

APPENDIX H

Detailed Modeling Output - Closure Scenarios

Table H1. Summary of Closure Scenarios

Scenario	MODFLOW File	Description				Cutoff Wall	Water Collection (L/s)			System Performance	
		# Wells		Drawdown (m)			Toe Seepage ¹	GW Pumped	Total Water Collected	Bypass Flow (L/s)	% Bypass
		High K	Low K	High K	Low K						
Scenario 1: 5 Wells Pumping at ~ 100 m spacing (Polishing Pond Included)											
1a	RCC33_2_1	2	3	1	1	n/a	9.3	27.9	37.2	23.6	39.8%
1b	RCC33_2_3	2	3	1	5	n/a	8	30.0	38.0	23.2	39.9%
1c	RCC33_2_4	2	3	2	5	n/a	1.3	45.8	47.1	16.0	26.2%
1d	RCC33_2_5	2	3	3	5	n/a	0.2	57.7	57.9	7.4	11.7%
1e	RCC33_2_6	2	3	4	5	n/a	0	67.4	67.4	1.0	1.6%
1f	RCC33_2_2	2	3	5	5	n/a	0	72.9	72.9	0.32	0.48%
1g	RCC33_2_7	2	3	5	10	n/a	0	73.5	73.5	0.2	0.35%
Scenario 2: 10 Wells Pumping at ~ 50 m spacing (Polishing Pond Included)											
2a	RCC33_2_8	4	6	2.5	2.5	n/a	0.2	57.7	57.9	7.2	11.3%
2b	RCC33_2_12	4	6	1	5	n/a	4.9	36.2	41.1	20.9	34.9%
2c	RCC33_2_13	4	6	2	5	n/a	0.6	52.2	52.8	11.6	18.6%
2d	RCC33_2_14	4	6	3	5	n/a	0	65.3	65.3	1.7	2.6%
2e	RCC33_2_15	4	6	4	5	n/a	0	72.0	72.0	0.28	0.42%
2f	RCC33_2_10	4	6	5	5	n/a	0	77.7	77.7	0.26	0.39%
2g	RCC33_2_11	4	6	5	10	n/a	0	78.5	78.5	0.19	0.28%
Scenario 3: 10 Wells Pumping at ~ 50 m spacing (Partial Penetration, Polishing Pond Included)											
3a	RCC33_2_17	4 - L2	6 - L2	5	5	n/a	0	63.9	63.9	3.77	5.88%
3b	RCC33_2_18	4 - L3	6 - L3	5	5	n/a	0	76.5	76.5	0.28	0.42%
3c	RCC33_2_19	4 - L4	6 - L4	5	5	n/a	0	74.1	74.1	0.32	0.47%
Scenario 4: 10 Wells Pumping at ~ 50 m spacing (Cutoff Wall at X13, Polishing Pond Included)											
4a	RCC36_2_1	4	6	2	5	L2	0.7	52.4	53.1	11.32	18.2%
4b	RCC36_1_1	4	6	2	5	L2-L5	2.3	61.2	63.5	0.31	0.49%
Scenario 5: 10 Wells Pumping at ~ 50 m spacing (RCDC Fully Lined, Polishing Pond Included)											
5a	RCC35_1_1	4	6	2	5	n/a	0.4	47.4	47.8	11.2	18.8%
5b	RCC35_1_2	4	6	5	5	n/a	0	67.2	67.2	0.3	0.48%
Scenario 6: 10 Wells Pumping at ~ 50 m spacing (Polishing Pond Removed)											
6a	RCC34_3_1	4	6	1	3	n/a	27.7	15.8	43.5	2.92	17.5%
6b	RCC34_3_2	4	6	3	3	n/a	22.5	30.9	53.4	0.16	0.73%

1. In closure scenarios 1-5 toe seepage is collected at X13; in closure scenario 6, toe seepage is collected at the toe of the Intermediate Dam.

Table H2. Current (steady-state) conditions used for Closure Scenarios 1-3 (RC33_2).

INPUT

Material	Layer	Hydraulic Conductivity	
		(m/d)	(m/s)
CVD	1	0.00864	1.0E-07
PP Sediments	1	0.000078	9.0E-10
PP Sed Window	1	0.026	3.0E-07
ID	1	0.026	3.0E-07
Tailings	1	0.0017	2.0E-08
Colluvium - S.	2,3,4	0.864	1.0E-05
Colluvium - N.	2,3,4	0.864	1.0E-05
U/S Alluvium	2,3,4	12.96	1.5E-04
D/S Alluvium	2,3,4	25.92	3.0E-04
Alluvium CVD	2,3,4	43.2	5.0E-04
Alluvium PW2	2,3	432	5.0E-03
Basal Till	5	0.026	3.0E-07
Slope Till	2,3,4,5	0.26	3.0E-06
Bedrock	6	0.017	2.0E-07

Other Parameters	m/d	m/s
Drain Conductance (m/d)	51.84	6.0E-04
RCDC River Conductance L5 (m/d)	5.184	6.0E-05
RCDC River Conductance L2 (m/d)	5.184	6.0E-05
PP Spillway Cond. L2,L4,L5 (m/d)	-	-
Intermediate Pond WL (m)	1046.516	7-Sep-05
Polishing Pond WL (m)	1027.395	7-Sep-05
Upstream Constant Head (m)	1036.4	
Downstream Constant Head (m)	1010.8	

Change Rose Creek near RCDC and d/s of confluence into constant head.

OUTPUT

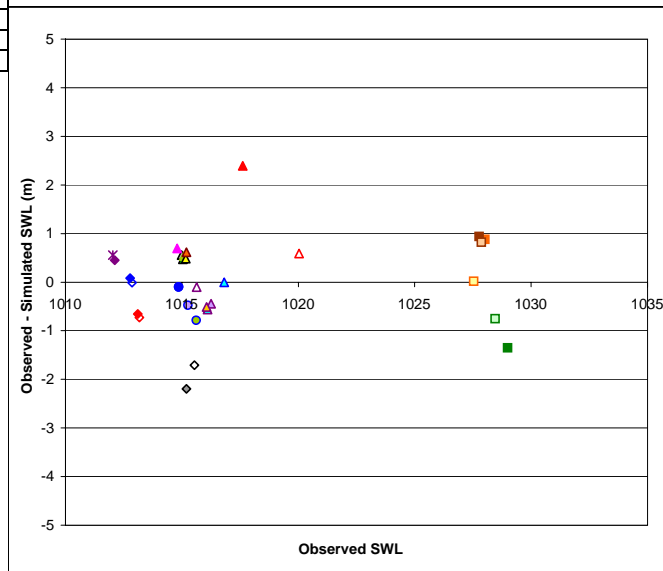
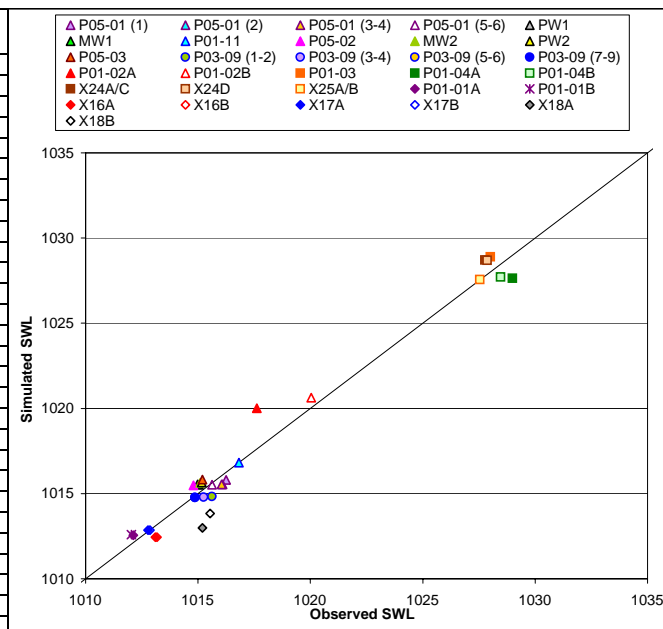
Well ID	Layer	Observed (masl)	Simulated (masl)	Sim-Obs (m)
P01-01A	3	1012.12	1012.56	0.45
P01-01B	6	1012.04	1012.59	0.56
P01-02A	2	1017.61	1020.00	2.39
P01-02B	5	1020.04	1020.63	0.59
P01-03 (North)	2	1028.02	1028.89	0.88
P01-04A (South)	4	1028.99	1027.64	-1.35
P01-04B (South)	5	1028.46	1027.71	-0.75
P01-11	3	1016.82	1016.82	0.00
X16A	2	1013.10	1012.45	-0.65
X16B	4	1013.17	1012.44	-0.73
X17A	2	1012.77	1012.85	0.08
X17B	4	1012.86	1012.85	-0.01
X18A	3	1015.19	1013.00	-2.19
X18B	6	1015.54	1013.83	-1.71
X24A/C (North)	2	1027.77	1028.70	0.94
X24D (North)	5	1027.87	1028.69	0.82
X25A/B (South)	2	1027.54	1027.56	0.02
P03-09-01-02	5	1015.62	1014.83	-0.79
P03-09-03-04	4	1015.26	1014.78	-0.48
P03-09-05-06	3	1015.09	1014.77	-0.32
P03-09-07-09	2	1014.87	1014.76	-0.11
P05-01-01	6	1016.25	1015.81	-0.44
P05-01-02	4	1016.10	1015.54	-0.56
P05-01-03-04	3	1016.06	1015.55	-0.51
P05-01-05-06	2	1015.63	1015.53	-0.10
PW1	2,4	1014.98	1015.54	0.56
MW1	2,4	1015.05	1015.51	0.47
P05-02	2	1014.79	1015.49	0.69
MW2	2,3	1015.09	1015.63	0.54
PW2	2,3	1015.17	1015.66	0.49
P05-03	2	1015.20	1015.81	0.62

Average head provided **RMS 0.89**

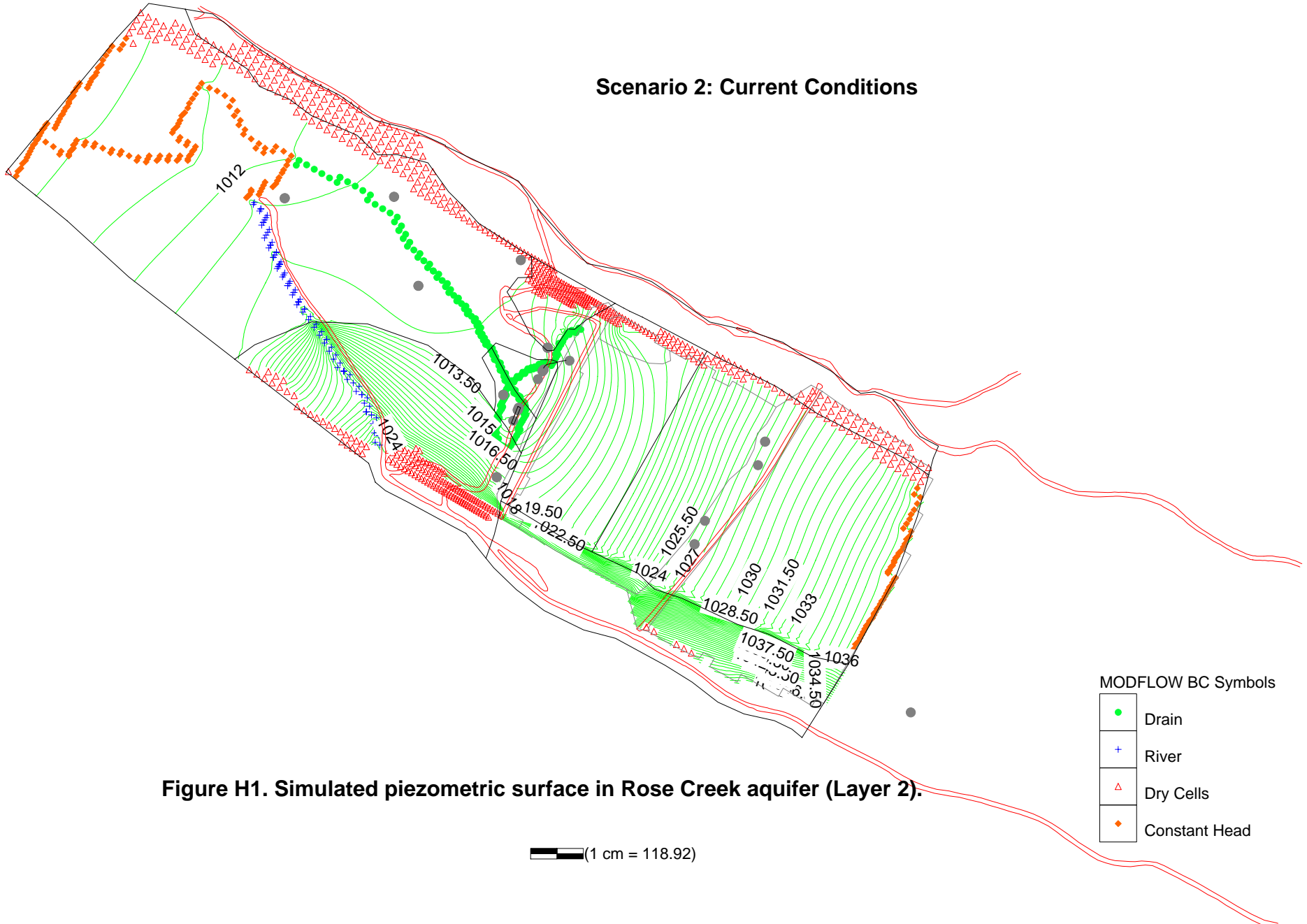
FLUXES	SIMULATED		TARGET
	Net m ³ /d	Net L/s	L/s
INTERMEDIATE POND			
arc	215.0	2.5	
polygon	585.8	6.8	
Total	801	9	24 - 30
POLISHING POND			
arc	22.4	0.3	
polygon	1207.9	14.0	
Total	1230	14	7 - 9.4
PP Spillway	0	0.0	-
X11	-710	-8.2	8.3
X13	-2654	-30.7	25 - 31
CVS1	-3270	-37.8	41 - 51
Rest of RC	-1080	-12.5	139 - 175
RCDC RIV	3291	38.1	40 - 200
U/S CH	2463	28.5	37 - 46
D/S CH	-781	-9.0	42 - 53

Negative or red numbers indicate flow out of model (i.e. into boundary condition)

Water Balance Error (%) 0.0
Iterations Converged



Scenario 2: Current Conditions



MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

Figure H1. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

(1 cm = 118.92)

Scenario 2: Current Conditions

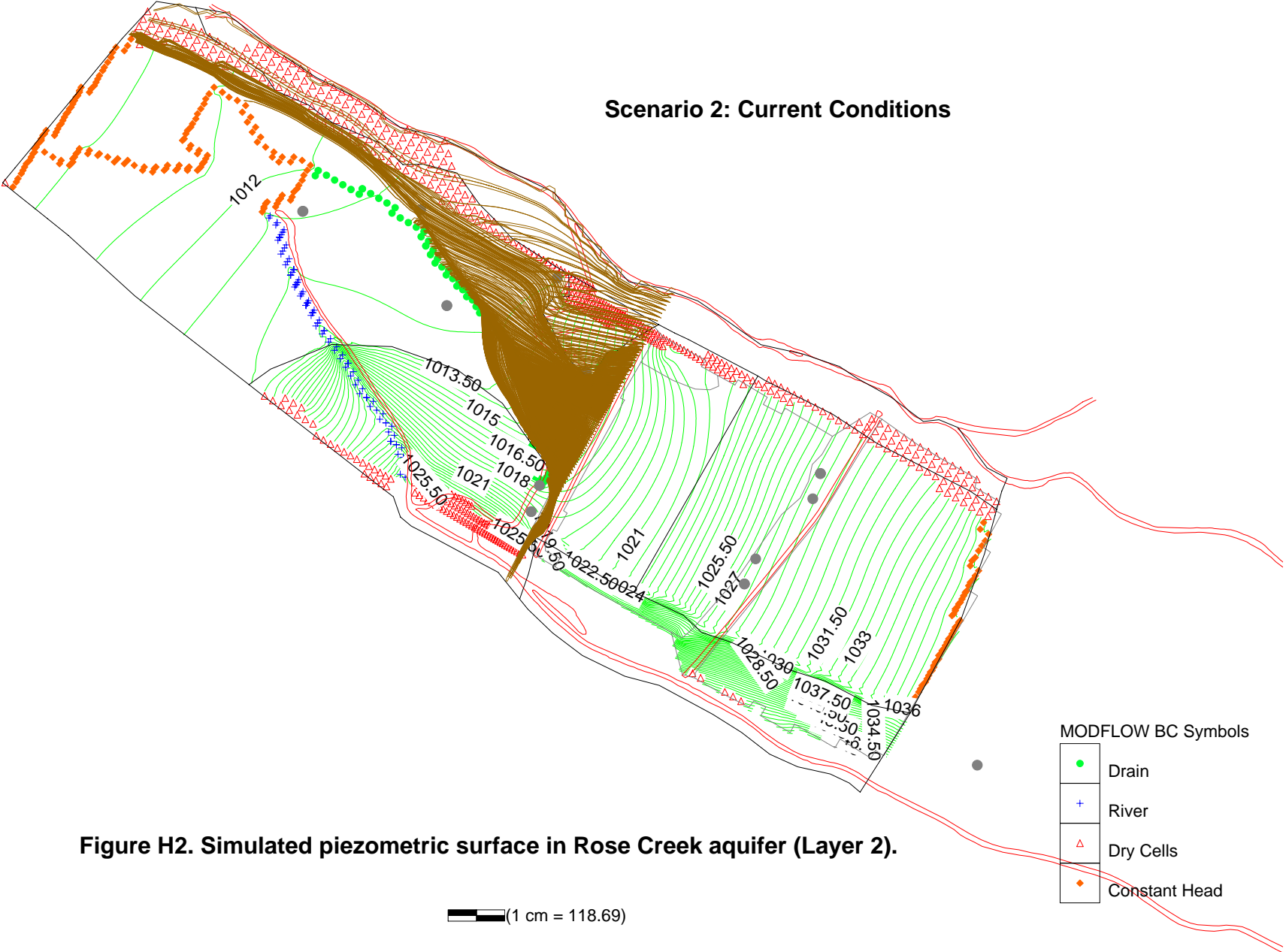


Figure H2. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols**
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

1 cm = 118.69

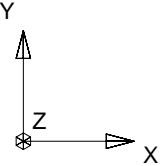


Table H3. Closure Scenario 1a (RCC33_2_1)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.371	1015.371	1015.371	1.000
PWA - Till	1016.347		1015.801	0.546
PWA - BR	1016.249		1015.995	0.255
PW1 - All (L2,4)	1015.542	1014.542	1014.542	1.000
PW1 - Till	1015.565		1014.780	0.784
PW1 - BR	1015.873		1015.500	0.373
PW2 - All (L2,3)	1015.651	1014.651	1014.651	1.000
PW2 - Till	1015.692		1015.017	0.676
PW2 - BR	1016.165		1015.686	0.479
PWB - All (L2-4)	1017.023	1016.023	1016.023	1.000
PWB - Till	1017.398		1016.790	0.607
PWB - BR	1018.592		1018.128	0.464
PWC - All (L2-4)	1021.025	1020.025	1020.025	1.000
PWC - Till	1021.993		1021.310	0.683
PWC - BR	1025.220		1024.836	0.384

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	39	0.45	7.2
PW1	2, 4	883	10.2	162
PW2	2, 3	1,433	16.6	263
PWB	2, 3, 4	32	0.37	5.9
PWC	2, 3, 4	20	0.23	3.6
TOTAL		2406	27.9	441

Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1016.342	0.172
OBS1_L3	1016.512	1016.332	0.180
OBS1_L4	1016.516	1016.334	0.182
OBS1_L5	1016.504	1016.318	0.186
OBS1_L6	1016.475	1016.267	0.208
OBS2_L2	1015.800	1015.486	0.315
OBS2_L3	1015.800	1015.475	0.325
OBS2_L4	1015.799	1015.469	0.330
OBS2_L5	1015.813	1015.484	0.329
OBS2_L6	1016.004	1015.701	0.303
OBS3_L2	1015.478	1015.031	0.447
OBS3_L3	1015.475	1015.027	0.447
OBS3_L4	1015.471	1015.024	0.447
OBS3_L5	1015.496	1015.050	0.446
OBS3_L6	1015.827	1015.417	0.410
OBS4_L2	1016.175	1015.550	0.625
OBS4_L3	1016.176	1015.548	0.628
OBS4_L4	1016.180	1015.550	0.629
OBS4_L5	1016.372	1015.781	0.591
OBS4_L6	1017.255	1016.770	0.484
OBS5_L2	1019.276	1018.718	0.558
OBS5_L3	1019.249	1018.694	0.554
OBS5_L4	1019.231	1018.679	0.552
OBS5_L5	1019.672	1019.142	0.531
OBS5_L6	1021.661	1021.231	0.430
OBS6_L2	1024.399	1023.933	0.466
OBS6_L3	1024.637	1024.171	0.466
OBS6_L4	1024.682	1024.218	0.464
OBS6_L5	1026.509	1026.143	0.365
OBS6_L6	1029.718	1029.441	0.276

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	216	2.5
polygon	585.8	6.8	588	6.8
Total	801	9	804	9
POLISHING POND				
arc	22.4	0.3	28	0.3
polygon	1207.9	14.0	1247	14.4
Total	1230	14	1275	15
X11	-710	-8.2	-154	-1.8
X13	-2654	-30.7	-803	-9.3
CVS1	-3270	-37.8	-2838	-32.8
Rest of RC	-1080	-12.5	-1075	-12.4
RCDC	3291	38.1	3300	38.2
U/S CH	2463	28.5	2523	29.2
D/S CH	-781	-9.0	-781	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5125	59.3
Flow Past GWIS (j76 into RF)		2037	23.6
% Bypass		40%	

Scenario 1a: Pumping (5 Wells with 1 m DD)

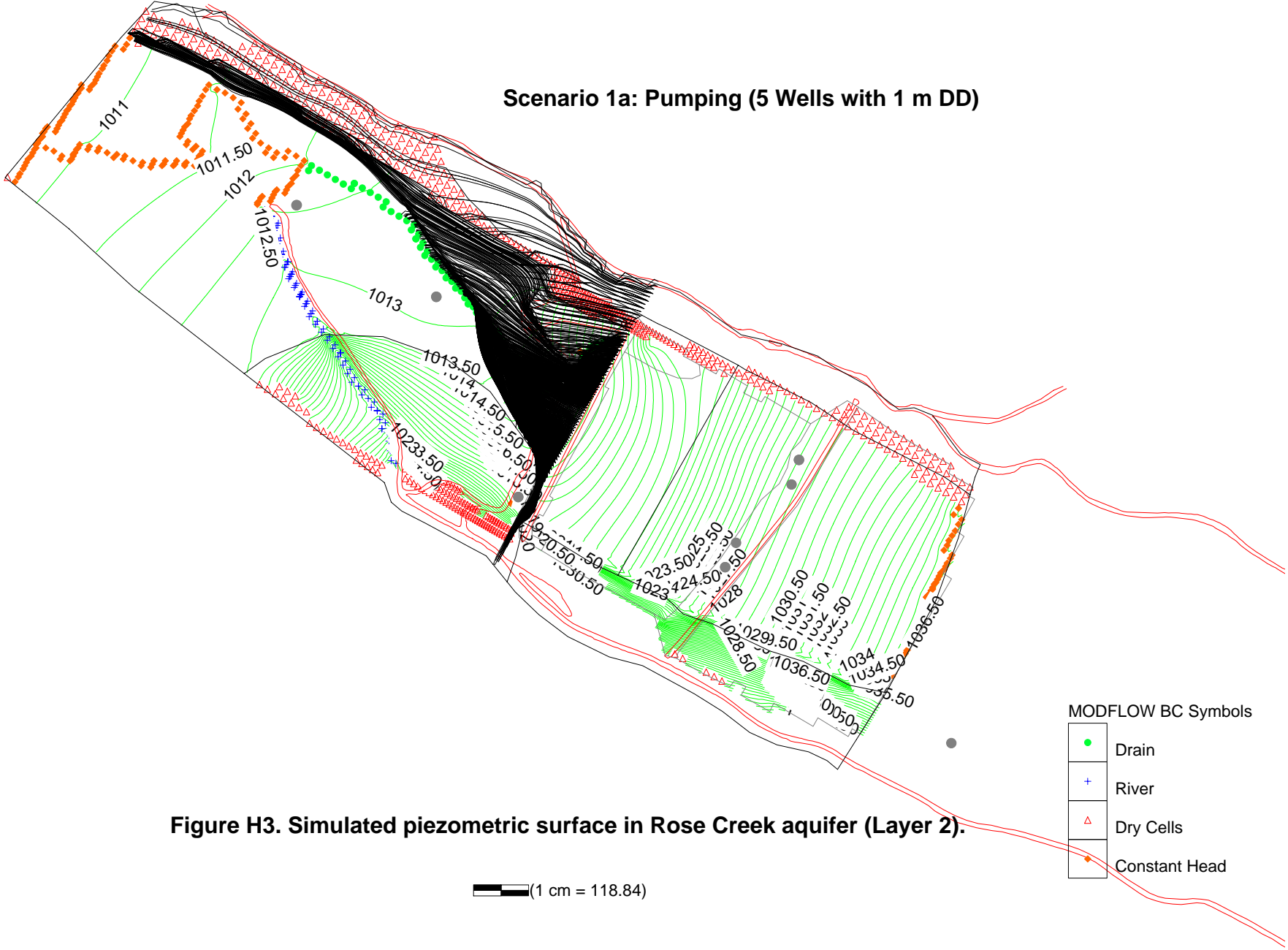


Figure H3. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols**
- Drain
 - + River
 - ▲ Dry Cells
 - Constant Head

1 cm = 118.84

Scenario 1a: Pumping (5 Wells with 1 m DD)

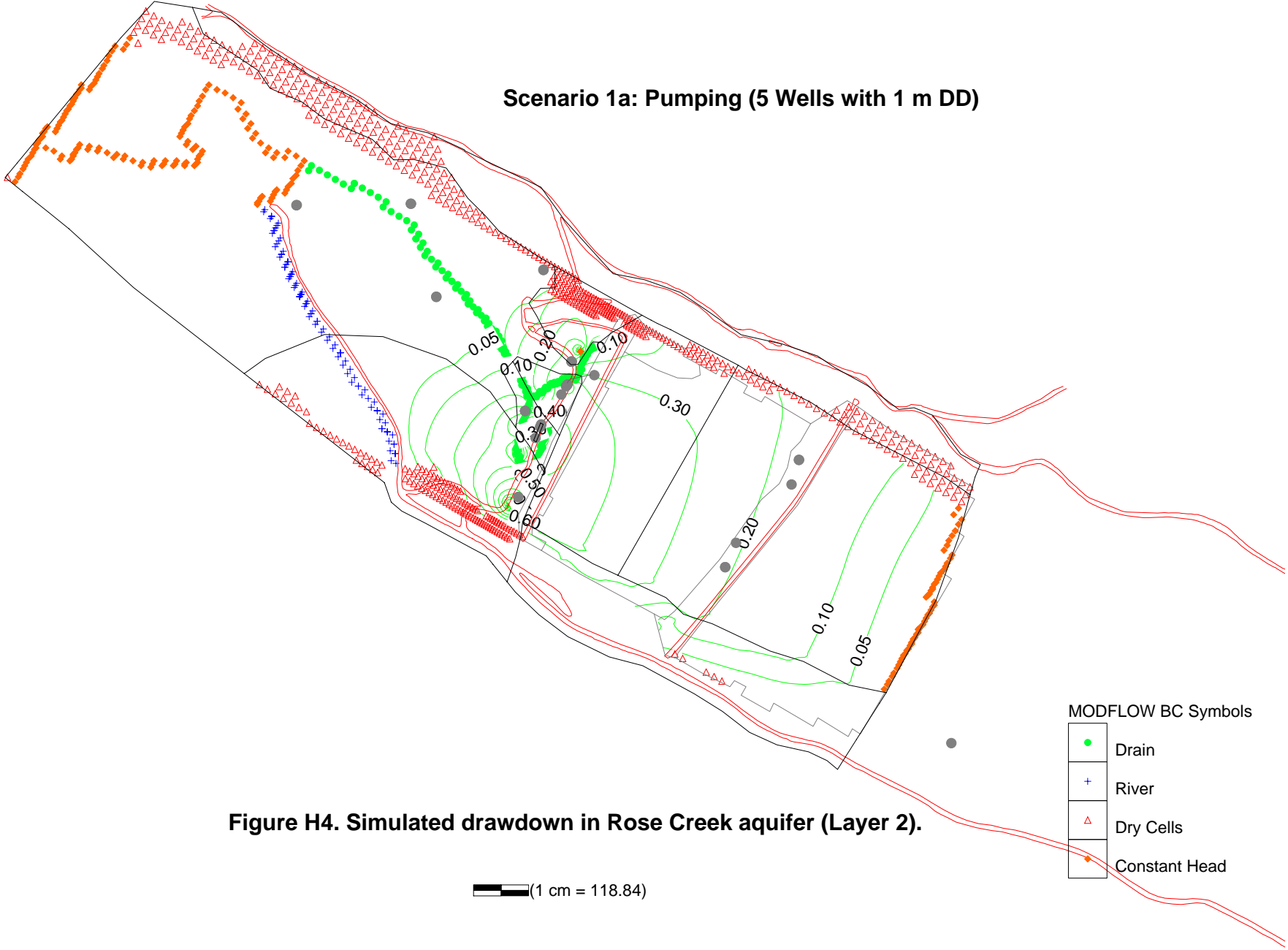


Figure H4. Simulated drawdown in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - Constant Head

(1 cm = 118.84)

Table H4. Closure Scenario 1b (RCC33_2_3)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.371	1011.371	1011.371	5.000
PWA - Till	1016.347		1013.816	2.531
PWA - BR	1016.249		1015.723	0.526
PW1 - All (L2,4)	1015.542	1014.542	1014.542	1.000
PW1 - Till	1015.565		1014.766	0.799
PW1 - BR	1015.873		1015.426	0.447
PW2 - All (L2,3)	1015.651	1014.651	1014.651	1.000
PW2 - Till	1015.692		1014.985	0.708
PW2 - BR	1016.165		1015.574	0.591
PWB - All (L2-4)	1017.023	1012.023	1012.023	5.000
PWB - Till	1017.398		1015.333	2.064
PWB - BR	1018.592		1017.548	1.044
PWC - All (L2-4)	1021.025	1016.025	1016.025	5.000
PWC - Till	1021.993		1019.453	2.540
PWC - BR	1025.220		1024.144	1.075

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	202	2.34	37.1
PW1	2, 4	828	9.6	152
PW2	2, 3	1,325	15.3	243
PWB	2, 3, 4	147	1.70	26.9
PWC	2, 3, 4	91	1.06	16.8
TOTAL		2594	30.0	476

Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1015.997	0.518
OBS1_L3	1016.512	1015.962	0.551
OBS1_L4	1016.516	1015.956	0.560
OBS1_L5	1016.504	1015.948	0.556
OBS1_L6	1016.475	1016.050	0.426
OBS2_L2	1015.800	1015.414	0.387
OBS2_L3	1015.800	1015.404	0.396
OBS2_L4	1015.799	1015.398	0.402
OBS2_L5	1015.813	1015.401	0.412
OBS2_L6	1016.004	1015.562	0.442
OBS3_L2	1015.478	1015.004	0.474
OBS3_L3	1015.475	1015.001	0.474
OBS3_L4	1015.471	1014.997	0.474
OBS3_L5	1015.496	1015.021	0.474
OBS3_L6	1015.827	1015.357	0.470
OBS4_L2	1016.175	1015.473	0.702
OBS4_L3	1016.176	1015.470	0.707
OBS4_L4	1016.180	1015.473	0.706
OBS4_L5	1016.372	1015.576	0.796
OBS4_L6	1017.255	1016.462	0.793
OBS5_L2	1019.276	1017.435	1.841
OBS5_L3	1019.249	1017.425	1.824
OBS5_L4	1019.231	1017.420	1.811
OBS5_L5	1019.672	1017.979	1.693
OBS5_L6	1021.661	1020.517	1.144
OBS6_L2	1024.399	1022.847	1.553
OBS6_L3	1024.637	1023.087	1.550
OBS6_L4	1024.682	1023.136	1.546
OBS6_L5	1026.509	1025.364	1.144
OBS6_L6	1029.718	1028.965	0.753

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	216	2.5
polygon	585.8	6.8	589	6.8
Total	801	9	805	9
POLISHING POND				
arc	22.4	0.3	29	0.3
polygon	1207.9	14.0	1256	14.5
Total	1230	14	1286	15
X11	-710	-8.2	-84	-1.0
X13	-2654	-30.7	-690	-8.0
CVS1	-3270	-37.8	-2797	-32.4
Rest of RC	-1080	-12.5	-1074	-12.4
RCDC	3291	38.1	3309	38.3
U/S CH	2463	28.5	2536	29.4
D/S CH	-781	-9.0	-781	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5021	58.1
Flow Past X13 (j76 into RF)		2003	23.2
% Bypass		39.9%	

Scenario 1b: Pumping (5 Wells with 1 & 5 m DD)

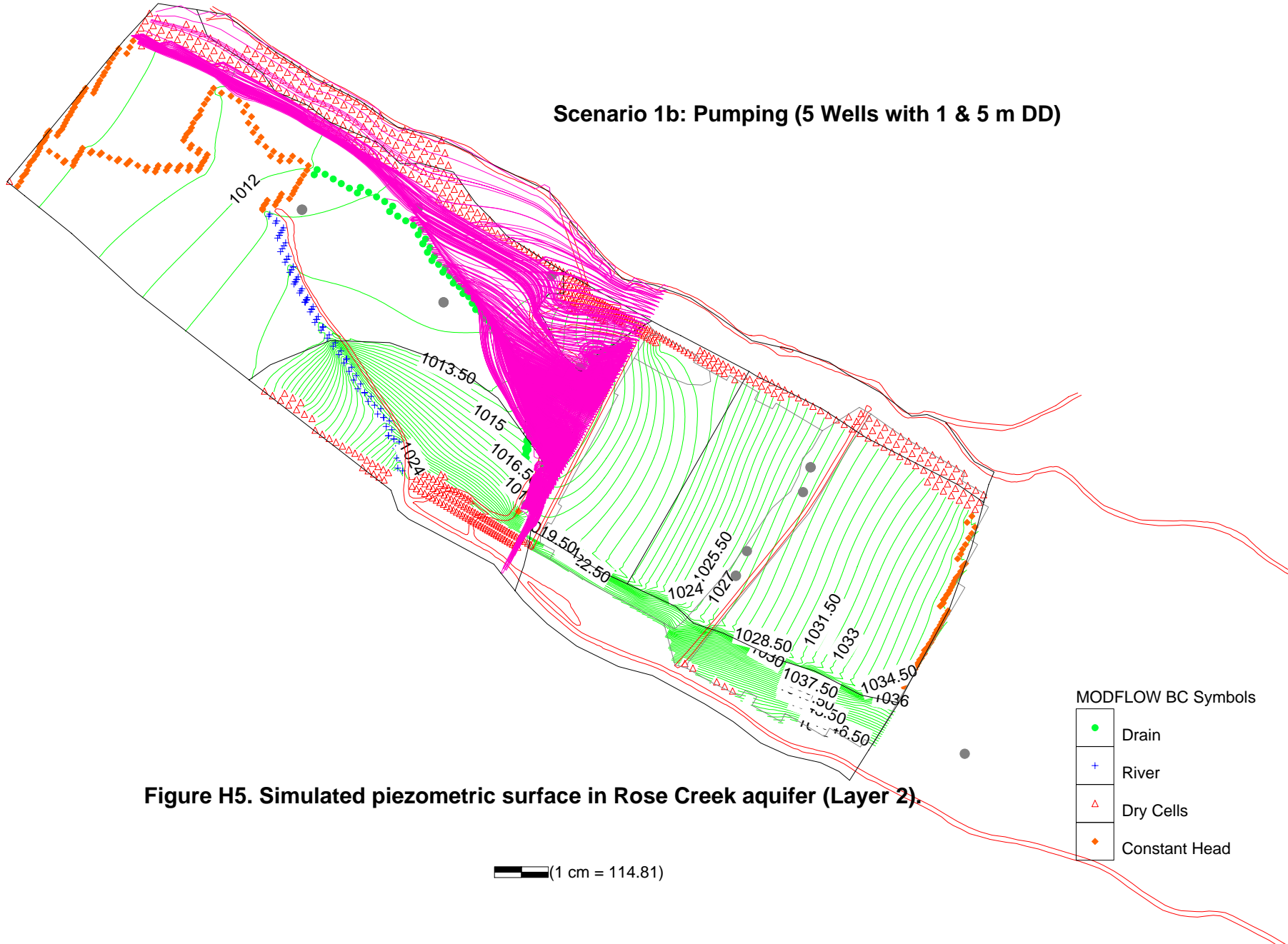


Figure H5. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 1b: Pumping (5 Wells with 1 & 5 m DD)

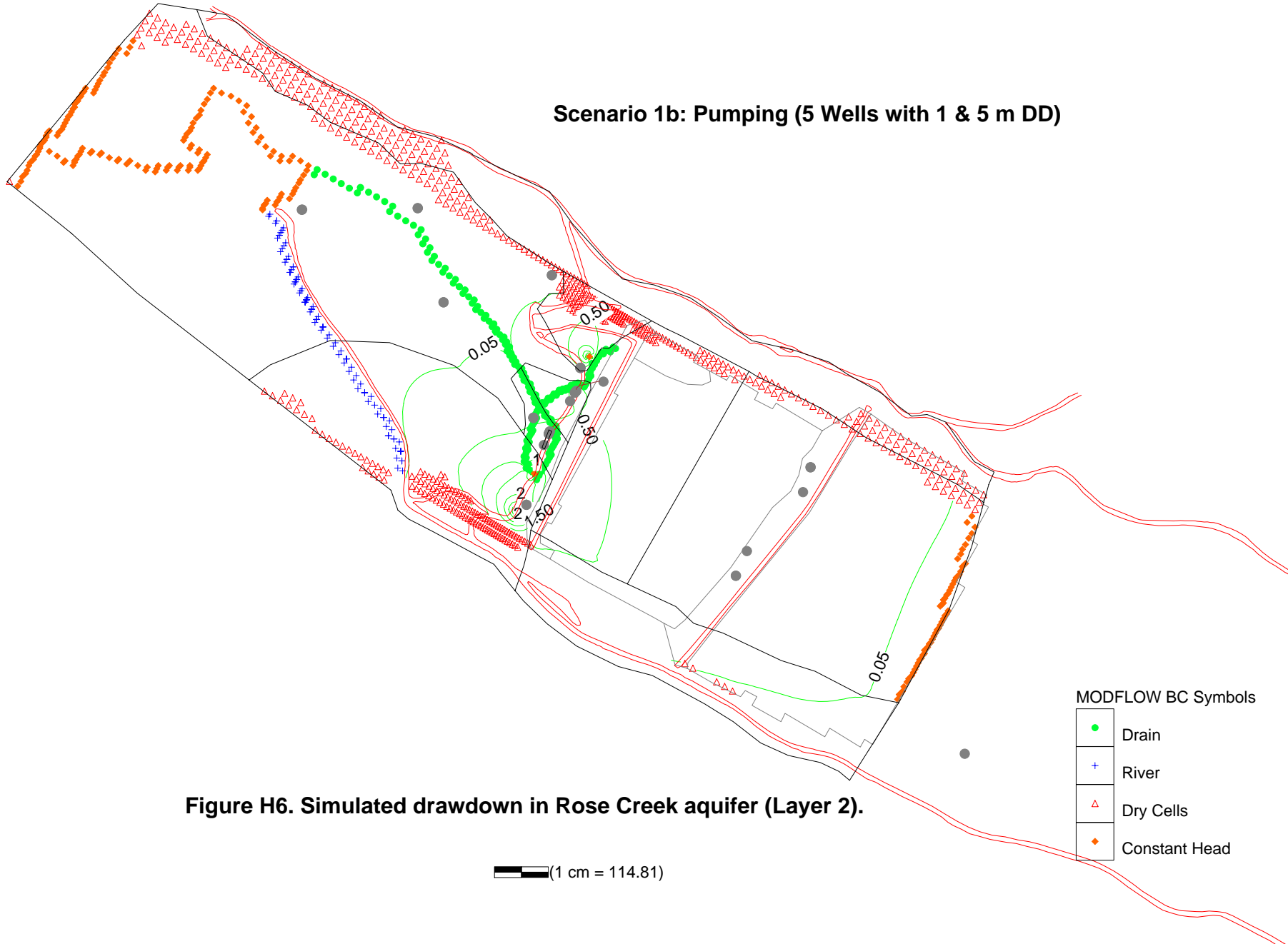


Figure H6. Simulated drawdown in Rose Creek aquifer (Layer 2).

