS-65-1			929	157.14				
AU-63-1			932	187.40				
AT-72-1			1000	213.82				
AU-146-1			11:17	270.14				
AT-142-1			11:30	279.82				
AU-138-1			11:34	303.49				
AU-130-1			11:43	264.46				
AT-129-1			11:49	267.15				
AV-122-1			11:52	242.80				
AU-114-2			11:59	220.04				
AU-102-1			12:08	250.33				
AV-96-1			12:15	242.65				
AU-88-1			12:20	213.08				
AY-88-1			12:26	227.34				
AW-84-1			12:33	216.31				
AX-75-1			12:44	220.25				
BE-68-2			13:13	231.80				
BF-74-1			13:16	227.78				
BE-68-2			13:25	237.32				
BJ-82-1			13:35	240.78				
BH-92-2			13:44	264.11				
BG-92-1			13:51	277.49				
BF-96-1			13:56	273.97				
BG-100-1			13:59	271.19				
BC-107-2	Transducer							

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL
7MW-1			11 oct 752	320.17				
7MW-2			7:38	325.42				
7MW-3			808	282.36				
7MW-4			7:33	281.64				
7MW-5			8:10	258.58				
7MW-6			7:27	279.91				
7MW-7			8:17	284.79				
7MW-8			7:22	250.58				
7MW-9			8:21	292.96				
7MW-10	~~7:19~~	~~236.15~~	7:19	236.15				
7MW-11			8:25	247.79				
7MW-12	10 oct 97 1746	254.54	11 oct 7:15	254.38				
7MW-13			837	217.04				
7MW-14	Pump well							
7MW-15			855	196.27				
7MW-16			11:39	315.35				
7MW-17			858	224.87				
7MW-18			11:25	305.06				
7MW-19			903	187.13				
7MW-20			11:21	258.94				
7MW-21			11:09	232.89	21 oct 1748	235.89		
7MW-22			11:06	254.21	21 oct 1740	257.02		
7MW-23			11:02	275.27				
7MW-24			10:58	272.07				
7MW-25			10:55	268.03				
7MW-26			10:51	258.94				
7MW-27			10:44	255.28				
7MW-28			10:48	244.15				
7MW-29			10:41	237.78				
7MW-30			10:24	213.21				
7MW-31			10:26	206.47				
7MW-32			10:23	223.62				
7MW-33			10:20	218.49				
7MW-34			10:18	210.91				
7MW-35			10:15	212.48				
7MW-36			10:11	205.31				
7MW-37			10:08	202.71				
7MW-38			9:53	140.71				
7MW-39			9:38	149.32				
7MW-40			9:44	185.94				
7MW-41			9:47	214.62				
7MW-42			9:20	216.06				
7MW-43			9:13	202.63				

Sticky w/mud

Well	Date/Time	SWL	Date/Time	SWL	Date/Time	SWL	Date/Time	~~MP SWL~~
7DM-1	11 Oct 8:43	225.15						1.3
7DM-2	13:20	226.58						2.0
7DM-3A	Transducer							
7DM-4B	12:54	213.09						1.4
~~7DM-5~~								
~~7DM-6~~								
7SM-1	8:48	161.47						1.35
7SM-2	13:22	128.30						1.7
7SM-3	13:48	242.91						0.9
7SM-4	12:50	148.42						1.4
7SM-5	759	170.13						1.4
7SM-6	12:37	177.99						1.5
7SM-7	12:23	156.70						1.7
7SM-8	12:05	140.18						1.1
7SM-9	1003	159.78						1.5
7SM-10	Transducer							
7SM-11	11:55	132.00						1.5
7SM-12	11.45	209.76						1.3
7SM-13	11:13	163.74						1.25
7TW-1	13:04	224.53						
7TW-2	13:28	221.71						
7TW-3	13:32	226.16						
7TW-4	13:37	244.39						
7TW-5	12:29	244.35						
7TW-6	12:11	223.94						
NPHW-8	12:03	249.44						
NPHW-9A	12:17	213.69						
NPHW-11	12:48	218.02						
NPHW-13	903	270.55						
NPHW-14	13:41	243.34						
NPHW-16	12:40	220.03						

ATTACHMENT D

Laboratory Test Results

Permeability Test
ASTM D 5084 (Method C: Falling Head, Rising Tailwater)

Project: BHXX-97-233
Donna Winchers
COGEMA Mining
Mills, Wyoming

Date: 03/13/98

Field No.: JC-8664C Sample: 1 Depth: 356 - 358'

Sample Description: Claystone, medium plasticity, grey.
(Undisturbed)

Initial		Final	
Wt Specimen + Tare Wet:	297.00	Wt Specimen + Tare Wet:	1005.00
Wt. Specimen + Tare Dry:	285.00	Wt. Specimen + Tare Dry:	917.10
Wt. Tare:	154.40	Wt. Tare:	152.40
Moisture Content:	9.2%	Moisture Content:	11.5%