1 cm = 114.81

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

Table H5. Closure Scenario 1c (RCC33_2_4)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.371	1011.371	1011.371	5.000
PWA - Till	1016.347		1013.599	2.748
PWA - BR	1016.249		1015.359	0.890
PW1 - All (L2,4)	1015.542	1013.542	1013.542	2.000
PW1 - Till	1015.565		1013.921	1.644
PW1 - BR	1015.873		1014.919	0.954
PW2 - All (L2,3)	1015.651	1013.651	1013.651	2.000
PW2 - Till	1015.692		1014.229	1.463
PW2 - BR	1016.165		1015.000	1.165
PWB - All (L2-4)	1017.023	1012.023	1012.023	5.000
PWB - Till	1017.398		1014.947	2.451
PWB - BR	1018.592		1017.092	1.500
PWC - All (L2-4)	1021.025	1016.025	1016.025	5.000
PWC - Till	1021.993		1019.249	2.745
PWC - BR	1025.220		1023.886	1.334

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	182	2.11	33.4
PW1	2, 4	1,368	15.8	251
PW2	2, 3	2,198	25.4	403
PWB	2, 3, 4	127	1.47	23.4
PWC	2, 3, 4	82	0.95	15.1
TOTAL		3958	45.8	726

Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1015.669	0.845
OBS1_L3	1016.512	1015.635	0.877
OBS1_L4	1016.516	1015.629	0.886
OBS1_L5	1016.504	1015.624	0.880
OBS1_L6	1016.475	1015.724	0.752
OBS2_L2	1015.800	1014.860	0.941
OBS2_L3	1015.800	1014.849	0.951
OBS2_L4	1015.799	1014.842	0.957
OBS2_L5	1015.813	1014.854	0.959
OBS2_L6	1016.004	1015.119	0.885
OBS3_L2	1015.478	1014.416	1.062
OBS3_L3	1015.475	1014.413	1.062
OBS3_L4	1015.471	1014.410	1.061
OBS3_L5	1015.496	1014.437	1.059
OBS3_L6	1015.827	1014.825	1.002
OBS4_L2	1016.175	1014.739	1.436
OBS4_L3	1016.176	1014.735	1.441
OBS4_L4	1016.180	1014.739	1.440
OBS4_L5	1016.372	1014.897	1.474
OBS4_L6	1017.255	1015.918	1.337
OBS5_L2	1019.276	1017.087	2.189
OBS5_L3	1019.249	1017.074	2.175
OBS5_L4	1019.231	1017.067	2.164
OBS5_L5	1019.672	1017.629	2.044
OBS5_L6	1021.661	1020.171	1.490
OBS6_L2	1024.399	1022.716	1.683
OBS6_L3	1024.637	1022.951	1.686
OBS6_L4	1024.682	1022.999	1.683
OBS6_L5	1026.509	1025.229	1.280
OBS6_L6	1029.718	1028.790	0.928

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	217	2.5
polygon	585.8	6.8	592	6.9
Total	801	9	810	9
POLISHING POND				
arc	22.4	0.3	37	0.4
polygon	1207.9	14.0	1315	15.2
Total	1230	14	1351	16
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-113	-1.3
CVS1	-3270	-37.8	-2173	-25.2
Rest of RC	-1080	-12.5	-1068	-12.4
RCDC	3291	38.1	3317	38.4
U/S CH	2463	28.5	2615	30.3
D/S CH	-781	-9.0	-781	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5275	61.0
Flow Past X13 (j76 into RF)		1380	16.0
% Bypass		26.2%	

Scenario 1c: Pumping (5 Wells with 2 & 5 m DD)

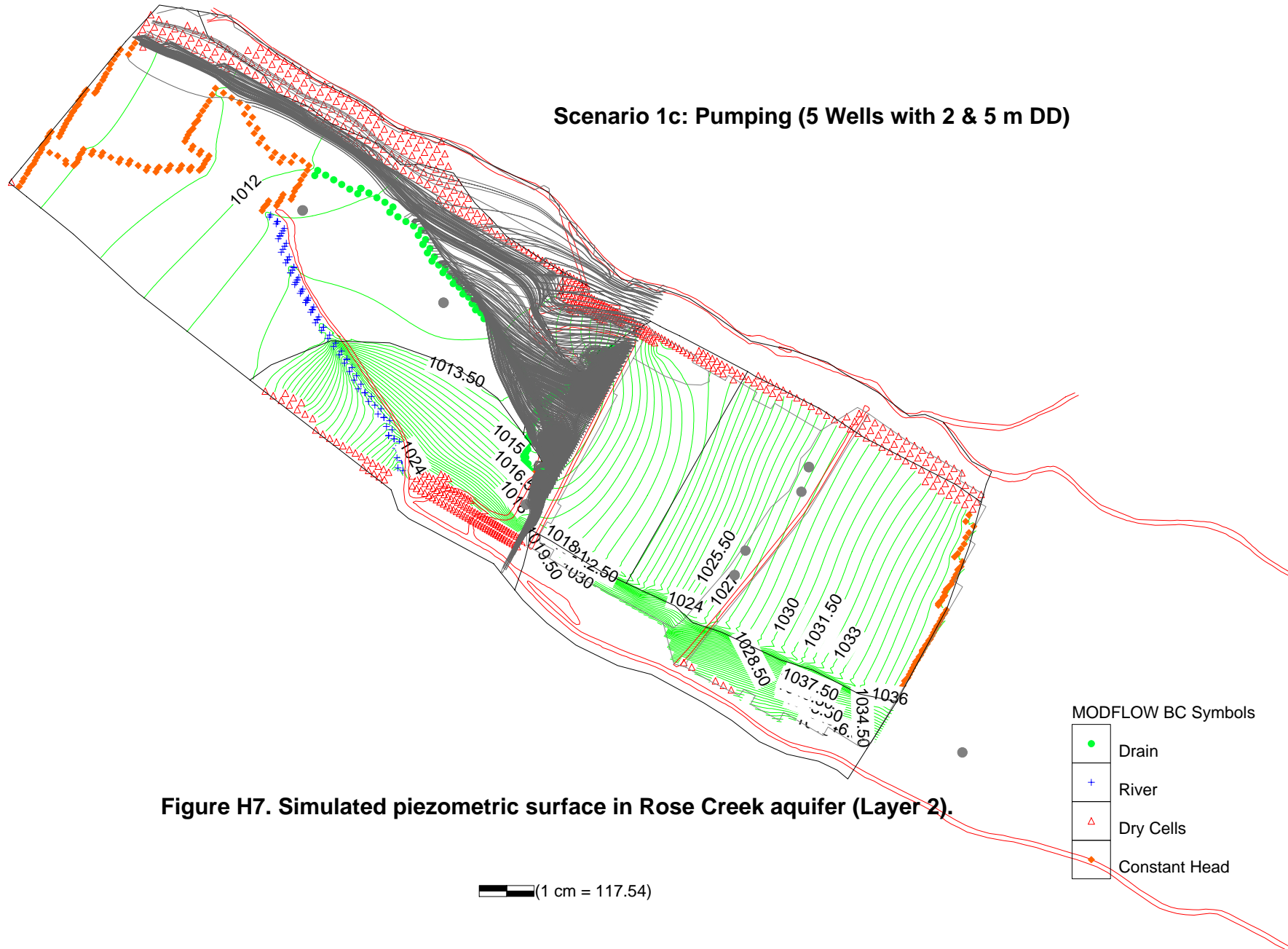


Figure H7. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

(1 cm = 117.54)

Scenario 1c: Pumping (5 Wells with 2 & 5 m DD)

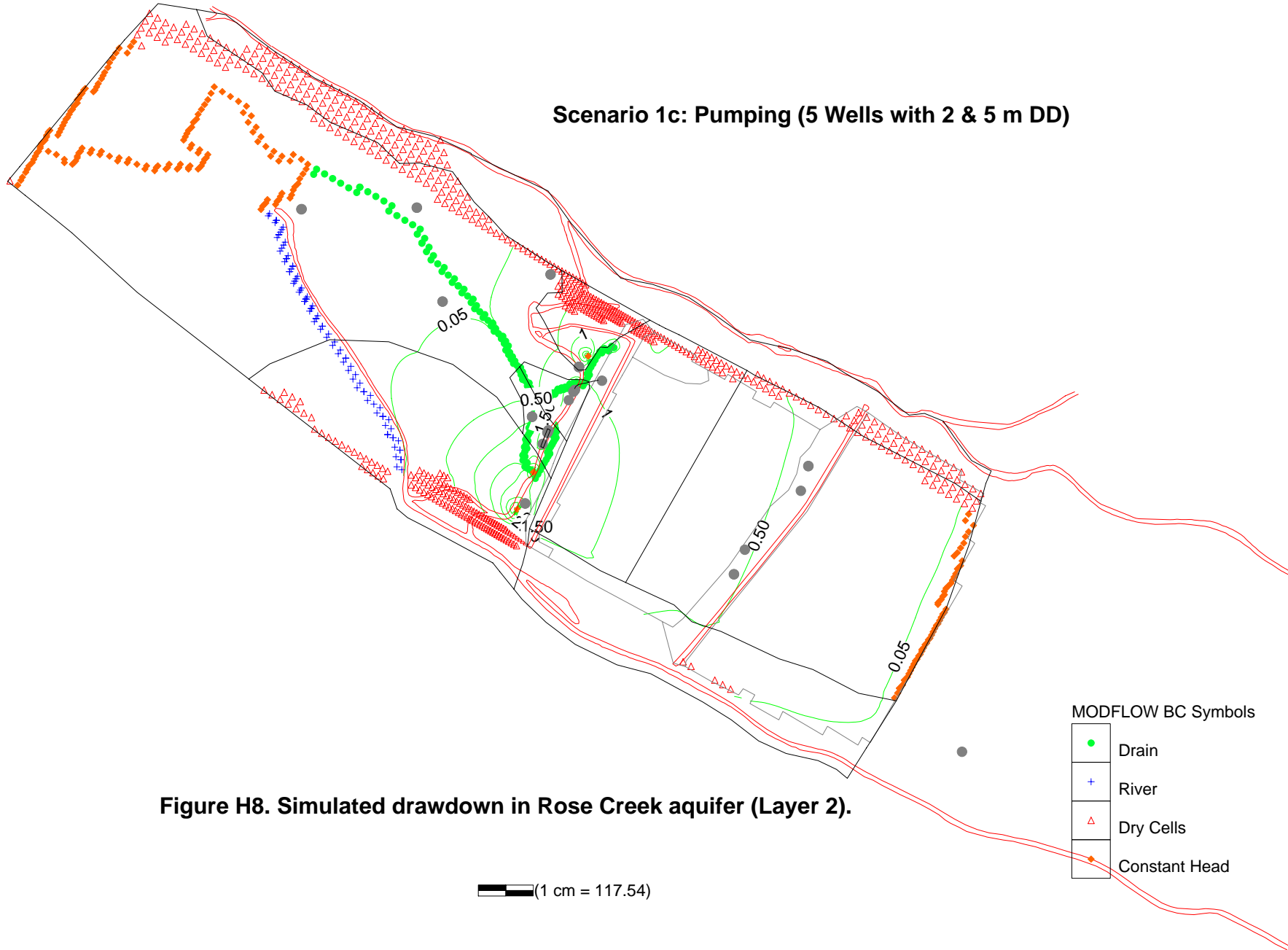


Figure H8. Simulated drawdown in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- Constant Head

(1 cm = 117.54)

Table H6. Closure Scenario 1d (RCC33_2_5)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.371	1011.371	1011.371	5.000
PWA - Till	1016.347		1013.329	3.018
PWA - BR	1016.249		1014.921	1.328
PW1 - All (L2,4)	1015.542	1012.542	1012.542	3.000
PW1 - Till	1015.565		1013.061	2.504
PW1 - BR	1015.873		1014.363	1.511
PW2 - All (L2,3)	1015.651	1012.651	1012.651	3.000
PW2 - Till	1015.692		1013.444	2.249
PW2 - BR	1016.165		1014.386	1.779
PWB - All (L2-4)	1017.023	1012.023	1012.023	5.000
PWB - Till	1017.398		1014.549	2.849
PWB - BR	1018.592		1016.617	1.975
PWC - All (L2-4)	1021.025	1016.025	1016.025	5.000
PWC - Till	1021.993		1019.039	2.955
PWC - BR	1025.220		1023.624	1.596

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	158	1.83	29.0
PW1	2, 4	1,785	20.7	327
PW2	2, 3	2,859	33.1	524
PWB	2, 3, 4	108	1.24	19.7
PWC	2, 3, 4	74	0.85	13.5
TOTAL		4983	57.7	914

Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1015.209	1.306
OBS1_L3	1016.512	1015.178	1.334
OBS1_L4	1016.516	1015.172	1.343
OBS1_L5	1016.504	1015.171	1.333
OBS1_L6	1016.475	1015.309	1.166
OBS2_L2	1015.800	1014.253	1.547
OBS2_L3	1015.800	1014.242	1.558
OBS2_L4	1015.799	1014.235	1.564
OBS2_L5	1015.813	1014.256	1.557
OBS2_L6	1016.004	1014.618	1.386
OBS3_L2	1015.478	1013.768	1.710
OBS3_L3	1015.475	1013.766	1.709
OBS3_L4	1015.471	1013.764	1.707
OBS3_L5	1015.496	1013.794	1.701
OBS3_L6	1015.827	1014.242	1.585
OBS4_L2	1016.175	1013.988	2.188
OBS4_L3	1016.176	1013.983	2.193
OBS4_L4	1016.180	1013.987	2.192
OBS4_L5	1016.372	1014.199	2.173
OBS4_L6	1017.255	1015.348	1.906
OBS5_L2	1019.276	1016.727	2.549
OBS5_L3	1019.249	1016.711	2.537
OBS5_L4	1019.231	1016.703	2.528
OBS5_L5	1019.672	1017.267	2.405
OBS5_L6	1021.661	1019.813	1.847
OBS6_L2	1024.399	1022.557	1.842
OBS6_L3	1024.637	1022.786	1.850
OBS6_L4	1024.682	1022.835	1.847
OBS6_L5	1026.509	1025.101	1.408
OBS6_L6	1029.718	1028.619	1.099

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	219	2.5
polygon	585.8	6.8	596	6.9
Total	801	9	814	9
POLISHING POND				
arc	22.4	0.3	44	0.5
polygon	1207.9	14.0	1381	16.0
Total	1230	14	1424	16
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-17	-0.2
CVS1	-3270	-37.8	-1421	-16.4
Rest of RC	-1080	-12.5	-1061	-12.3
RCDC	3291	38.1	3325	38.5
U/S CH	2463	28.5	2698	31.2
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5441	63.0
Flow Past X13 (j76 into RF)		635	7.4
% Bypass		11.7%	

Scenario 1d: Pumping (5 Wells with 3 & 5 m DD)

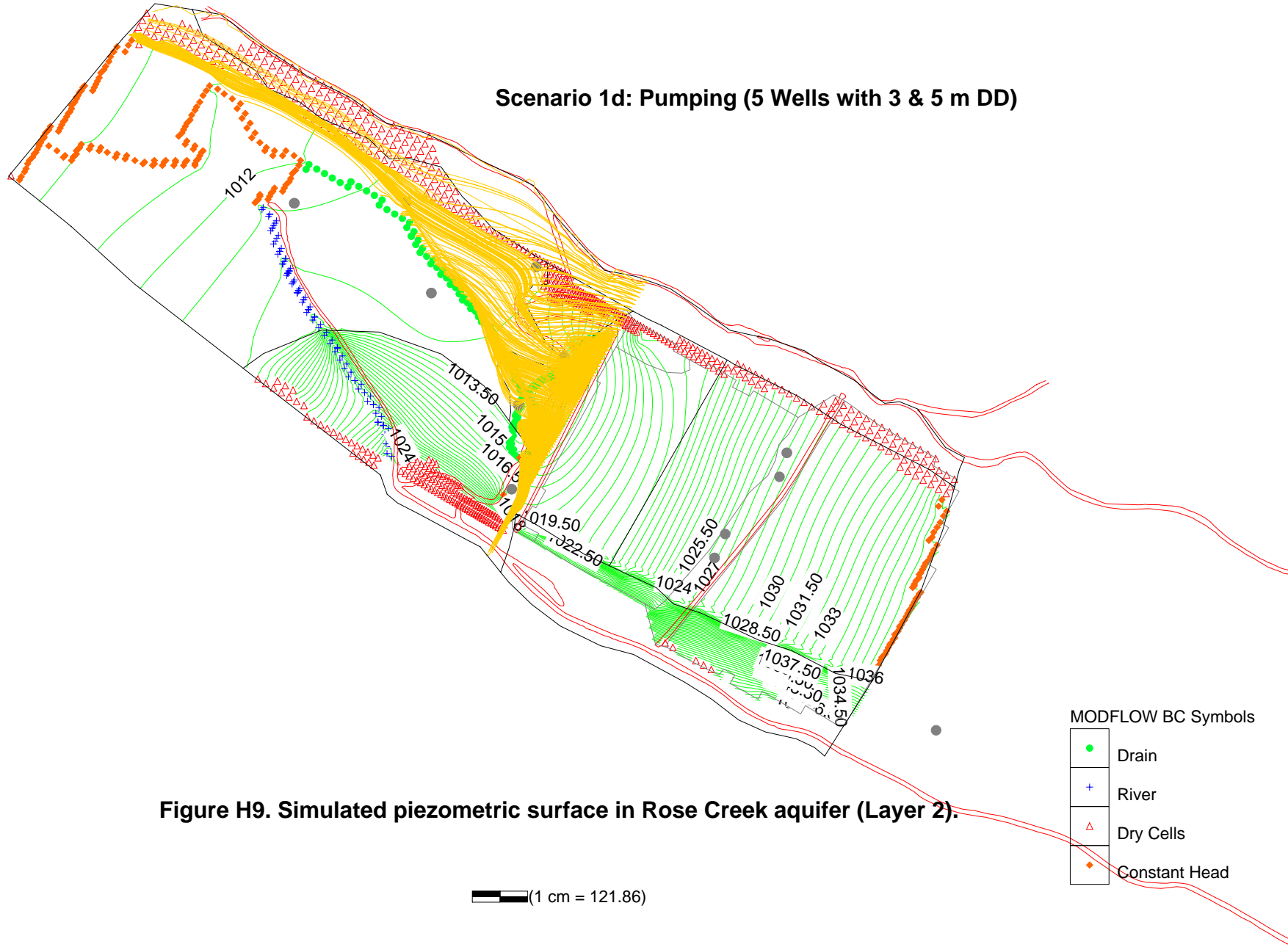
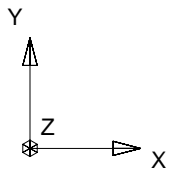


Figure H9. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

1 cm = 121.86



Scenario 1d: Pumping (5 Wells with 3 & 5 m DD)

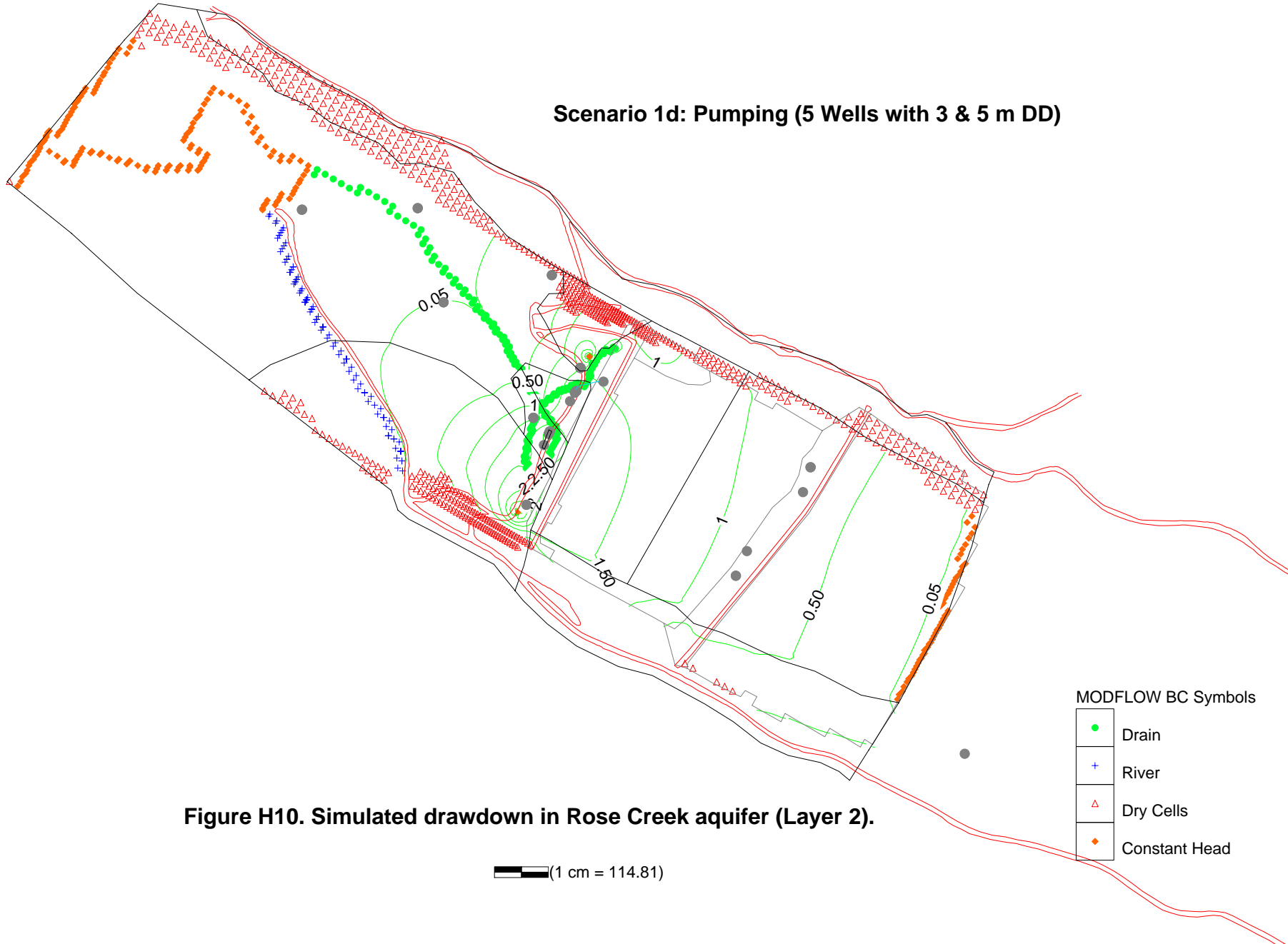



Figure H10. Simulated drawdown in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

 (1 cm = 114.81)

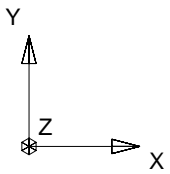


Table H7. Closure Scenario 1e (RCC33_2_6)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.371	1011.371	1011.371	5.000
PWA - Till	1016.347		1013.055	3.291
PWA - BR	1016.249		1014.469	1.781
PW1 - All (L2,4)	1015.542	1011.542	1011.542	4.000
PW1 - Till	1015.565		1012.197	3.367
PW1 - BR	1015.873		1013.789	2.084
PW2 - All (L2,3)	1015.651	1011.651	1011.651	4.000
PW2 - Till	1015.692		1012.652	3.041
PW2 - BR	1016.165		1013.758	2.407
PWB - All (L2-4)	1017.023	1012.023	1012.023	5.000
PWB - Till	1017.398		1014.153	3.245
PWB - BR	1018.592		1016.139	2.453
PWC - All (L2-4)	1021.025	1016.025	1016.025	5.000
PWC - Till	1021.993		1018.834	3.159
PWC - BR	1025.220		1023.356	1.864

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	134	1.55	24.6
PW1	2, 4	2,123	24.6	389
PW2	2, 3	3,412	39.5	626
PWB	2, 3, 4	88	1.02	16.2
PWC	2, 3, 4	65	0.75	11.9
TOTAL		5822	67.4	1,068

Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1014.741	1.773
OBS1_L3	1016.512	1014.715	1.798
OBS1_L4	1016.516	1014.709	1.806
OBS1_L5	1016.504	1014.714	1.790
OBS1_L6	1016.475	1014.883	1.593
OBS2_L2	1015.800	1013.638	2.162
OBS2_L3	1015.800	1013.627	2.173
OBS2_L4	1015.799	1013.619	2.180
OBS2_L5	1015.813	1013.649	2.164
OBS2_L6	1016.004	1014.100	1.904
OBS3_L2	1015.478	1013.104	2.374
OBS3_L3	1015.475	1013.102	2.373
OBS3_L4	1015.471	1013.101	2.370
OBS3_L5	1015.496	1013.135	2.361
OBS3_L6	1015.827	1013.641	2.185
OBS4_L2	1016.175	1013.238	2.938
OBS4_L3	1016.176	1013.232	2.944
OBS4_L4	1016.180	1013.236	2.943
OBS4_L5	1016.372	1013.500	2.871
OBS4_L6	1017.255	1014.773	2.482
OBS5_L2	1019.276	1016.373	2.903
OBS5_L3	1019.249	1016.356	2.893
OBS5_L4	1019.231	1016.345	2.886
OBS5_L5	1019.672	1016.911	2.761
OBS5_L6	1021.661	1019.454	2.207
OBS6_L2	1024.399	1022.414	1.985
OBS6_L3	1024.637	1022.640	1.997
OBS6_L4	1024.682	1022.688	1.994
OBS6_L5	1026.509	1024.957	1.552
OBS6_L6	1029.718	1028.435	1.282

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	220	2.5
polygon	585.8	6.8	599	6.9
Total	801	9	818	9
POLISHING POND				
arc	22.4	0.3	51	0.6
polygon	1207.9	14.0	1442	16.7
Total	1230	14	1493	17
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-773	-8.9
Rest of RC	-1080	-12.5	-1048	-12.1
RCDC	3291	38.1	3334	38.6
U/S CH	2463	28.5	2778	32.2
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5601	64.8
Flow Past X13 (j76 into RF)		90	1.0
% Bypass		1.6%	

Scenario 1e: Pumping (5 Wells with 4 & 5 m DD)

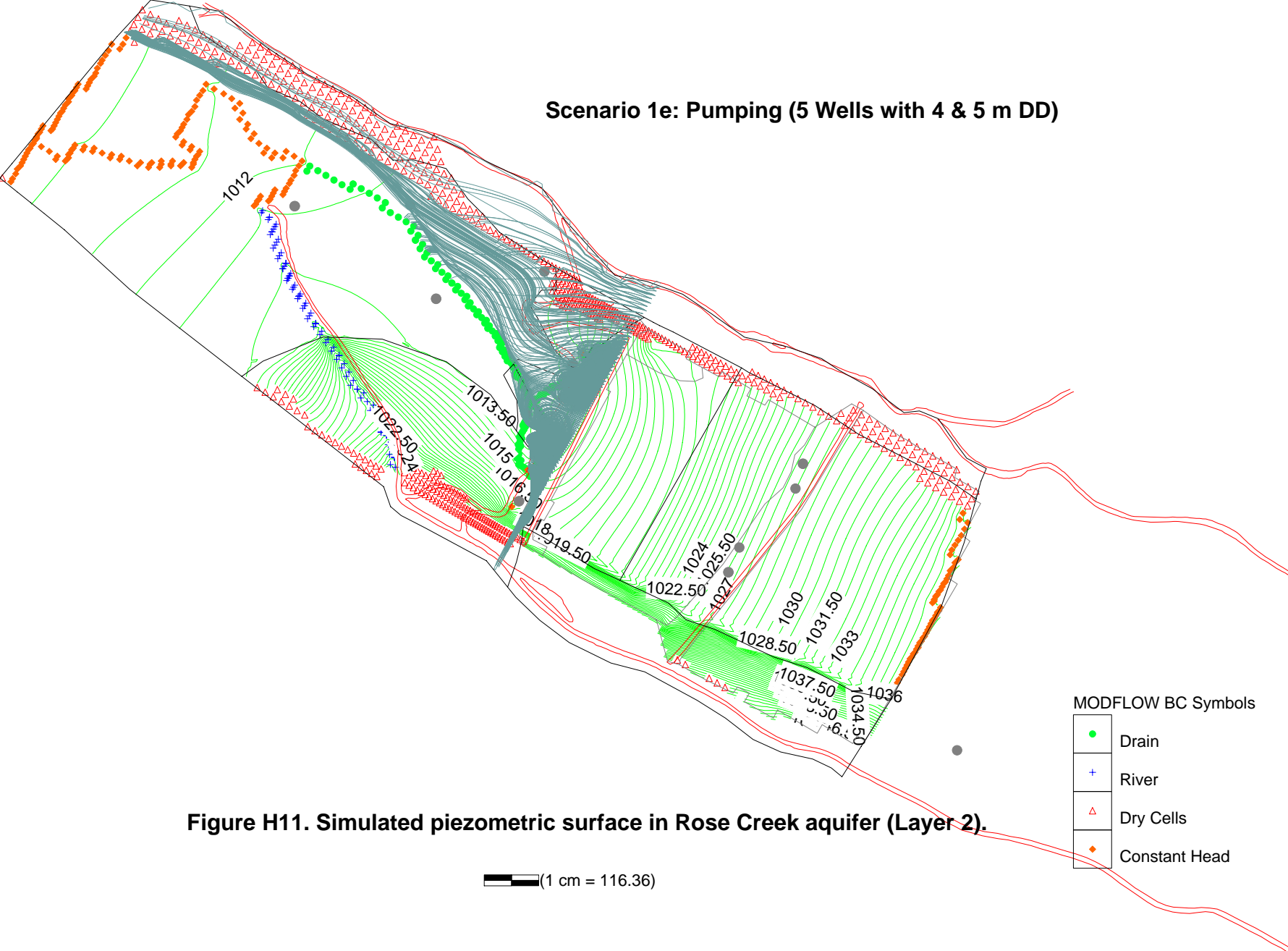
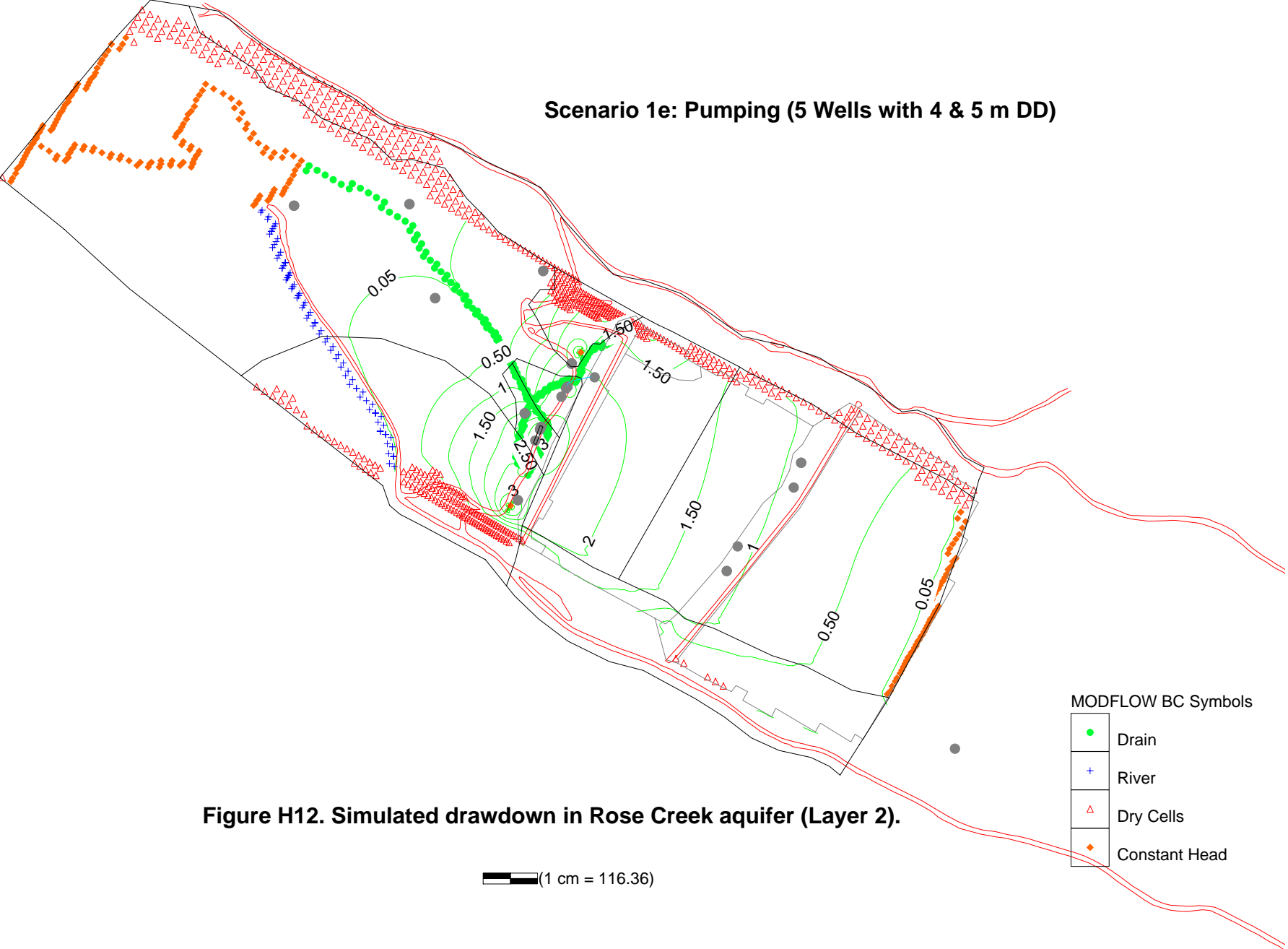


Figure H11. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

(1 cm = 116.36)

Scenario 1e: Pumping (5 Wells with 4 & 5 m DD)



- MODFLOW BC Symbols**
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

Figure H12. Simulated drawdown in Rose Creek aquifer (Layer 2).

(1 cm = 116.36)

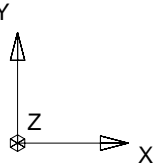


Table H8. Closure Scenario 1f (RCC33_2_2)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.371	1011.371	1011.371	5.000
PWA - Till	1016.347		1012.759	3.588
PWA - BR	1016.249		1013.951	2.298
PW1 - All (L2,4)	1015.542	1010.542	1010.542	5.000
PW1 - Till	1015.565		1011.316	4.248
PW1 - BR	1015.873		1013.147	2.726
PW2 - All (L2,3)	1015.651	1010.651	1010.651	5.000
PW2 - Till	1015.692		1011.827	3.865
PW2 - BR	1016.165		1013.072	3.093
PWB - All (L2-4)	1017.023	1012.023	1012.023	5.000
PWB - Till	1017.398		1013.742	3.656
PWB - BR	1018.592		1015.637	2.955
PWC - All (L2-4)	1021.025	1016.025	1016.025	5.000
PWC - Till	1021.993		1018.624	3.369
PWC - BR	1025.220		1023.086	2.134

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	108	1.25	19.9
PW1	2, 4	2,298	26.6	422
PW2	2, 3	3,767	43.6	691
PWB	2, 3, 4	69	0.80	12.6
PWC	2, 3, 4	56	0.65	10.3
TOTAL		6298	72.9	1,155