Initial Diameter (in):	2.9	Initial Area, A (in2):	6.79	Initial Wt. (gm):	835.60
Initial Ht. (in):	3.3	Initial Dry Unit Wt. (pcf):	130.8	Initial Saturation:	78.0%
Final Ht., L (in):	3.3	Final Area, A (in2):	6.79		
Final Diameter (in):	2.9	Final Dry Unit Wt. (pcf):	130.8	Final Saturation:	97.5%
Sp. Gravity:	2.785	Void Ratio, e	0.3288		

Burette Area, a (cm2): 0.08
Permeant Liquid: De-aired, de-ionized water
Operating Pressures (psi): Cell: 125.0 Head: 123.0 Tail: 120.0
Maximum Effective Consolidation Pressure (psi): 5.0 Overburden (psf): 720.0
Minimum Effective Consolidation Pressure (psi): 2.0 Overburden (psf): 288.0
Skempton's B coeficient: 1.0

	Time (t) sec	H1 cm	H2 cm	hi cm	hf cm	havg cm	Average Hydraulic Gradient	Method C K cm/sec
Initial	0	15.6	36.0	231.4				
Final	29760	22.9	29.5		217.6	224.5	26.9	
Result								1.6E-08
Initial	0	22.9	29.5	217.6				
Final	62040	35.2	17.6		193.4	205.5	24.7	
Result								1.5E-08
Initial	0	2.4	49.0	257.6				
Final	79680	21.1	31.8		221.7	239.7	28.8	
Result								1.5E-08
Initial	0	3.0	48.4	256.4				
Final	81780	15.6	36.0		231.4	243.9	29.3	
Result								9.8E-09
Average Permeability								1.4E-08
Assigned Permeability								

Remarks:

Note: The hydraulic conductivity of a soil can vary significantly depending on its density, its structure and degree of saturation, the remolding moisture content and method, permeant, temperature, and other factors.

T. Matt Koster, EIT
Materials Engineer

Permeability Test

ASTM D 5084 (Method C: Falling Head, Rising Tailwater)

Project: BHXX-97-233
Donna Wichers
COGEMA Mining
Mills, Wyoming

Date: 03/13/98

Field No.: JC-8664C **Sample:** 2 **Depth:** 615 - 616

Sample Description: Claystone, medium plasticity, grey
(UNDISTURBED)

Initial		Final	
Wt Specimen + Tare Wet:	301.40	Wt Specimen + Tare Wet:	916.60
Wt. Specimen + Tare Dry:	286.10	Wt. Specimen + Tare Dry:	825.70
Wt. Tare:	116.90	Wt. Tare:	128.30
Moisture Content:	9.0%	Moisture Content:	13.0%

Initial Diameter (in):	2.9	Initial Area, A (in2):	6.74	Initial Wt. (gm):	758.80
Initial Ht. (in):	3.1	Initial Dry Unit Wt. (pcf):	125.8	Initial Saturation:	68.7%
Final Ht., L (in):	3.1	Final Area, A (in2):	6.74		
Final Diameter (in):	2.9	Final Dry Unit Wt. (pcf):	125.8	Final Saturation:	99.0%
Sp. Gravity:	2.745	Void Ratio, e	0.3620		

Burette Area, a (cm2):	1.00	Permeant Liquid:	De-aired, de-ionized water
Operating Pressures (psi): Cell:	128.0	Head: 123.0	Tail: 120.0
Maximum Effective Consolidation Pressure (psi):	8.0	Overburden (psf):	1152.0
Minimum Effective Consolidation Pressure (psi):	5.0	Overburden (psf):	720.0
Skempton's B coeficient:	1.0		

	Time (t) sec	H1 cm	H2 cm	hi cm	hf cm	havg cm	Average Hydraulic Gradient	Method C K cm/sec
Initial	0	0.4	50.0	260.6				
Final	273960	15.6	34.8		230.2	245.4	30.9	
Result								4.1E-08
Initial	0	0.0	49.9	260.9				
Final	90780	5.2	44.7		250.5	255.7	32.2	
Result								4.1E-08
Initial	0	5.2	44.7	250.5				
Final	70500	9.0	40.9		242.9	246.7	31.1	
Result								4.0E-08
Initial	0	9.0	40.9	242.9				
Final	82800	13.5	36.4		233.9	238.4	30.0	
Result								4.2E-08
Average Permeability								4.1E-08
Assigned Permeability								

Remarks:

Note : The hydraulic conductivity of a soil can vary significantly depending on its density, its structure and degree of saturation, the remolding moisture content and method, permeant, temperature, and other factors.

T. Matt Koster, EIT
Materials Engineer

Permeability Test
ASTM D 5084 (Method C: Falling Head, Rising Tailwater)

Project: BHXX-97-233
Donna Wichers
COGEMA Mining
Mills, Wyoming

Date: 03/13/98

Field No.: JC-8665C **Sample:** 1 **Depth:** 340 - 341'

Sample Description: Claystone, medium plasticity, grey.
(Undisturbed)

Initial		Final	
Wt Specimen + Tare Wet:	576.60	Wt Specimen + Tare Wet:	1131.90
Wt. Specimen + Tare Dry:	543.80	Wt. Specimen + Tare Dry:	1026.30
Wt. Tare:	151.70	Wt. Tare:	116.90
Moisture Content:	8.4%	Moisture Content:	11.6%

Initial Diameter (in):	2.9	Initial Area, A (in2):	6.79	Initial Wt. (gm):	996.00
Initial Ht. (in):	3.9	Initial Dry Unit Wt. (pcf):	130.8	Initial Saturation:	70.2%
Final Ht., L (in):	3.9	Final Area, A (in2):	6.79		
Final Diameter (in):	2.9	Final Dry Unit Wt. (pcf):	130.8	Final Saturation:	97.5%
Sp. Gravity:	2.793	Void Ratio, e	0.3332		

Burette Area, a (cm2): 0.08
Permeant Liquid: De-aired, de-ionized water
Operating Pressures (psi): Cell: 128.0 Head: 123.0 Tail: 120.0
Maximum Effective Consolidation Pressure (psi): 8.0 Overburden (psf): 1152.0
Minimum Effective Consolidation Pressure (psi): 5.0 Overburden (psf): 720.0
Skempton's B coeficient: 1.0

	Time (t) sec	H1 cm	H2 cm	hi cm	hf cm	havg cm	Average Hydraulic Gradient	Method C K cm/sec
Initial	0	0.8	49.2	259.4				
Final	9600	10.0	40.0		241.1	250.2	25.0	
Result								7.1E-08
Initial	0	1.0	49.0	259.0				
Final	16200	16.5	33.5		226.0	243.5	24.3	
Result								7.4E-08
Initial	0	0.2	48.8	259.6				
Final	11520	11.6	37.5		236.9	248.3	24.8	
Result								7.4E-08
Initial	0	0.7	48.8	259.2				
Final	9720	10.0	39.5		240.5	249.8	25.0	
Result								7.2E-08
Average Permeability								7.3E-08
Assigned Permeability								

Remarks:

Note: The hydraulic conductivity of a soil can vary significantly depending on its density, its structure and degree of saturation, the remolding moisture content and method, permeant, temperature, and other factors.

T. Matt Koster, EIT
Materials Engineer

Permeability Test
ASTM D 5084 (Method C: Falling Head, Rising Tailwater)

Project: BHXX-97-233
Donna Winchers
COGEMA Mining
Mills, Wyoming

Date: 03/13/98

Field No.: JC-8665C **Sample:** 2 **Depth:** 677 - 678'

Sample Description: Claystone, medium plasticity, grey.
(UNDISTURBED)

Initial		Final	
Wt Specimen + Tare Wet:	211.70	Wt Specimen + Tare Wet:	927.20
Wt. Specimen + Tare Dry:	206.60	Wt. Specimen + Tare Dry:	840.00
Wt. Tare:	151.70	Wt. Tare:	115.00
Moisture Content:	9.3%	Moisture Content:	12.0%

Initial Diameter (in):	2.9	Initial Area, A (in2):	6.74	Initial Wt. (gm):	779.70
Initial Ht. (in):	3.1	Initial Dry Unit Wt. (pcf):	130.0	Initial Saturation:	76.3%
Final Ht., L (in):	3.1	Final Area, A (in2):	6.74		
Final Diameter (in):	2.9	Final Dry Unit Wt. (pcf):	130.0	Final Saturation:	98.8%
Sp. Gravity:	2.792	Void Ratio, e	0.3405		

Burette Area, a (cm2): 1.00
Permeant Liquid: De-aired, de-ionized water
Operating Pressures (psi): Cell: 128.0 Head: 123.0 Tail: 120.0
Maximum Effective Consolidation Pressure (psi): 8.0 Overburden (psf): 1152.0
Minimum Effective Consolidation Pressure (psi): 5.0 Overburden (psf): 720.0
Skempton's B coeficient: 1.0

	Time (t) sec	H1 cm	H2 cm	hi cm	hf cm	havg cm	Average Hydraulic Gradient	Method C K cm/sec
Initial	0	0.0	50.0	261.0				
Final	111180	16.8	33.2		227.4	244.2	31.0	
Result								1.1E-07
Initial	0	0.0	50.0	261.0				
Final	71880	10.6	39.4		239.8	250.4	31.8	
Result								1.1E-07
Initial	0	0.0	50.0	261.0				
Final	90120	13.1	37.0		234.9	248.0	31.5	
Result								1.1E-07
Initial	0	0.2	50.0	260.8				
Final	84660	12.7	37.5		235.8	248.3	31.5	
Result								1.1E-07
Average Permeability								1.1E-07
Assigned Permeability								

Remarks:

Note: The hydraulic conductivity of a soil can very significantly depending on its density, its structure and degree of saturation, the remolding moisture content and method, permeant, temperature, and other factors.