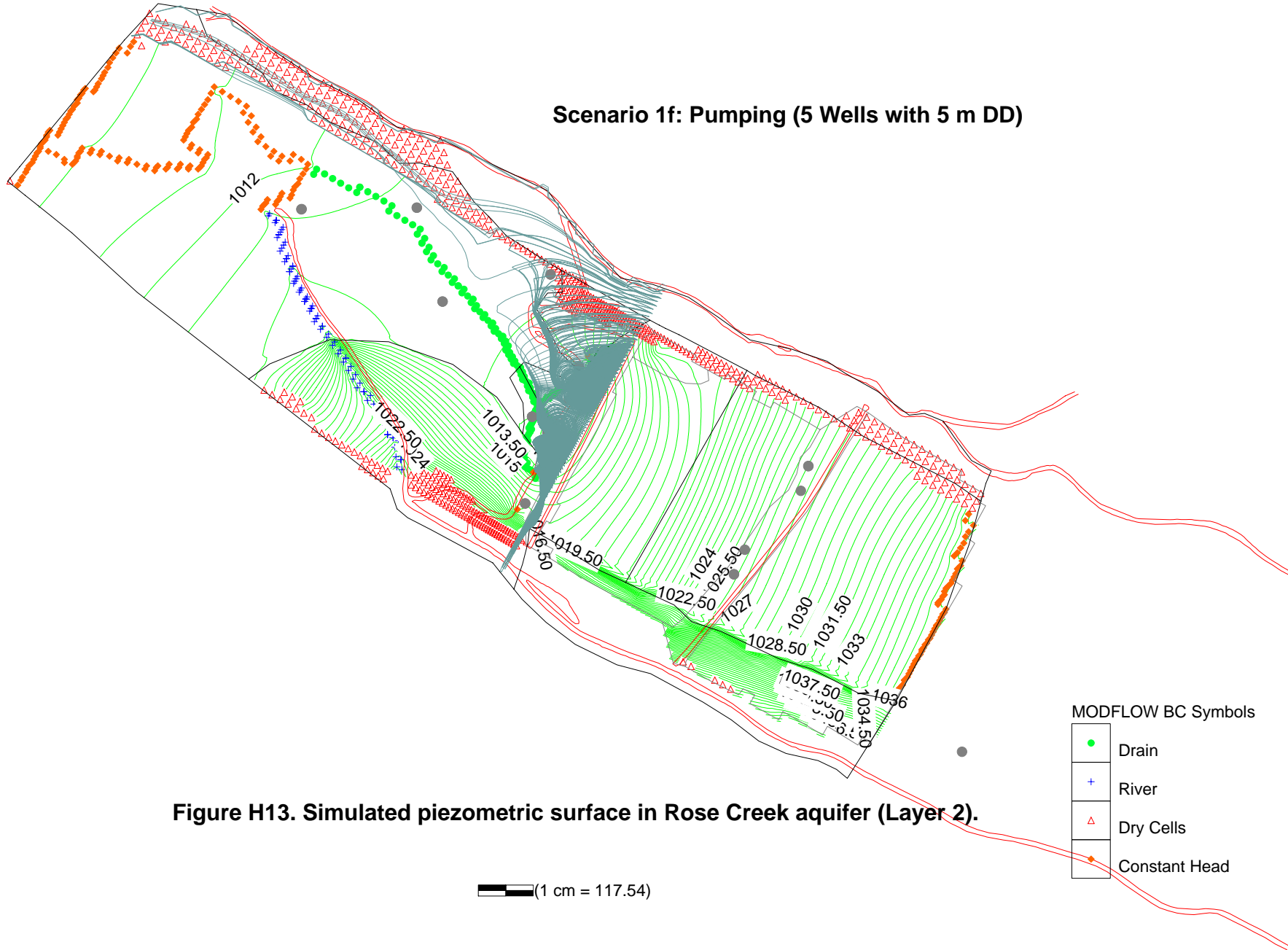
Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1014.232	2.282
OBS1_L3	1016.512	1014.209	2.304
OBS1_L4	1016.516	1014.204	2.311
OBS1_L5	1016.504	1014.211	2.293
OBS1_L6	1016.475	1014.393	2.082
OBS2_L2	1015.800	1012.977	2.823
OBS2_L3	1015.800	1012.964	2.836
OBS2_L4	1015.799	1012.956	2.844
OBS2_L5	1015.813	1012.991	2.822
OBS2_L6	1016.004	1013.514	2.491
OBS3_L2	1015.478	1012.376	3.102
OBS3_L3	1015.475	1012.373	3.102
OBS3_L4	1015.471	1012.372	3.099
OBS3_L5	1015.496	1012.408	3.087
OBS3_L6	1015.827	1012.968	2.859
OBS4_L2	1016.175	1012.469	3.707
OBS4_L3	1016.176	1012.462	3.714
OBS4_L4	1016.180	1012.465	3.714
OBS4_L5	1016.372	1012.778	3.593
OBS4_L6	1017.255	1014.160	3.094
OBS5_L2	1019.276	1016.011	3.265
OBS5_L3	1019.249	1015.990	3.259
OBS5_L4	1019.231	1015.977	3.254
OBS5_L5	1019.672	1016.543	3.129
OBS5_L6	1021.661	1019.083	2.578
OBS6_L2	1024.399	1022.293	2.106
OBS6_L3	1024.637	1022.511	2.126
OBS6_L4	1024.682	1022.558	2.124
OBS6_L5	1026.509	1024.820	1.689
OBS6_L6	1029.718	1028.255	1.462

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	221	2.6
polygon	585.8	6.8	600	6.9
Total	801	9	821	10
POLISHING POND				
arc	22.4	0.3	57	0.7
polygon	1207.9	14.0	1504	17.4
Total	1230	14	1561	18
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-492	-5.7
Rest of RC	-1080	-12.5	-1018	-11.8
RCDC	3291	38.1	3346	38.7
U/S CH	2463	28.5	2860	33.1
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5760	66.7
Flow Past X13 (j76 into RF)		28	0.3
% Bypass		0.5%	

Scenario 1f: Pumping (5 Wells with 5 m DD)



Scenario 1f: Pumping (5 Wells with 5 m DD)

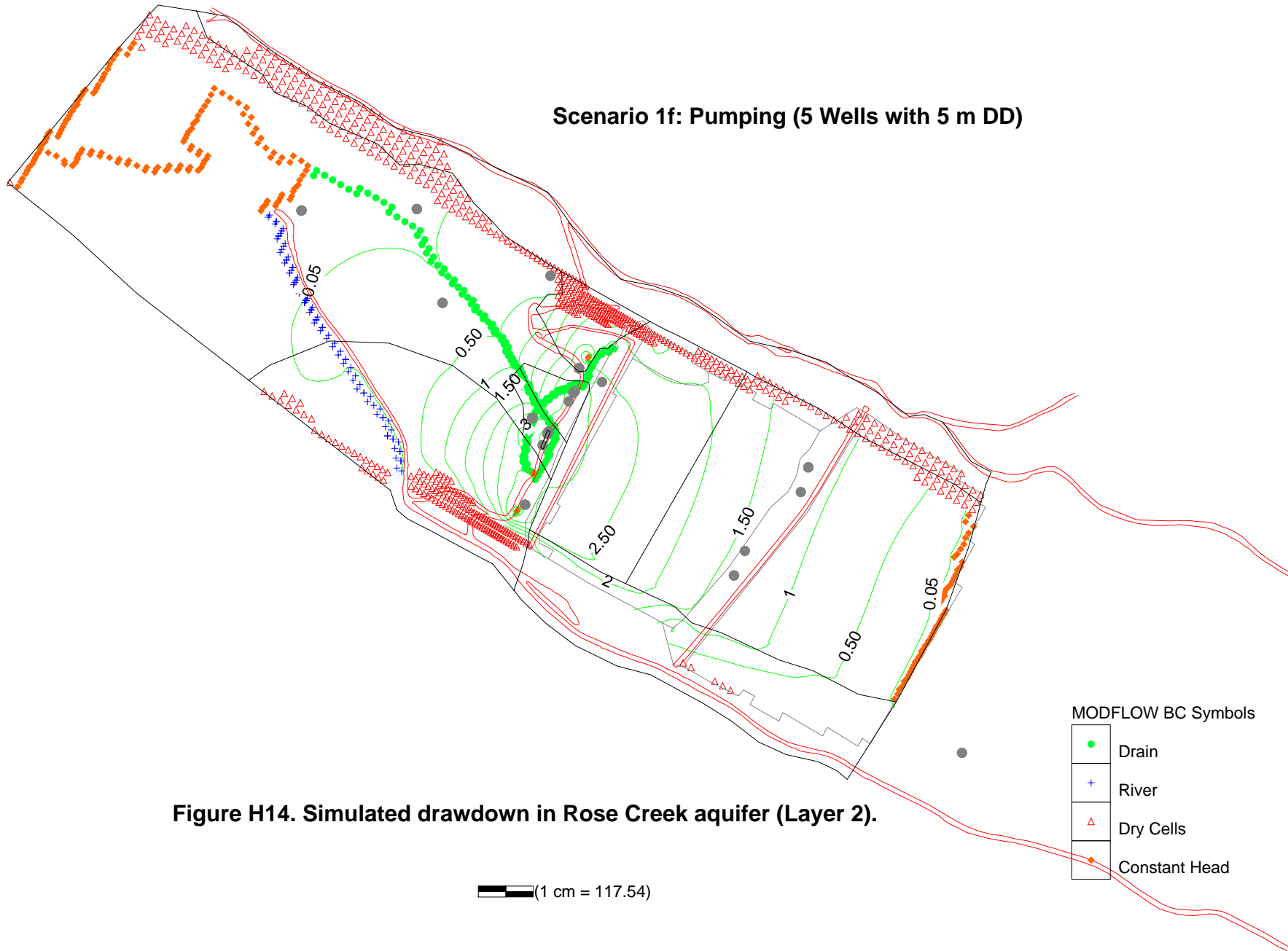


Figure H14. Simulated drawdown in Rose Creek aquifer (Layer 2).

Table H9. Closure Scenario 1g (RCC33_2_7)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L3,4)	1016.371	1006.371	1006.371	10.000
PWA - Till	1016.347		1010.310	6.037
PWA - BR	1016.249		1013.573	2.676
PW1 - All (L2,4)	1015.542	1010.542	1010.542	5.000
PW1 - Till	1015.565		1011.285	4.279
PW1 - BR	1015.873		1013.022	2.851
PW2 - All (L2,3)	1015.651	1010.651	1010.651	5.000
PW2 - Till	1015.692		1011.775	3.918
PW2 - BR	1016.165		1012.925	3.240
PWB - All (L3,4)	1017.023	1007.023	1007.023	10.000
PWB - Till	1017.398		1012.023	5.375
PWB - BR	1018.592		1014.994	3.598
PWC - All (L2-4)	1021.025	1011.025	1011.025	10.000
PWC - Till	1021.993		1016.661	5.333
PWC - BR	1025.220		1022.422	2.797

Low K wells

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	3, 4	250	2.89	45.8
PW1	2, 4	2,206	25.5	405
PW2	2, 3	3,610	41.8	662
PWB	3, 4	174	2.01	31.9
PWC	2, 3, 4	111	1.28	20.4
TOTAL		6350	73.5	1,165

Observation Well	Current Heads (RC33_2b)	Closure	
		Heads	Drawdown
OBS1_L2	1016.514	1013.728	2.787
OBS1_L3	1016.512	1013.680	2.833
OBS1_L4	1016.516	1013.667	2.848
OBS1_L5	1016.504	1013.686	2.818
OBS1_L6	1016.475	1014.067	2.408
OBS2_L2	1015.800	1012.843	2.957
OBS2_L3	1015.800	1012.832	2.968
OBS2_L4	1015.799	1012.824	2.975
OBS2_L5	1015.813	1012.846	2.967
OBS2_L6	1016.004	1013.303	2.702
OBS3_L2	1015.478	1012.316	3.162
OBS3_L3	1015.475	1012.313	3.161
OBS3_L4	1015.471	1012.313	3.158
OBS3_L5	1015.496	1012.346	3.149
OBS3_L6	1015.827	1012.870	2.957
OBS4_L2	1016.175	1012.363	3.812
OBS4_L3	1016.176	1012.355	3.821
OBS4_L4	1016.180	1012.360	3.819
OBS4_L5	1016.372	1012.525	3.846
OBS4_L6	1017.255	1013.804	3.451
OBS5_L2	1019.276	1014.715	4.561
OBS5_L3	1019.249	1014.699	4.549
OBS5_L4	1019.231	1014.695	4.536
OBS5_L5	1019.672	1015.354	4.319
OBS5_L6	1021.661	1018.359	3.302
OBS6_L2	1024.399	1021.588	2.812
OBS6_L3	1024.637	1021.776	2.861
OBS6_L4	1024.682	1021.814	2.868
OBS6_L5	1026.509	1024.279	2.229
OBS6_L6	1029.718	1027.840	1.877

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	221	2.6
polygon	585.8	6.8	601	7.0
Total	801	9	822	10
POLISHING POND				
arc	22.4	0.3	59	0.7
polygon	1207.9	14.0	1496	17.3
Total	1230	14	1556	18
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-465	-5.4
Rest of RC	-1080	-12.5	-1014	-11.7
RCDC	3291	38.1	3353	38.8
U/S CH	2463	28.5	2879	33.3
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

CAPTURE EFFICIENCY		m3/d	L/s
Flow Under CVD (j99 out of LF)		5764	66.7
Flow Past X13 (j76 into RF)		20	0.2
% Bypass		0.3%	

Scenario 1g: Pumping (5 Wells with 5 & 10 m DD)

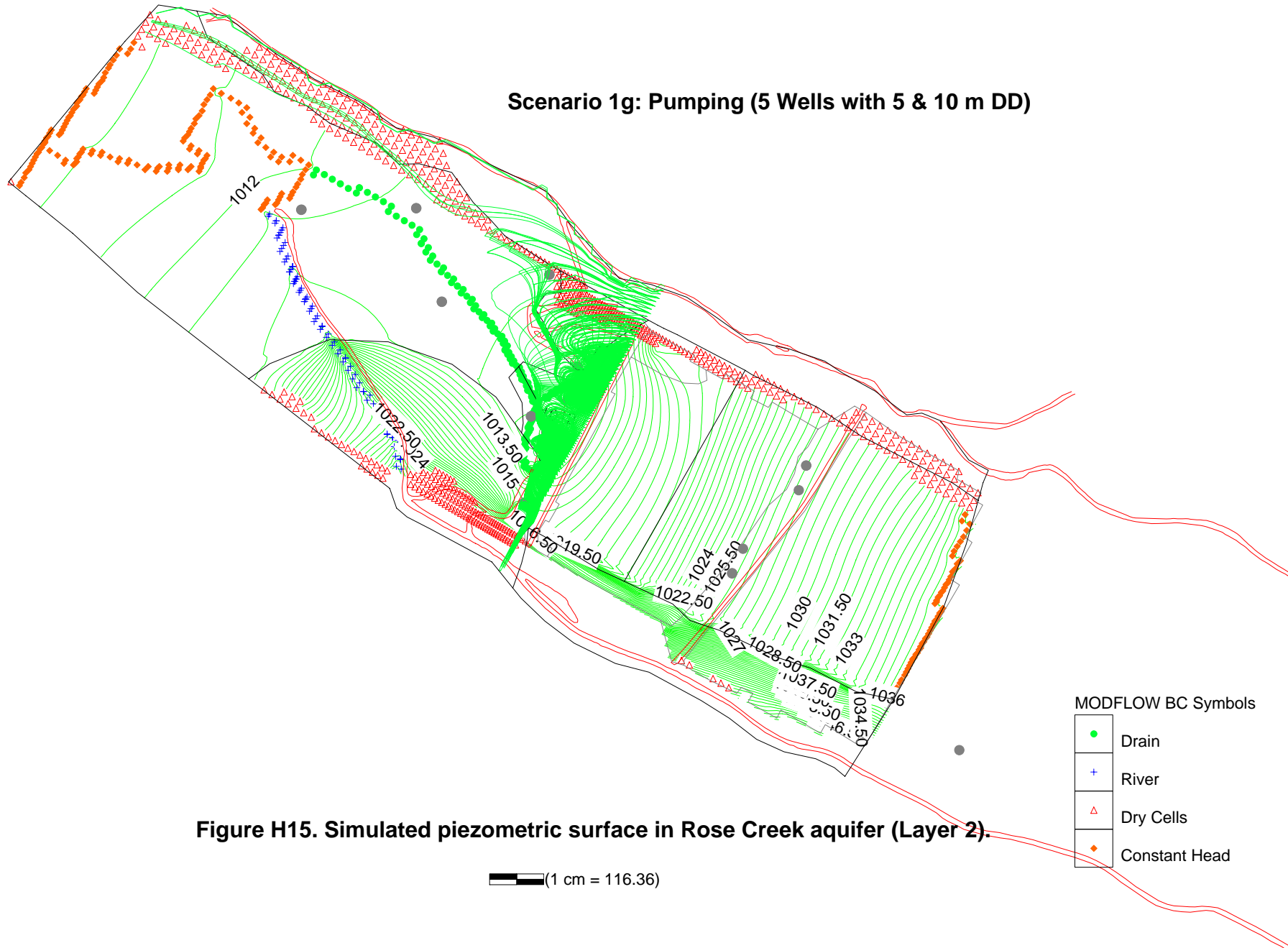


Figure H15. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 1g: Pumping (5 Wells with 5 & 10 m DD)

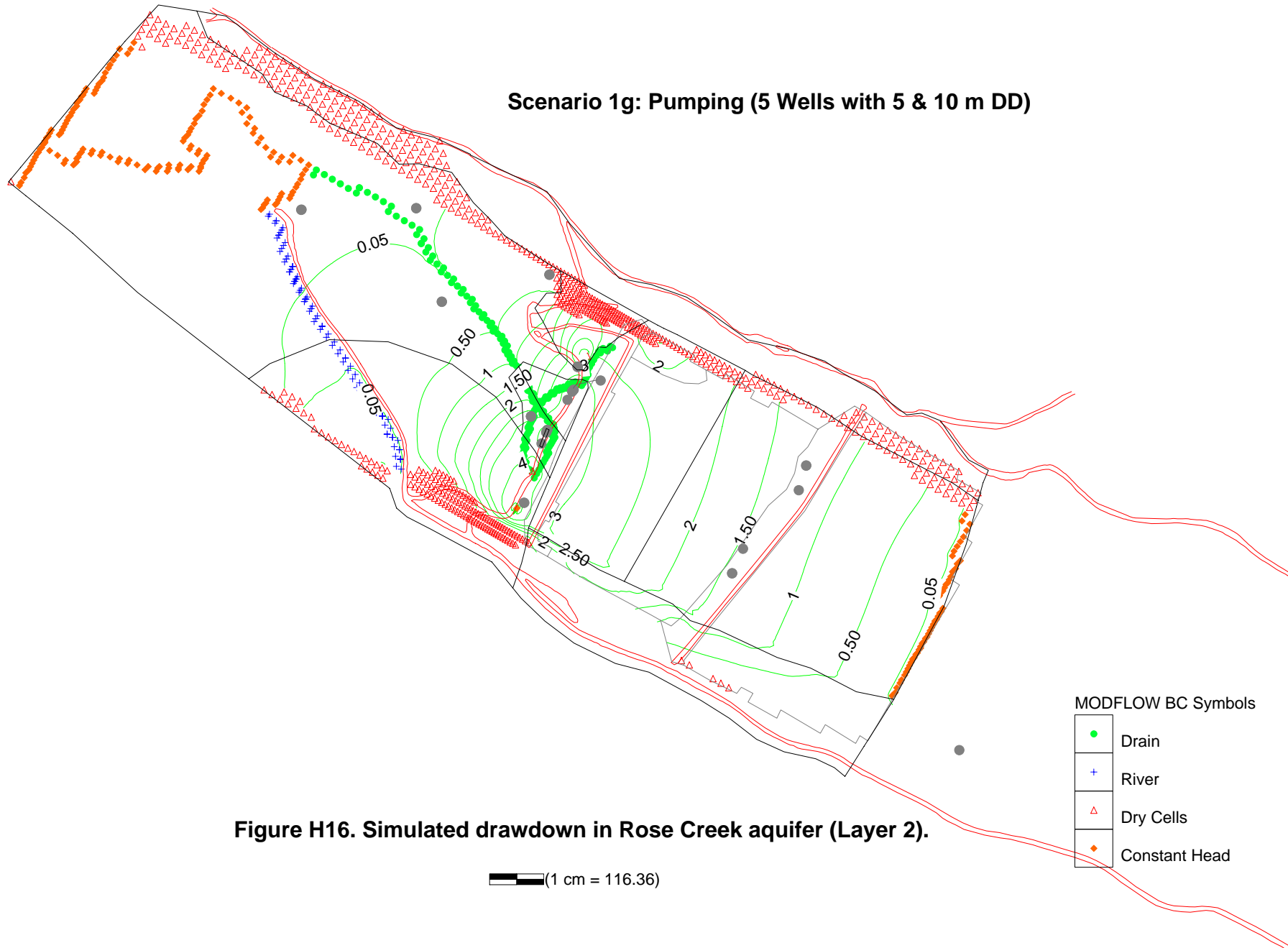


Figure H16. Simulated drawdown in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

Table H10. Closure Scenario 2a (RCC33_2_8)

Pumping Well ID	Current Heads (RCC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.933	1014.433	1014.433	2.500
PWA - Till	1016.927		1015.220	1.707
PWA - BR	1016.893		1015.754	1.139
PWB - All (L2-4)	1016.617	1014.117	1014.117	2.500
PWB - Till	1016.602		1014.650	1.952
PWB - BR	1016.501		1015.284	1.216
PWC - All (L2-4)	1016.070	1013.570	1013.570	2.500
PWC - Till	1016.059		1014.078	1.980
PWC - BR	1016.093		1014.778	1.315
PW1 - All (L2,4)	1015.541	1013.041	1013.041	2.500
PW1 - Till	1015.561		1013.360	2.201
PW1 - BR	1015.874		1014.380	1.494
PWD - All (L2-4)	1015.488	1012.988	1012.988	2.500
PWD - Till	1015.509		1013.297	2.212
PWD - BR	1015.832		1014.209	1.623
PW2 - All (L2,3)	1015.652	1013.152	1013.152	2.500
PW2 - Till	1015.695		1013.621	2.074
PW2 - BR	1016.167		1014.462	1.705
PWE - All (L2-4)	1016.004	1013.504	1013.504	2.500
PWE - Till	1016.210		1014.043	2.167
PWE - BR	1017.052		1015.324	1.728
PWF - All (L2-4)	1017.099	1014.599	1014.599	2.500
PWF - Till	1017.486		1015.514	1.972
PWF - BR	1018.697		1017.046	1.651
PWG - All (L2-4)	1019.149	1016.649	1016.649	2.500
PWG - Till	1019.555		1017.568	1.987
PWG - BR	1021.476		1019.974	1.503
PWH - All (L2-4)	1021.171	1018.671	1018.671	2.500
PWH - Till	1022.229		1020.399	1.829
PWH - BR	1025.539		1024.338	1.201

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	219	2.5
polygon	585.8	6.8	595	6.9
Total	801	9	814	9
POLISHING POND				
arc	22.4	0.3	44	0.5
polygon	1207.9	14.0	1379	16.0
Total	1230	14	1422	16
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-15	-0.2
CVS1	-3270	-37.8	-1409	-16.3
Rest of RC	-1080	-12.5	-1061	-12.3
RCDC	3291	38.1	3320	38.4
U/S CH	2463	28.5	2695	31.2
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	16	0.19	3.0
PWB	2, 3, 4	65	0.75	11.8
PWC	2, 3, 4	103	1.19	19
PW1	2, 4	1,136	13.15	208
PWD	2, 3, 4	1,478	17.11	271
PW2	2, 3	1,574	18.22	289
PWE	2, 3, 4	531	6.15	97.5
PWF	2, 3, 4	33	0.39	6.1
PWG	2, 3, 4	25	0.29	4.7
PWH	2, 3, 4	23	0.27	4.2
TOTAL		4986	58	915

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5455	63.1
Flow Past X13 (j76 into RF)	619	7.2
% Bypass	11.3%	

Scenario 2a: Pumping (10 Wells with 2.5 m DD)

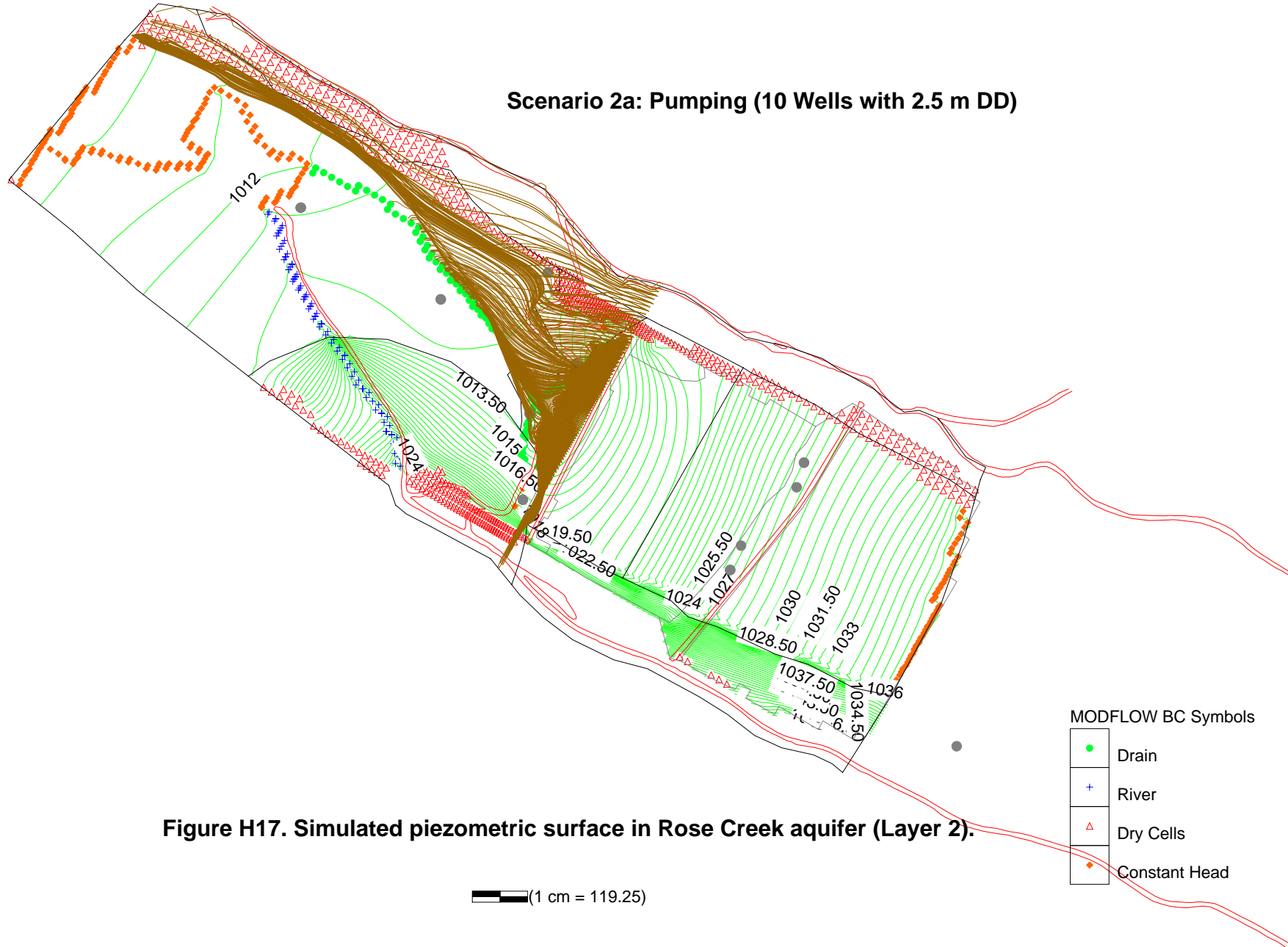
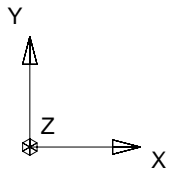


Figure H17. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols**
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

1 cm = 119.25



Scenario 2a: Pumping (10 Wells with 2.5 m DD)

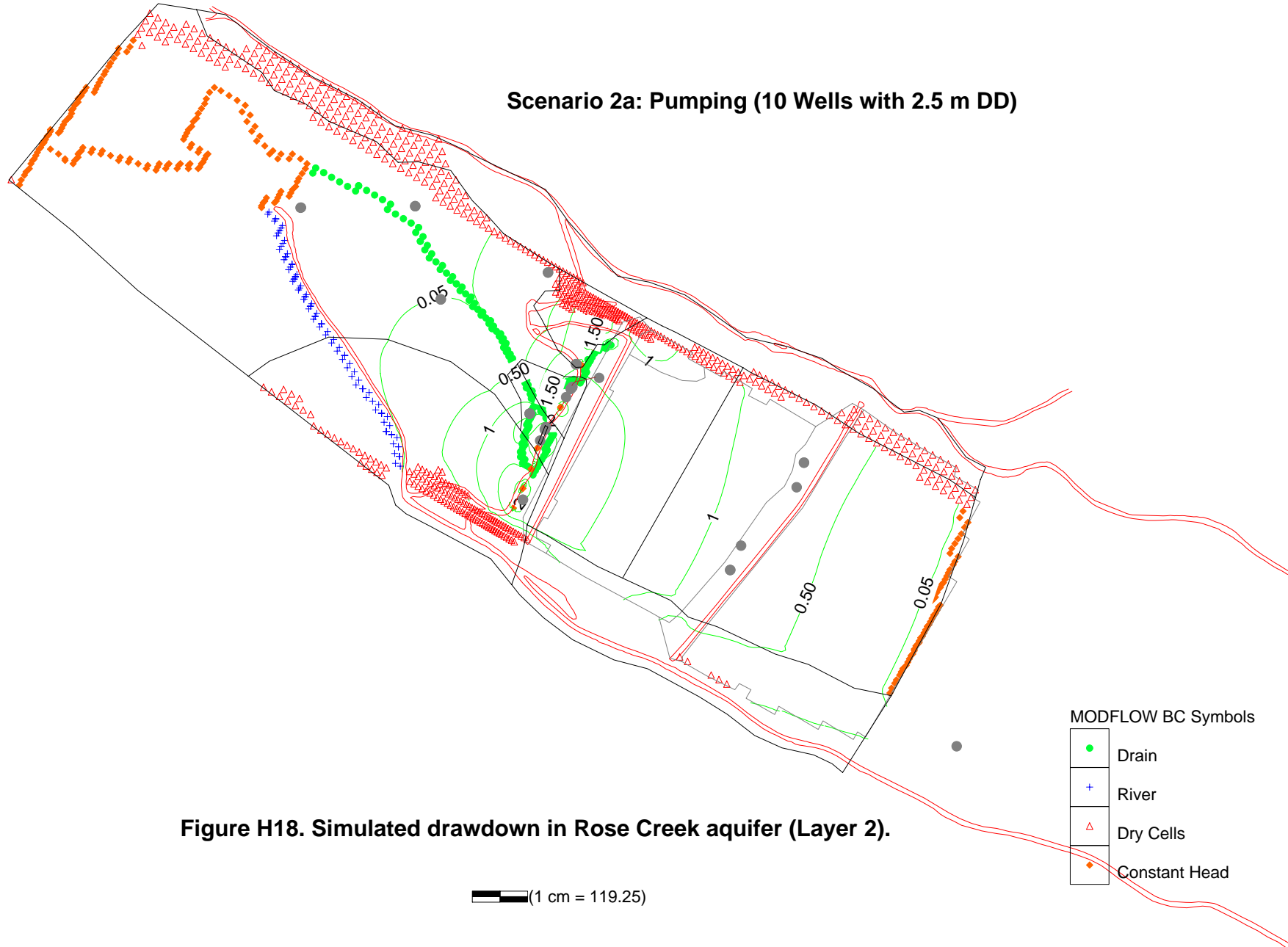


Figure H18. Simulated drawdown in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◇ Constant Head

1 cm = 119.25

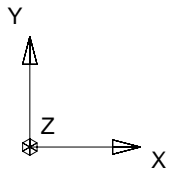


Table H11. Closure Scenario 2b (RCC33_2_12)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1014.390	2.537
PWA - BR	1016.893		1015.908	0.985
PWB - All (L3,4)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1013.349	3.253
PWB - BR	1016.501		1015.550	0.951
PWC - All (L3,4)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1013.107	2.952
PWC - BR	1016.093		1015.300	0.793
PW1 - All (L2,4)	1015.541	1014.541	1014.541	1.000
PW1 - Till	1015.561		1014.677	0.884
PW1 - BR	1015.874		1015.203	0.671
PWD - All (L2-4)	1015.488	1014.488	1014.488	1.000
PWD - Till	1015.509		1014.637	0.873
PWD - BR	1015.832		1015.157	0.675
PW2 - All (L2,3)	1015.652	1014.652	1014.652	1.000
PW2 - Till	1015.695		1014.877	0.818
PW2 - BR	1016.167		1015.398	0.768
PWE - All (L2-4)	1016.004	1015.004	1015.004	1.000
PWE - Till	1016.210		1015.235	0.974
PWE - BR	1017.052		1016.065	0.987
PWF - All (L3,4)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1014.965	2.521
PWF - BR	1018.697		1017.291	1.406
PWG - All (L3,4)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1016.483	3.073
PWG - BR	1021.476		1019.851	1.625
PWH - All (L2-4)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1019.290	2.938
PWH - BR	1025.539		1024.168	1.371

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	217	2.5
polygon	585.8	6.8	590	6.8
Total	801	9	807	9
POLISHING POND				
arc	22.4	0.3	32	0.4
polygon	1207.9	14.0	1286	14.9
Total	1230	14	1319	15
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-425	-4.9
CVS1	-3270	-37.8	-2599	-30.1
Rest of RC	-1080	-12.5	-1072	-12.4
RCDC	3291	38.1	3314	38.4
U/S CH	2463	28.5	2567	29.7
D/S CH	-781	-9.0	-781	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	41	0.47	7.5
PWB	2, 3, 4	183	2.12	33.6
PWC	2, 3, 4	363	4.20	67
PW1	2, 4	504	5.83	92
PWD	2, 3, 4	699	8.09	128
PW2	2, 3	835	9.67	153
PWE	2, 3, 4	218	2.52	40.0
PWF	2, 3, 4	126	1.45	23.0
PWG	2, 3, 4	90	1.04	16.5
PWH	2, 3, 4	70	0.81	12.8
TOTAL		3129	36	574

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5188	60.0
Flow Past X13 (j76 into RF)	1808	20.9
% Bypass	34.9%	

Scenario 2b: Pumping (10 Wells with 1 & 5 m DD)

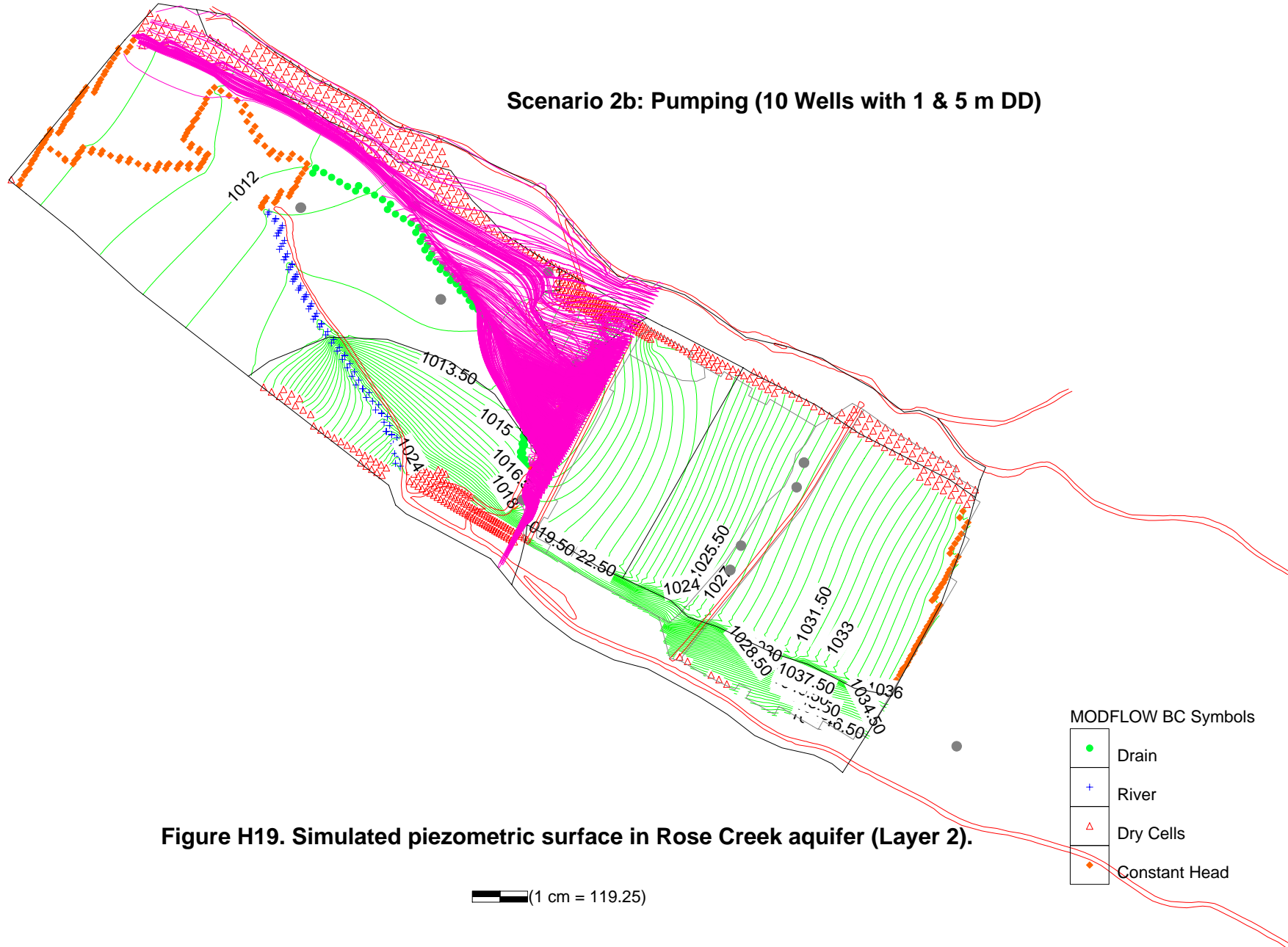
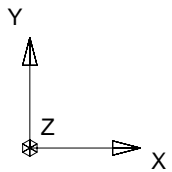


Figure H19. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

█ (1 cm = 119.25)



Scenario 2b: Pumping (10 Wells with 1 & 5 m DD)

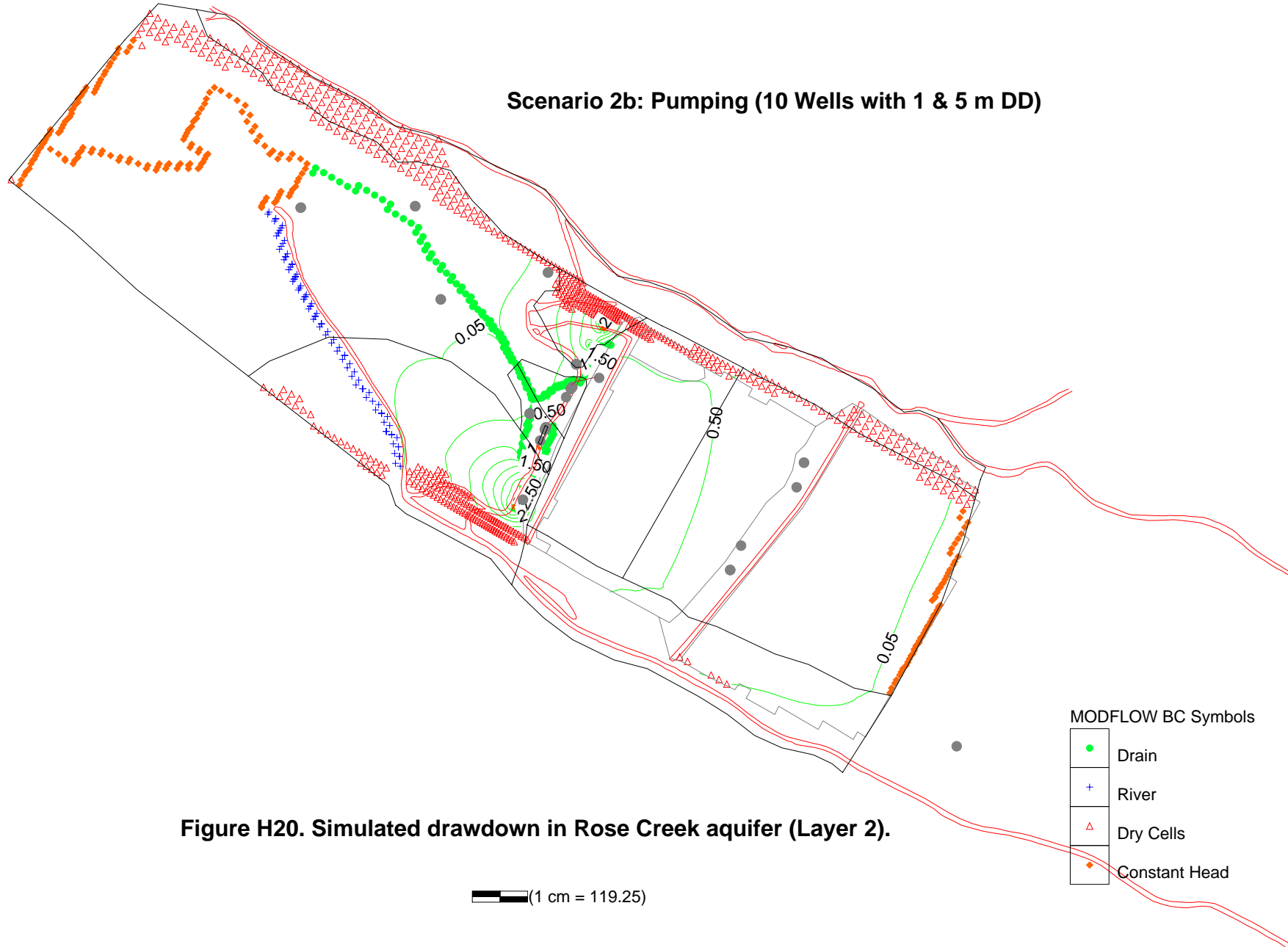


Figure H20. Simulated drawdown in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◇ Constant Head