T. Matt Koster, EIT
Materials Engineer

ATTACHMENT E

MODFLOW Ground Water Model Files

u7-120.wel

```
      16       -41
      16
       1        41        45      -193
       1        37        51      -193
       1        39        47     -6353
       1        40        54      -193
       1        44        54      -193
       1        46        52      -193
       1        49        51      -193
       1        54        51      -193
       1        58        51      -193
       1        62        51      -193
       1        66        51      -193
       1        36        57      -193
       1        40        58      -193
       1        42        60      -193
       1        48        59      -193
       1        52        57      -193
```

u7.oc

```
      -3        -3        30        31
       0         1         1         1
       1         1         1         1
```

u7.sip

```
     100         5
1.5000000 0.0010000         1       0.0         0
```

u7-trans.bcf

```
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3
       0       8.0
       0     150.0
       0     150.0
       0     .0001
       0      1.64
       0     4100.
       0        .2
       0     4150.
```

u7-trans.bas

```
Unit 7 velocity model

       1       100       100         1         4
 11 12  0  0  0  0  0  0 19  0  0 22  0  0  0  0  0  0  0  0  0  0  0  0
       0         1
       1         1                (26I3)         2
 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
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  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1 -1
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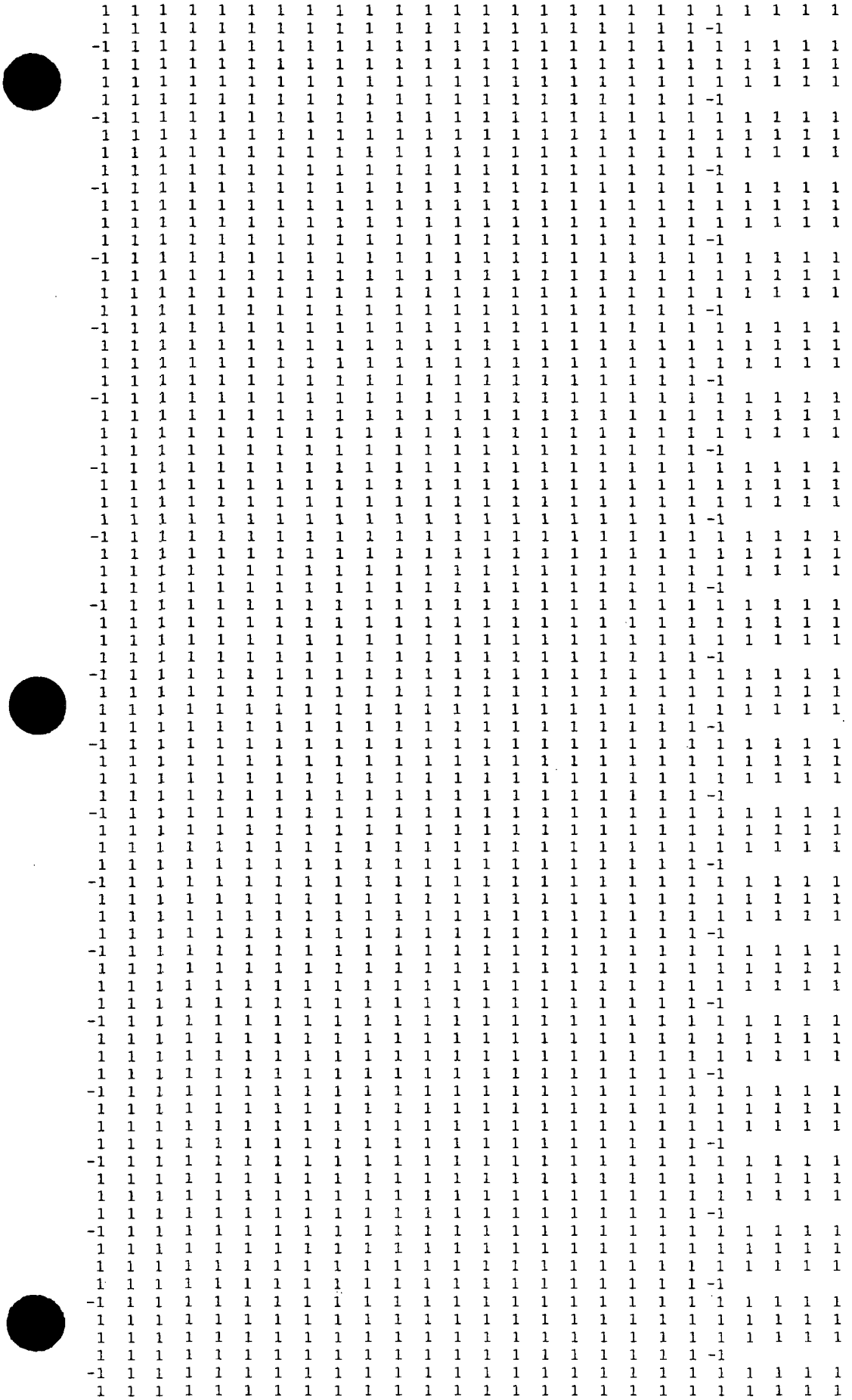

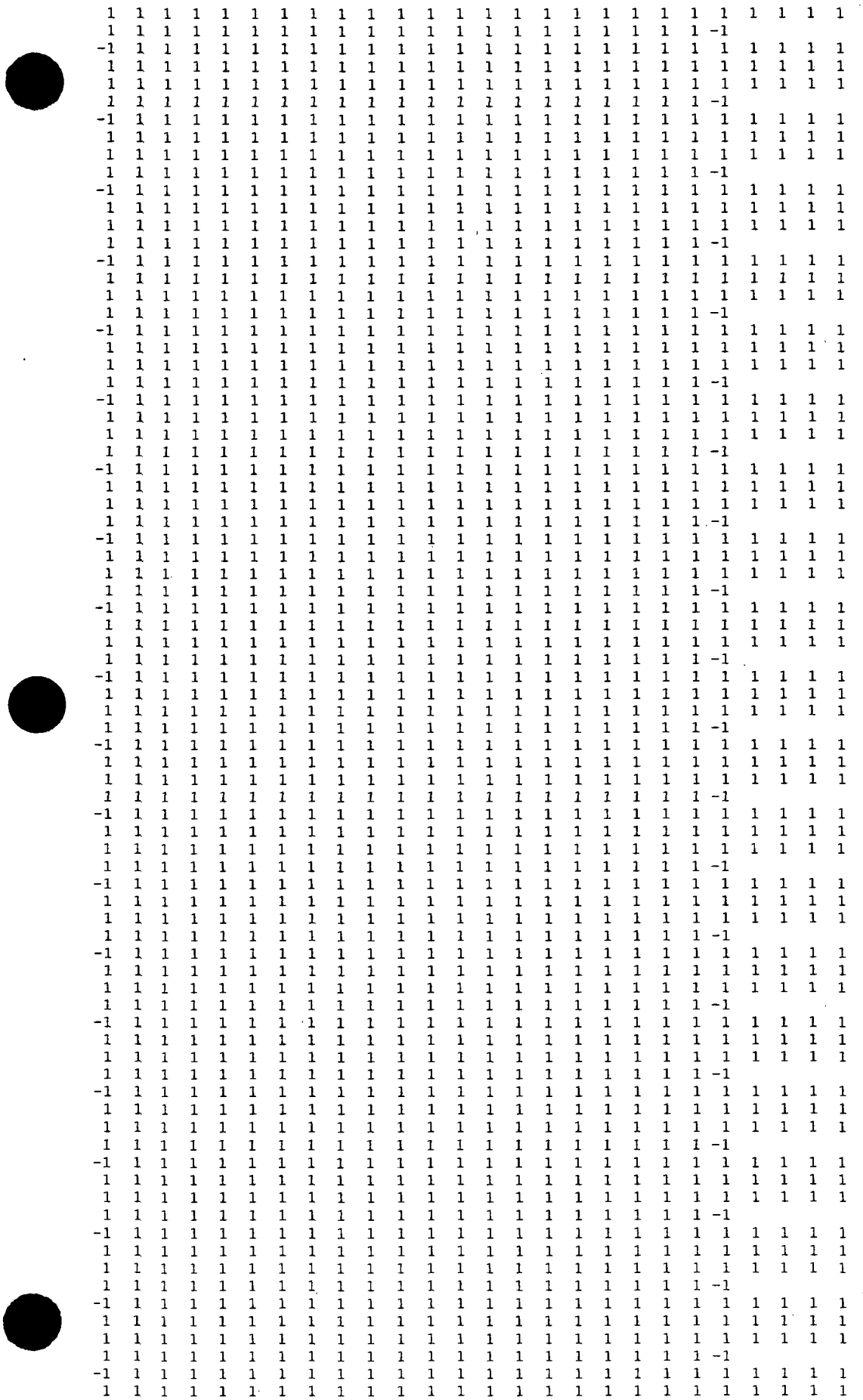

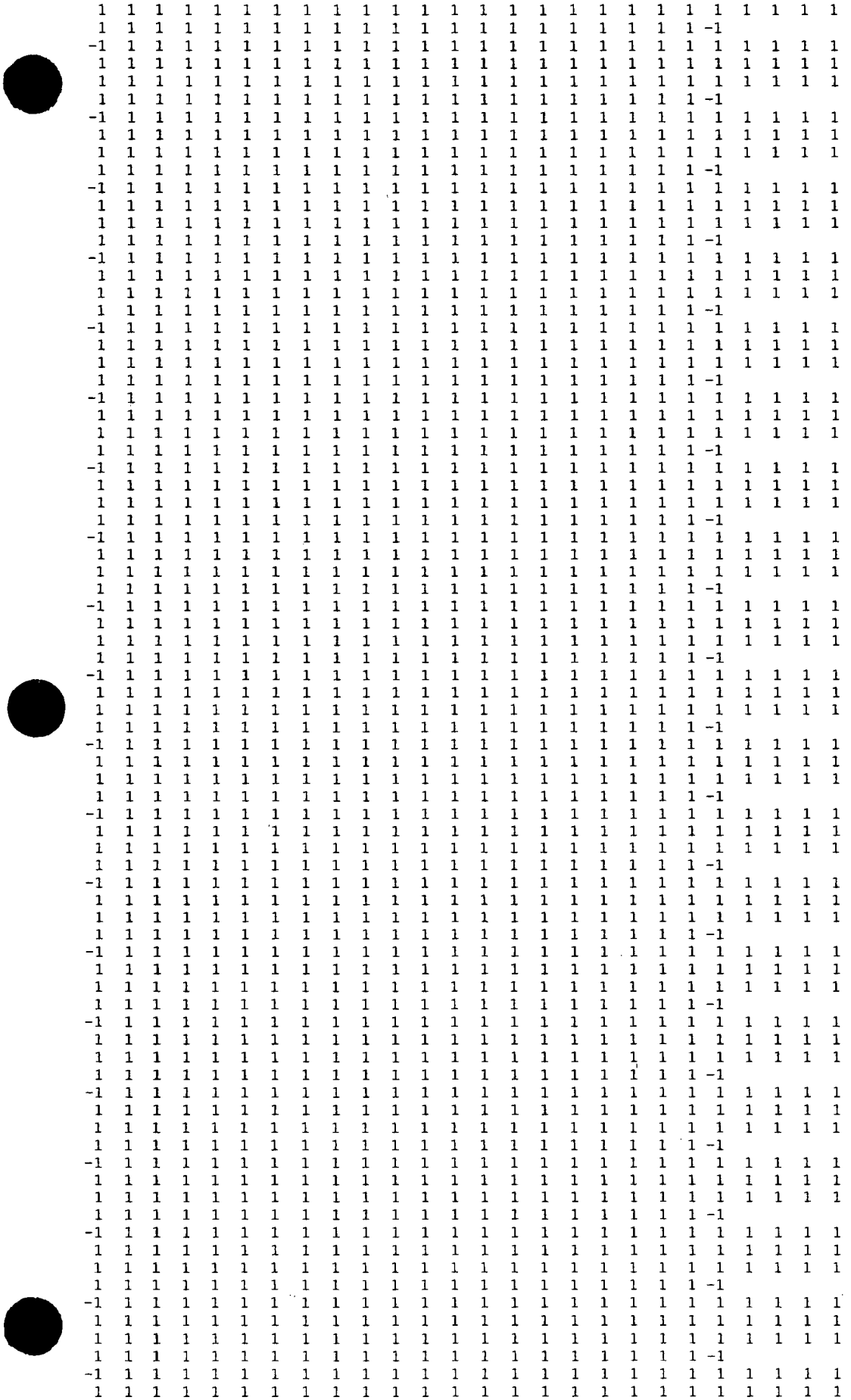

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-1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1  1
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```

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      1.0
      -32        1.0          (11G7.1)        12
60.000000          1 1.0000000
```