1 cm = 119.25

Table H12. Closure Scenario 2c (RCC33_2_13)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1014.123	2.804
PWA - BR	1016.893		1015.522	1.371
PWB - All (L3,4)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1013.134	3.468
PWB - BR	1016.501		1015.108	1.392
PWC - All (L3,4)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1012.812	3.247
PWC - BR	1016.093		1014.779	1.314
PW1 - All (L2,4)	1015.541	1013.541	1013.541	2.000
PW1 - Till	1015.561		1013.781	1.781
PW1 - BR	1015.874		1014.579	1.295
PWD - All (L2-4)	1015.488	1013.488	1013.488	2.000
PWD - Till	1015.509		1013.736	1.774
PWD - BR	1015.832		1014.481	1.351
PW2 - All (L2,3)	1015.652	1013.652	1013.652	2.000
PW2 - Till	1015.695		1014.026	1.669
PW2 - BR	1016.167		1014.708	1.458
PWE - All (L2-4)	1016.004	1014.004	1014.004	2.000
PWE - Till	1016.210		1014.374	1.836
PWE - BR	1017.052		1015.413	1.639
PWF - All (L3,4)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1014.561	2.926
PWF - BR	1018.697		1016.778	1.919
PWG - All (L3,4)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1016.233	3.322
PWG - BR	1021.476		1019.481	1.996
PWH - All (L2-4)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1019.106	3.122
PWH - BR	1025.539		1023.902	1.638

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	218	2.5
polygon	585.8	6.8	594	6.9
Total	801	9	812	9
POLISHING POND				
arc	22.4	0.3	41	0.5
polygon	1207.9	14.0	1362	15.8
Total	1230	14	1403	16
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-53	-0.6
CVS1	-3270	-37.8	-1790	-20.7
Rest of RC	-1080	-12.5	-1064	-12.3
RCDC	3291	38.1	3323	38.5
U/S CH	2463	28.5	2664	30.8
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	34	0.39	6.2
PWB	2, 3, 4	159	1.84	29.2
PWC	2, 3, 4	309	3.58	57
PW1	2, 4	869	10.06	159
PWD	2, 3, 4	1,193	13.81	219
PW2	2, 3	1,309	15.16	240
PWE	2, 3, 4	397	4.59	72.8
PWF	2, 3, 4	104	1.20	19.1
PWG	2, 3, 4	77	0.89	14.1
PWH	2, 3, 4	62	0.71	11.3
TOTAL		4513	52	828

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5379	62.3
Flow Past X13 (j76 into RF)	1002	11.6
% Bypass	18.6%	

Scenario 2c: Pumping (10 Wells with 2 & 5 m DD)

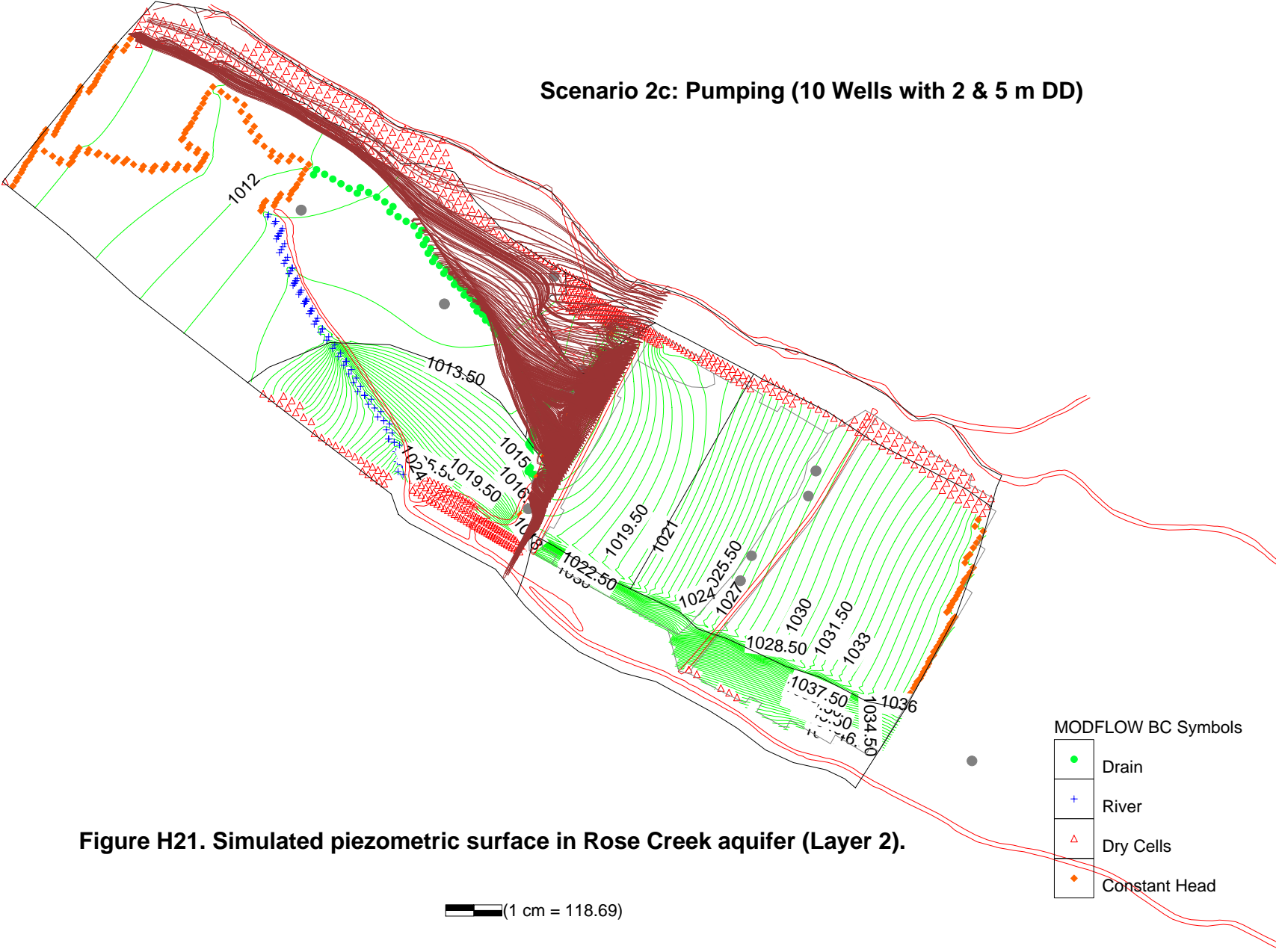


Figure H21. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

(1 cm = 118.69)

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

Scenario 2c: Pumping (10 Wells with 2 & 5 m DD)

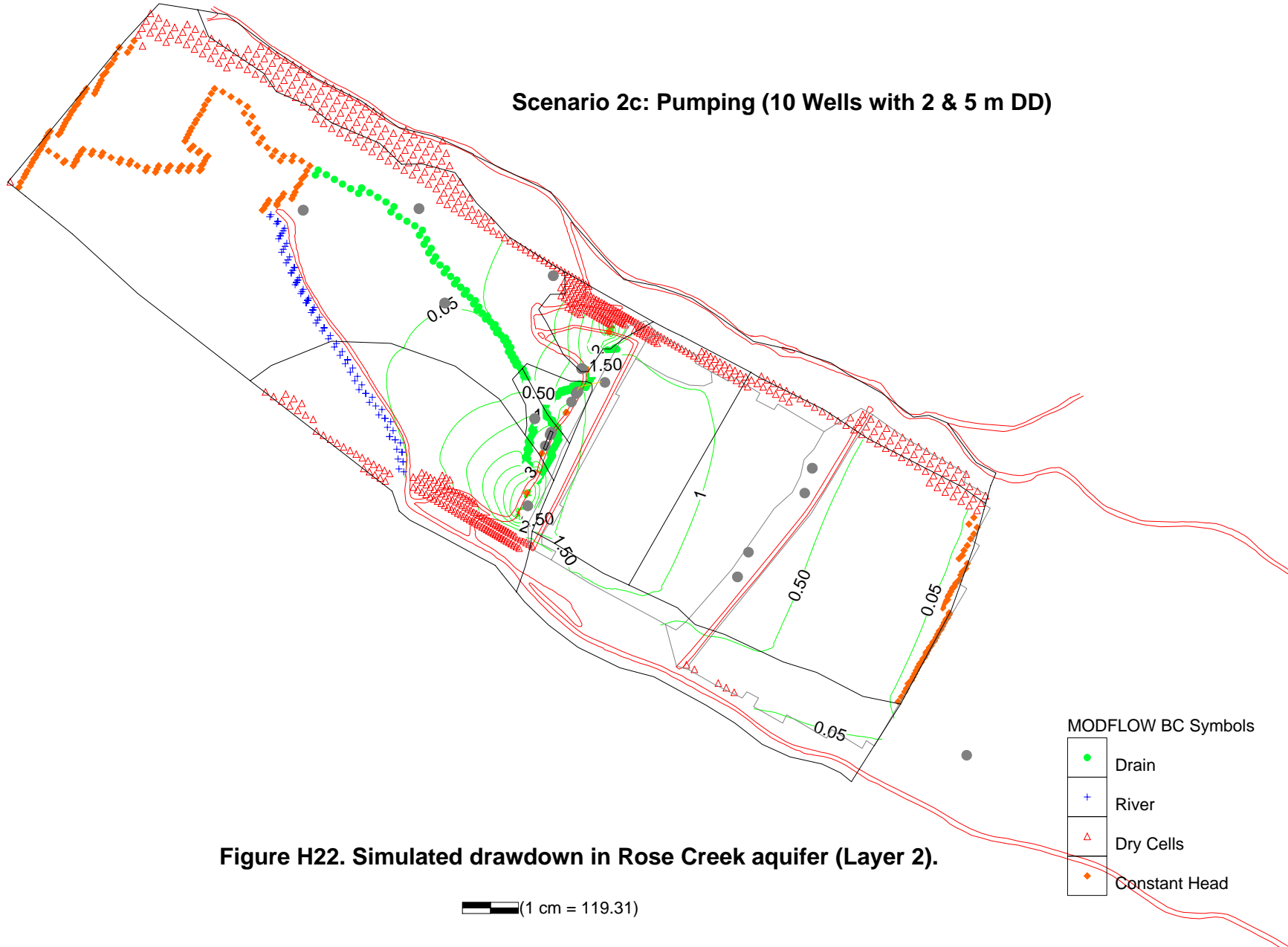


Figure H22. Simulated drawdown in Rose Creek aquifer (Layer 2).

(1 cm = 119.31)

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

Table H13. Closure Scenario 2d (RCC33_2_14)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1013.862	3.065
PWA - BR	1016.893		1015.136	1.757
PWB - All (L3,4)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1012.920	3.682
PWB - BR	1016.501		1014.665	1.836
PWC - All (L3,4)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1012.517	3.542
PWC - BR	1016.093		1014.252	1.841
PW1 - All (L2,4)	1015.541	1012.541	1012.541	3.000
PW1 - Till	1015.561		1012.882	2.679
PW1 - BR	1015.874		1013.945	1.929
PWD - All (L2-4)	1015.488	1012.488	1012.488	3.000
PWD - Till	1015.509		1012.827	2.682
PWD - BR	1015.832		1013.789	2.043
PW2 - All (L2,3)	1015.652	1012.652	1012.652	3.000
PW2 - Till	1015.695		1013.162	2.533
PW2 - BR	1016.167		1014.003	2.163
PWE - All (L2-4)	1016.004	1013.004	1013.004	3.000
PWE - Till	1016.210		1013.510	2.700
PWE - BR	1017.052		1014.754	2.298
PWF - All (L3,4)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1014.159	3.327
PWF - BR	1018.697		1016.265	2.432
PWG - All (L3,4)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1015.988	3.567
PWG - BR	1021.476		1019.112	2.364
PWH - All (L2-4)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1018.929	3.300
PWH - BR	1025.539		1023.636	1.904

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	220	2.5
polygon	585.8	6.8	598	6.9
Total	801	9	817	9
POLISHING POND				
arc	22.4	0.3	49	0.6
polygon	1207.9	14.0	1432	16.6
Total	1230	14	1481	17
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-1	0.0
CVS1	-3270	-37.8	-908	-10.5
Rest of RC	-1080	-12.5	-1055	-12.2
RCDC	3291	38.1	3332	38.6
U/S CH	2463	28.5	2757	31.9
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	29	0.34	5.4
PWB	2, 3, 4	135	1.57	24.8
PWC	2, 3, 4	255	2.96	47
PW1	2, 4	1,179	13.65	216
PWD	2, 3, 4	1,607	18.60	295
PW2	2, 3	1,681	19.46	308
PWE	2, 3, 4	554	6.41	101.7
PWF	2, 3, 4	83	0.96	15.3
PWG	2, 3, 4	64	0.75	11.8
PWH	2, 3, 4	54	0.62	9.9
TOTAL		5643	65	1035

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5563	64.4
Flow Past X13 (j76 into RF)	146	1.7
% Bypass	2.6%	

Scenario 2d: Pumping (10 Wells with 3 & 5 m DD)

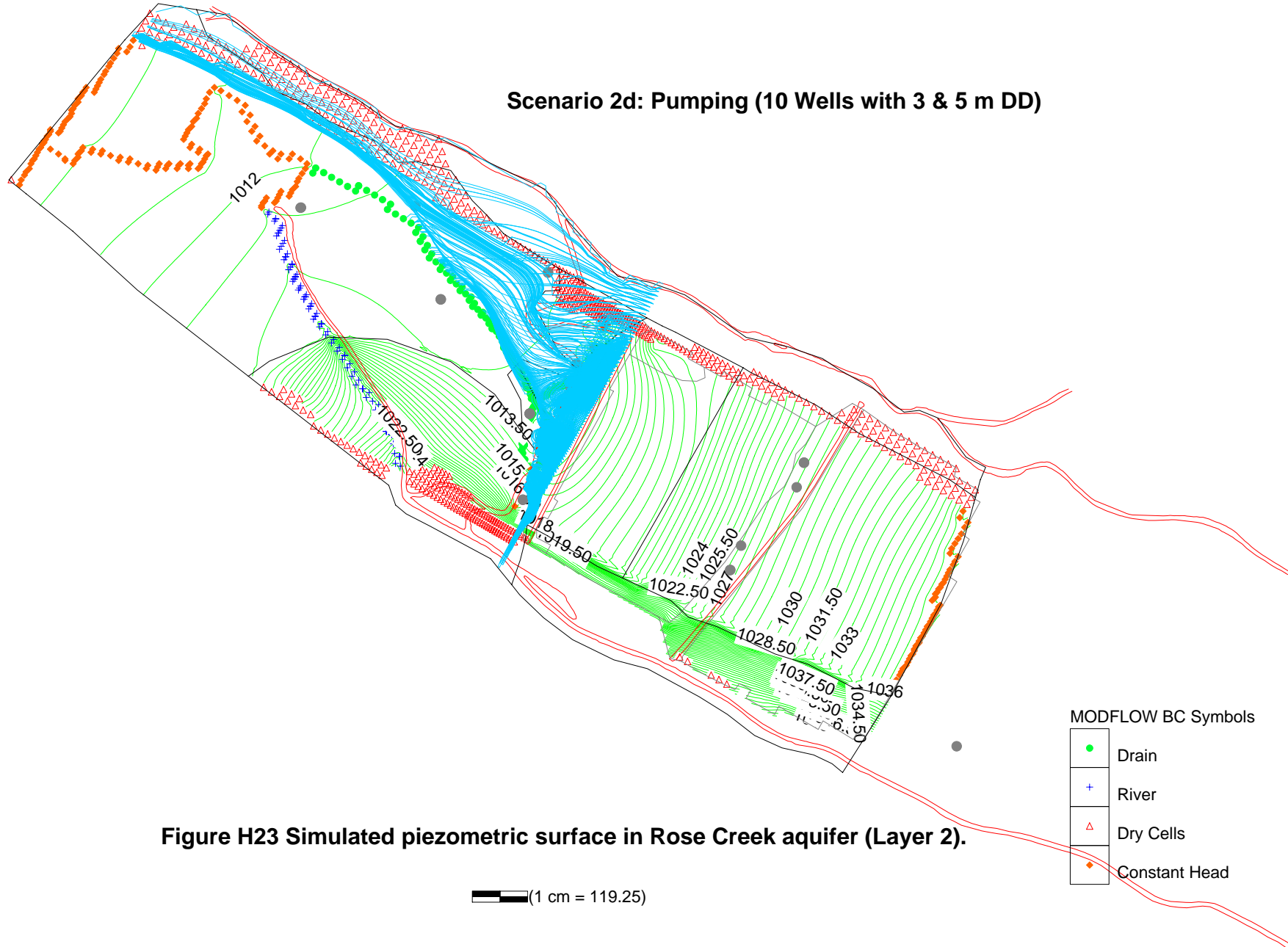
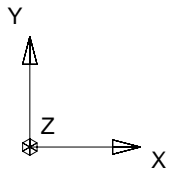


Figure H23 Simulated piezometric surface in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◇ Constant Head

█ (1 cm = 119.25)



Scenario 2d: Pumping (10 Wells with 3 & 5 m DD)

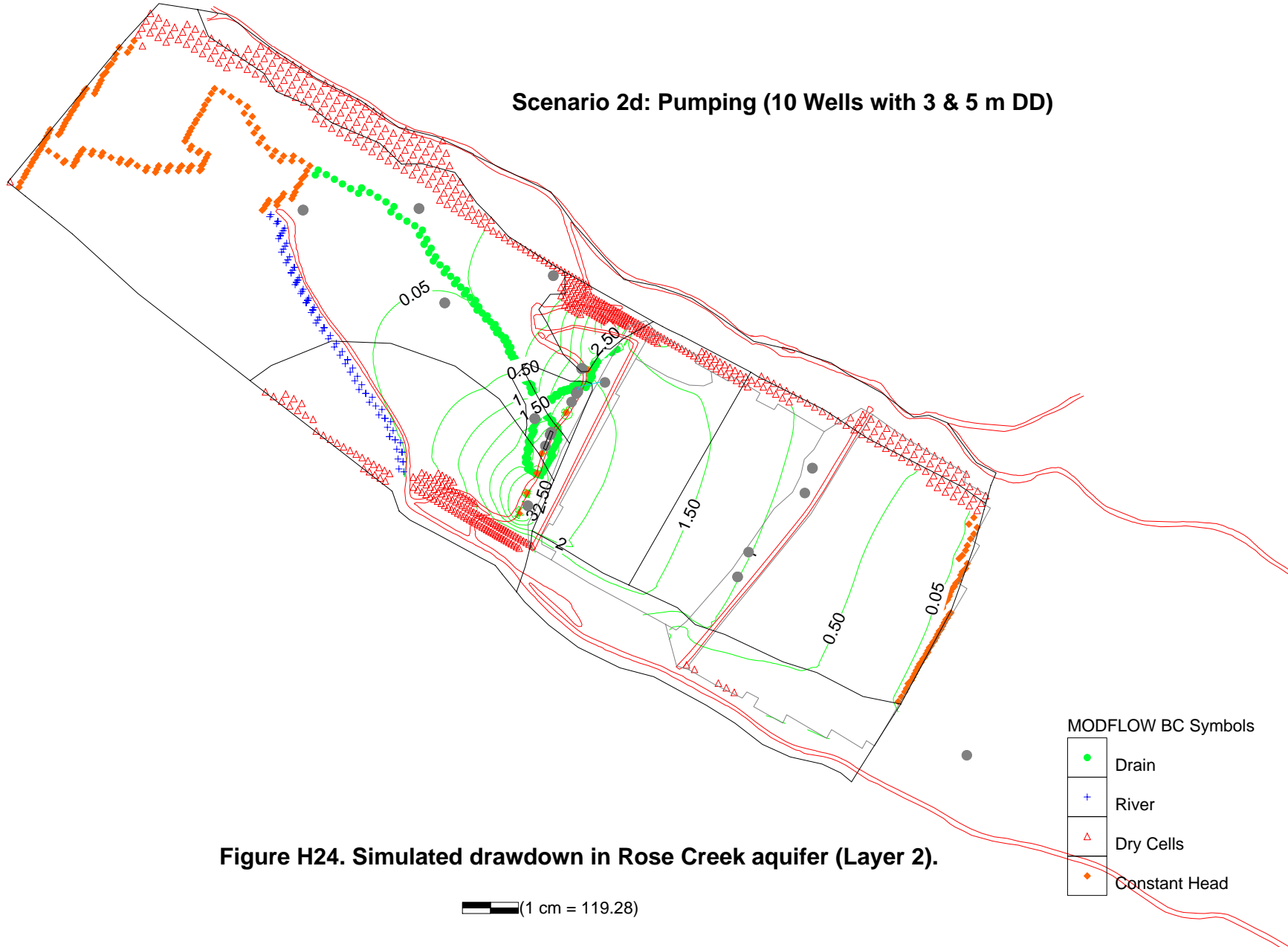
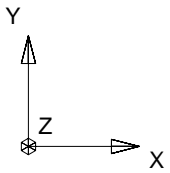


Figure H24. Simulated drawdown in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head



1 cm = 119.28

Table H14. Closure Scenario 2e (RCC33_2_15)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1013.862	3.065
PWA - BR	1016.893		1015.136	1.757
PWB - All (L3,4)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1012.920	3.682
PWB - BR	1016.501		1014.665	1.836
PWC - All (L3,4)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1012.517	3.542
PWC - BR	1016.093		1014.252	1.841
PW1 - All (L2,4)	1015.541	1011.541	1011.541	4.000
PW1 - Till	1015.561		1012.882	2.679
PW1 - BR	1015.874		1013.945	1.929
PWD - All (L2-4)	1015.488	1011.488	1011.488	4.000
PWD - Till	1015.509		1012.827	2.682
PWD - BR	1015.832		1013.789	2.043
PW2 - All (L2,3)	1015.652	1011.652	1011.652	4.000
PW2 - Till	1015.695		1013.162	2.533
PW2 - BR	1016.167		1014.003	2.163
PWE - All (L2-4)	1016.004	1012.004	1012.004	4.000
PWE - Till	1016.210		1013.510	2.700
PWE - BR	1017.052		1014.754	2.298
PWF - All (L3,4)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1014.159	3.327
PWF - BR	1018.697		1016.265	2.432
PWG - All (L3,4)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1015.988	3.567
PWG - BR	1021.476		1019.112	2.364
PWH - All (L2-4)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1018.929	3.300
PWH - BR	1025.539		1023.636	1.904

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	220	2.5
polygon	585.8	6.8	598	6.9
Total	801	9	817	9
POLISHING POND				
arc	22.4	0.3	49	0.6
polygon	1207.9	14.0	1432	16.6
Total	1230	14	1481	17
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-1	0.0
CVS1	-3270	-37.8	-908	-10.5
Rest of RC	-1080	-12.5	-1055	-12.2
RCDC	3291	38.1	3332	38.6
U/S CH	2463	28.5	2757	31.9
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	23	0.27	4.3
PWB	2, 3, 4	109	1.27	20.1
PWC	2, 3, 4	196	2.27	36
PW1	2, 4	1,347	15.59	247
PWD	2, 3, 4	1,841	21.31	338
PW2	2, 3	1,874	21.69	344
PWE	2, 3, 4	666	7.71	122.2
PWF	2, 3, 4	62	0.72	11.4
PWG	2, 3, 4	52	0.60	9.5
PWH	2, 3, 4	46	0.53	8.4
TOTAL		6218	72	1141

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5727	66.3
Flow Past X13 (j76 into RF)	24	0.3
% Bypass	0.4%	

Scenario 2e: Pumping (10 Wells with 4 & 5 m DD)

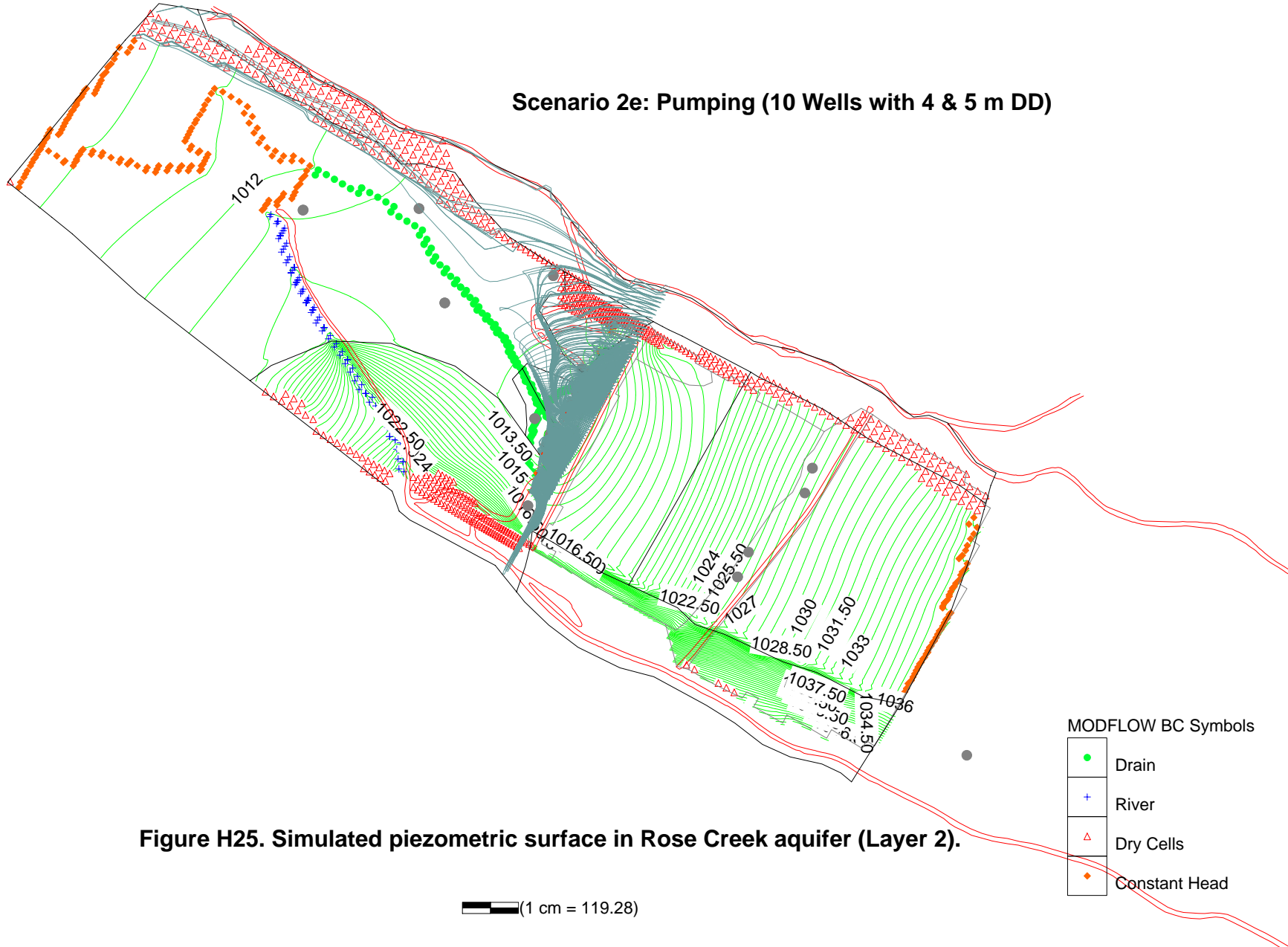


Figure H25. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

Scenario 2e: Pumping (10 Wells with 4 & 5 m DD)

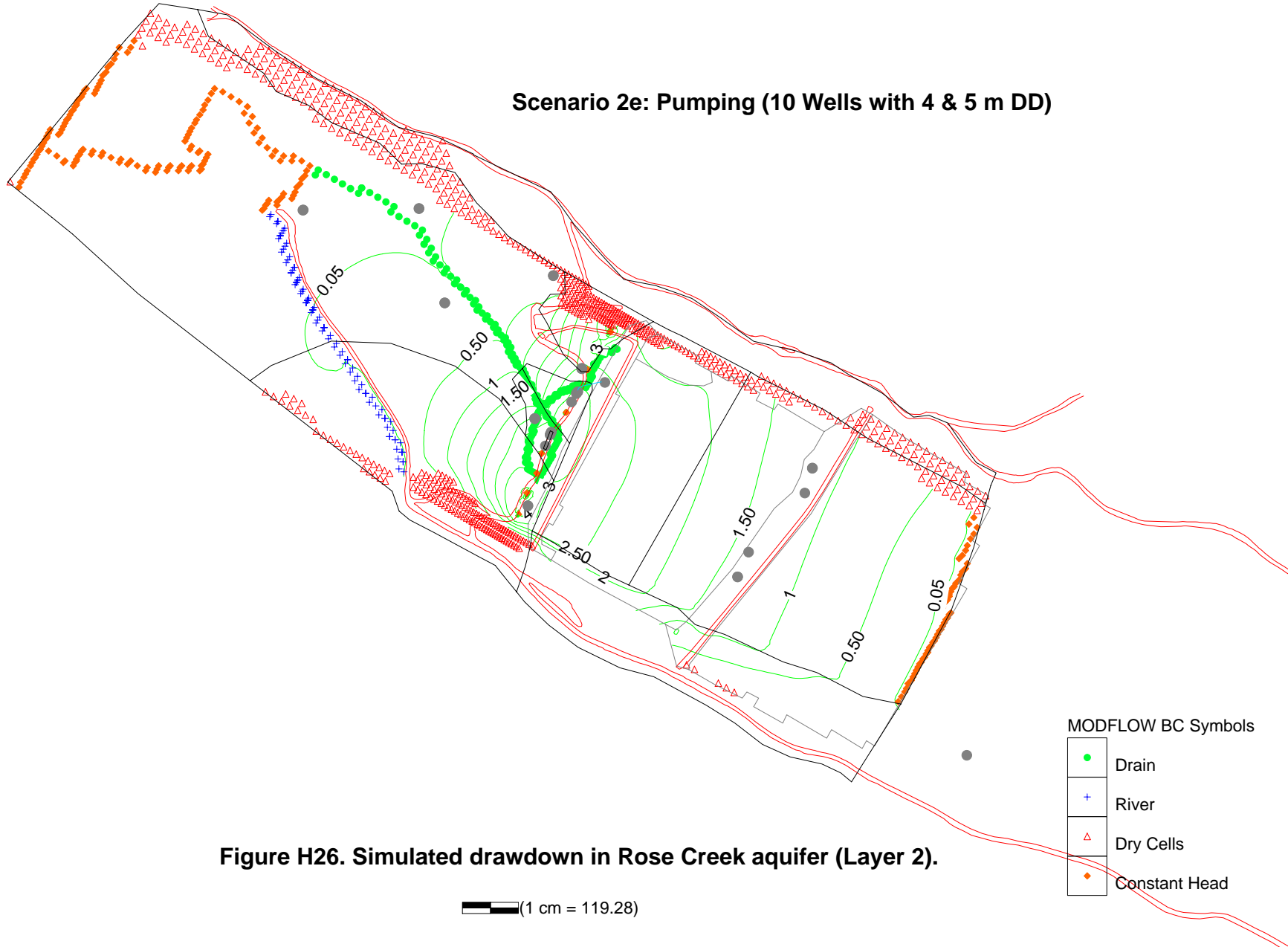


Figure H26. Simulated drawdown in Rose Creek aquifer (Layer 2).

1 cm = 119.28

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

Table H15. Closure Scenario 2f (RCC33_2_10)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1013.255	3.672
PWA - BR	1016.893		1014.200	2.693
PWB - All (L2-4)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1012.446	4.156
PWB - BR	1016.501		1013.611	2.890
PWC - All (L2-4)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1011.867	4.192
PWC - BR	1016.093		1013.016	3.077
PW1 - All (L2,4)	1015.541	1010.541	1010.541	5.000
PW1 - Till	1015.561		1011.037	4.525
PW1 - BR	1015.874		1012.500	3.374
PWD - All (L2-4)	1015.488	1010.488	1010.488	5.000
PWD - Till	1015.509		1010.955	4.554
PWD - BR	1015.832		1012.240	3.592
PW2 - All (L2,3)	1015.652	1010.652	1010.652	5.000
PW2 - Till	1015.695		1011.360	4.335
PW2 - BR	1016.167		1012.456	3.711
PWE - All (L2-4)	1016.004	1011.004	1011.004	5.000
PWE - Till	1016.210		1011.748	4.461
PWE - BR	1017.052		1013.347	3.705
PWF - All (L2-4)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1013.340	4.146
PWF - BR	1018.697		1015.192	3.505
PWG - All (L2-4)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1015.492	4.063
PWG - BR	1021.476		1018.357	3.119
PWH - All (L2-4)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1018.581	3.647
PWH - BR	1025.539		1023.109	2.430

Low K Wells

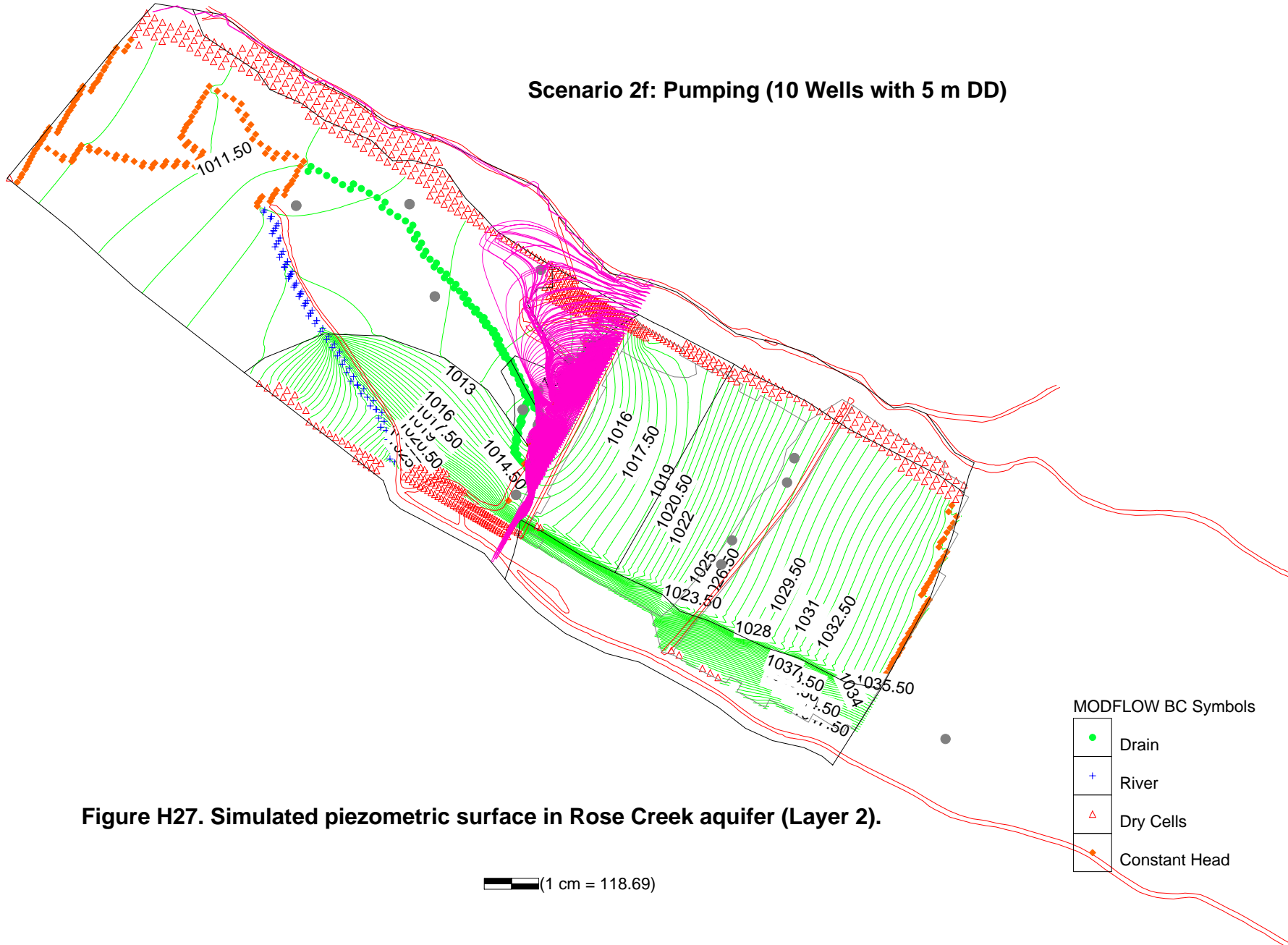
FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	222	2.6
polygon	585.8	6.8	603	7.0
Total	801	9	825	10
POLISHING POND				
arc	22.4	0.3	64	0.7
polygon	1207.9	14.0	1541	17.8
Total	1230	14	1605	19
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-258	-3.0
Rest of RC	-1080	-12.5	-981	-11.4
RCDC	3291	38.1	3358	38.9
U/S CH	2463	28.5	2942	34.0
D/S CH	-781	-9.0	-779	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	18	0.21	3.3
PWB	2, 3, 4	85	0.98	15.6
PWC	2, 3, 4	139	1.61	25
PW1	2, 4	1,478	17.11	271
PWD	2, 3, 4	2,058	23.82	378
PW2	2, 3	2,038	23.59	374
PWE	2, 3, 4	773	8.95	141.9
PWF	2, 3, 4	42	0.49	7.8
PWG	2, 3, 4	40	0.46	7.3
PWH	2, 3, 4	40	0.46	7.3
TOTAL		6712	78	1231

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5898	68.3
Flow Past X13 (j76 into RF)	23	0.3
% Bypass	0.4%	

Scenario 2f: Pumping (10 Wells with 5 m DD)

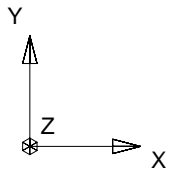


MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

Figure H27. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

(1 cm = 118.69)



Scenario 2f: Pumping (10 Wells with 5 m DD)