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE 1, "PROPOSED MINE UNIT 7 LOCATION."

WITHIN THIS PACKAGE... OR, BY SEARCHING USING THE DOCUMENT/REPORT DRAWING NO. FIGURE 1

D-01

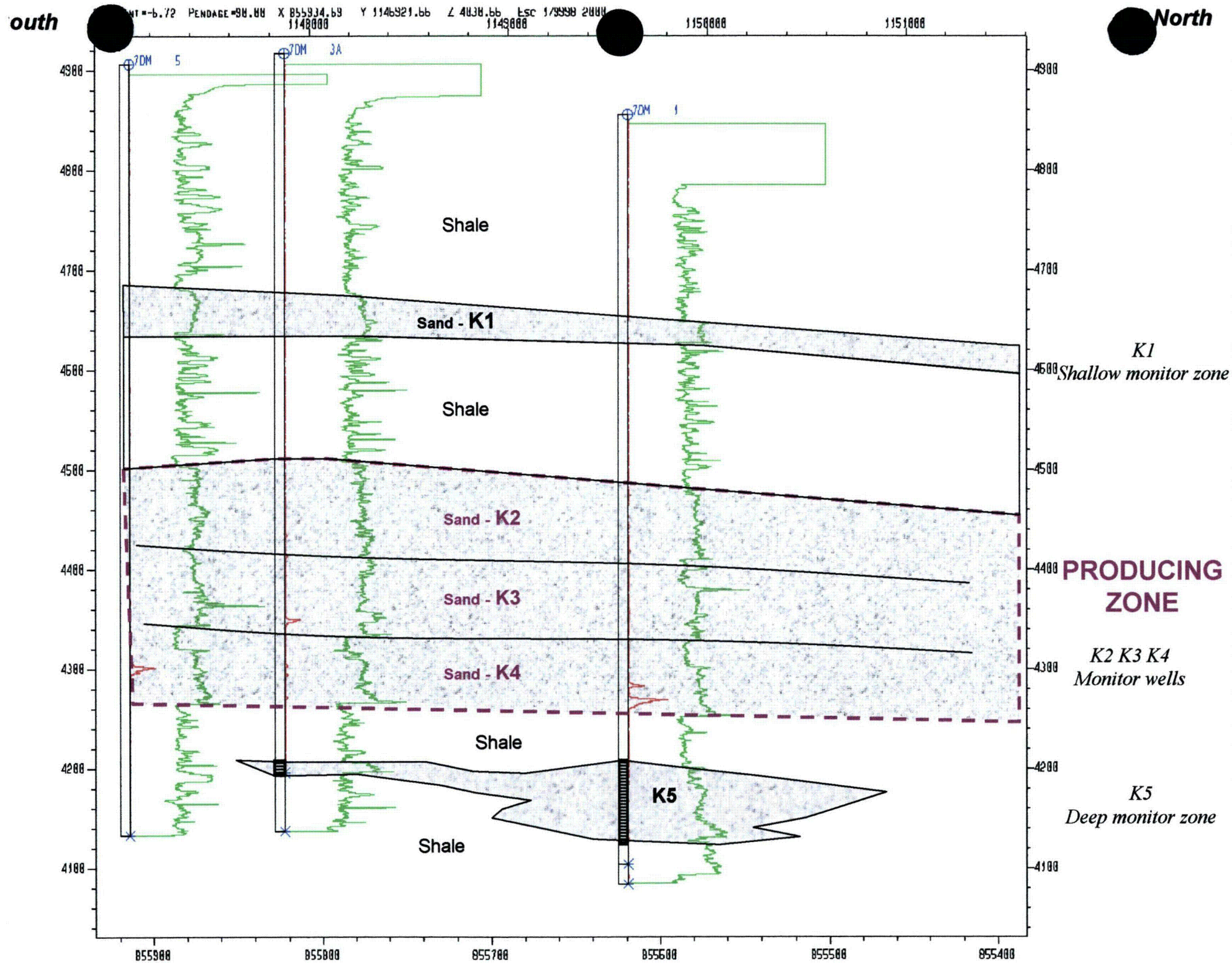
THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

FIGURE 2, "PROPOSED MINE UNIT 7 FACILITIES DETAIL FOR BASELINE PACKAGE."

WITHIN THIS PACKAGE... OR, BY SEARCHING USING THE DOCUMENT/REPORT DRAWING NO. FIGURE 2

D-02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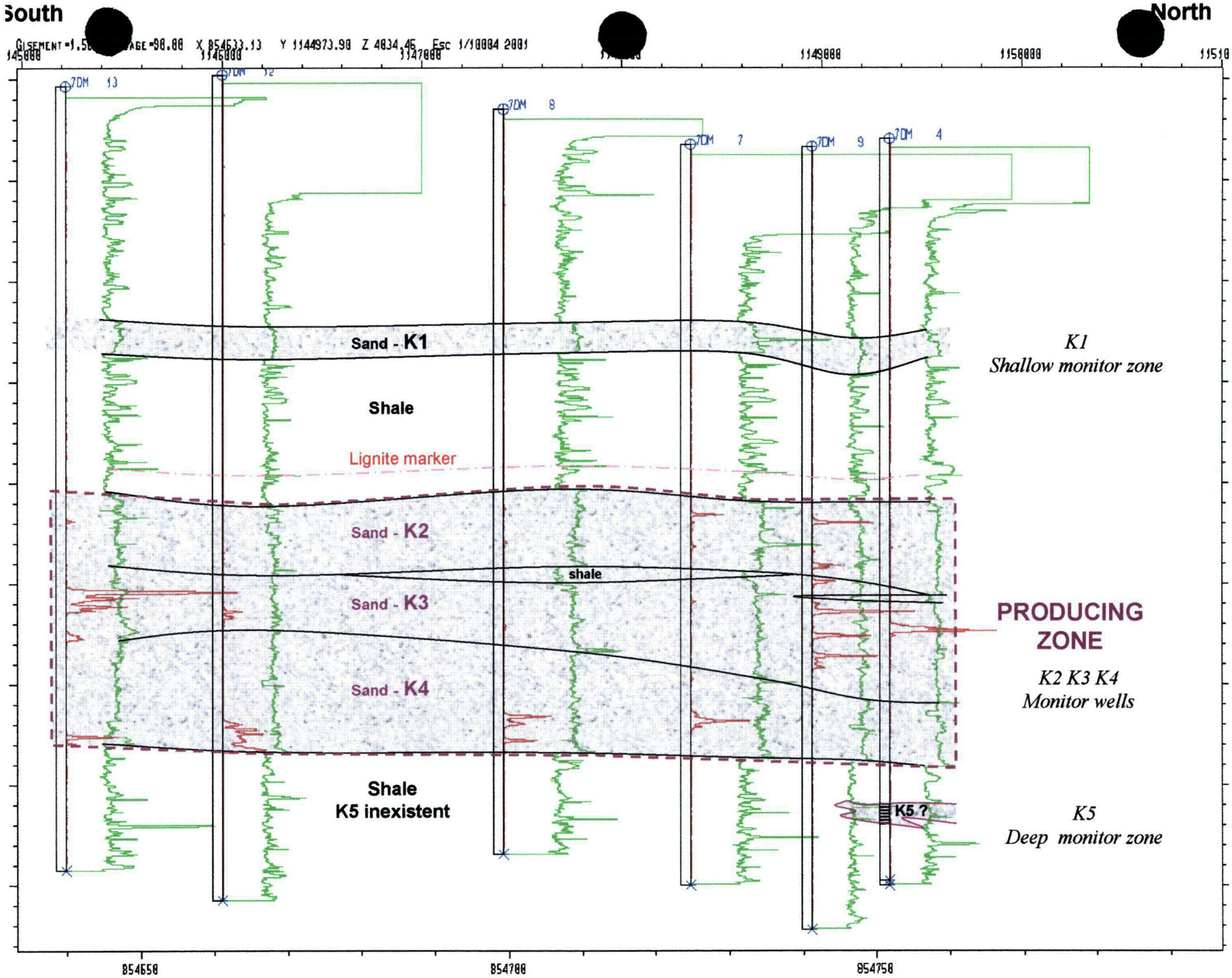
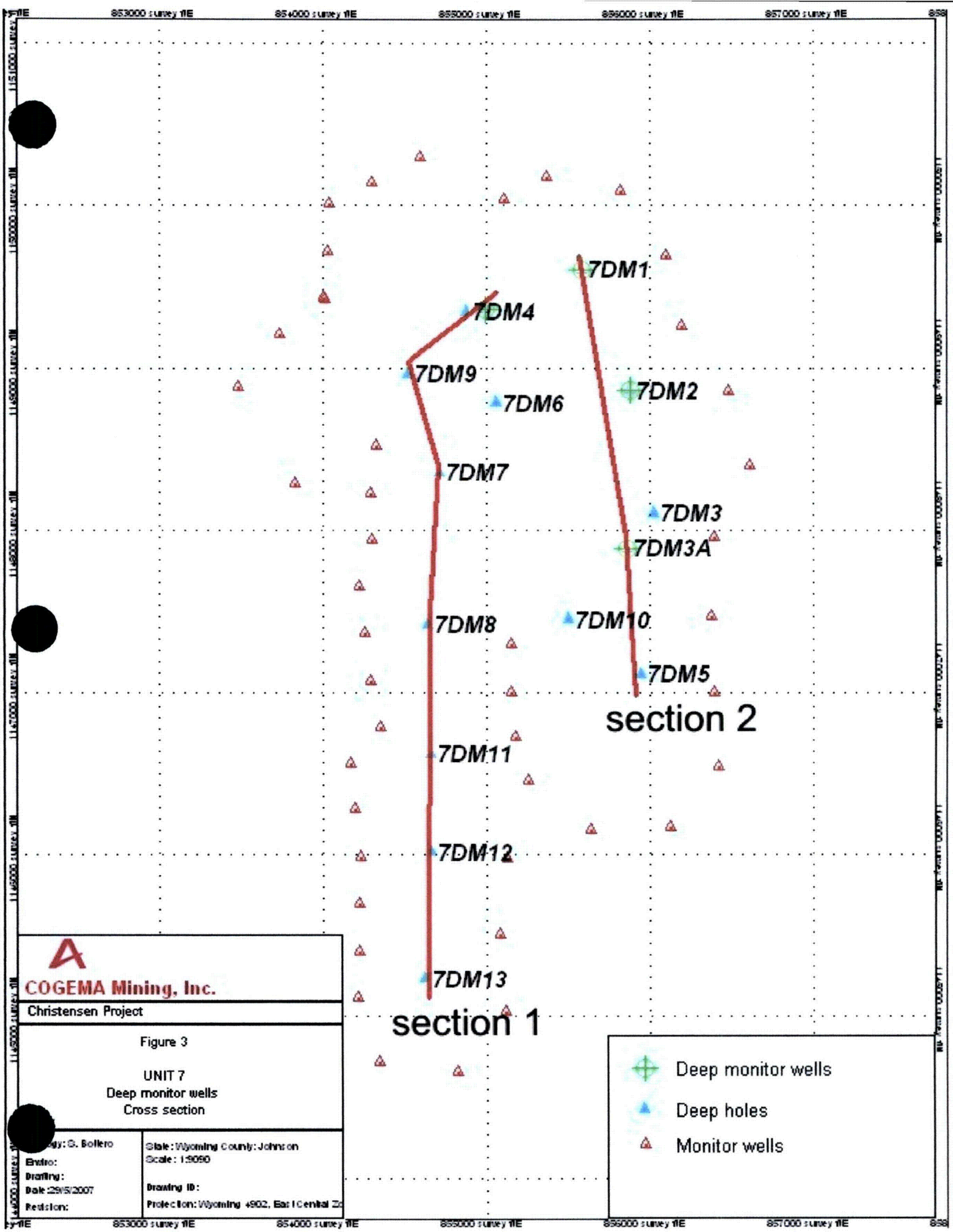
North
7DM 5
7DM 3A
7DM 1
Shale
Sand - K1
Shale
Sand - K2
Sand - K3
Sand - K4
Shale
K5
Shale
K1
Shallow monitor zone
PRODUCING ZONE
K2 K3 K4
Monitor wells
K5
Deep monitor zone


South
North
7DM 13
7DM 12
7DM 8
7DM 7
7DM 9
7DM 4
Sand - K1
Shale
Lignite marker
Sand - K2
shale
Sand - K3
Sand - K4
Shale
K5 inexistent
K5 ?
K1
Shallow monitor zone
PRODUCING ZONE
K2 K3 K4
Monitor wells
K5
Deep monitor zone
854650
854700
854750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7DM4
7DM9
7DM2
7DM6
7DM7
7DM3
7DM3A
7DM8
7DM10
7DM5
section 2
7DM11
7DM12
7DM13
section 1
Deep monitor wells
Deep holes
Monitor wells
COGEMA Mining, Inc.
Christensen Project
Figure 3
UNIT 7
Deep monitor wells
Cross section
State: Wyoming County: Johnson
Scale: 1:9090
Drawing ID:
Date: 29/5/2007
Revision: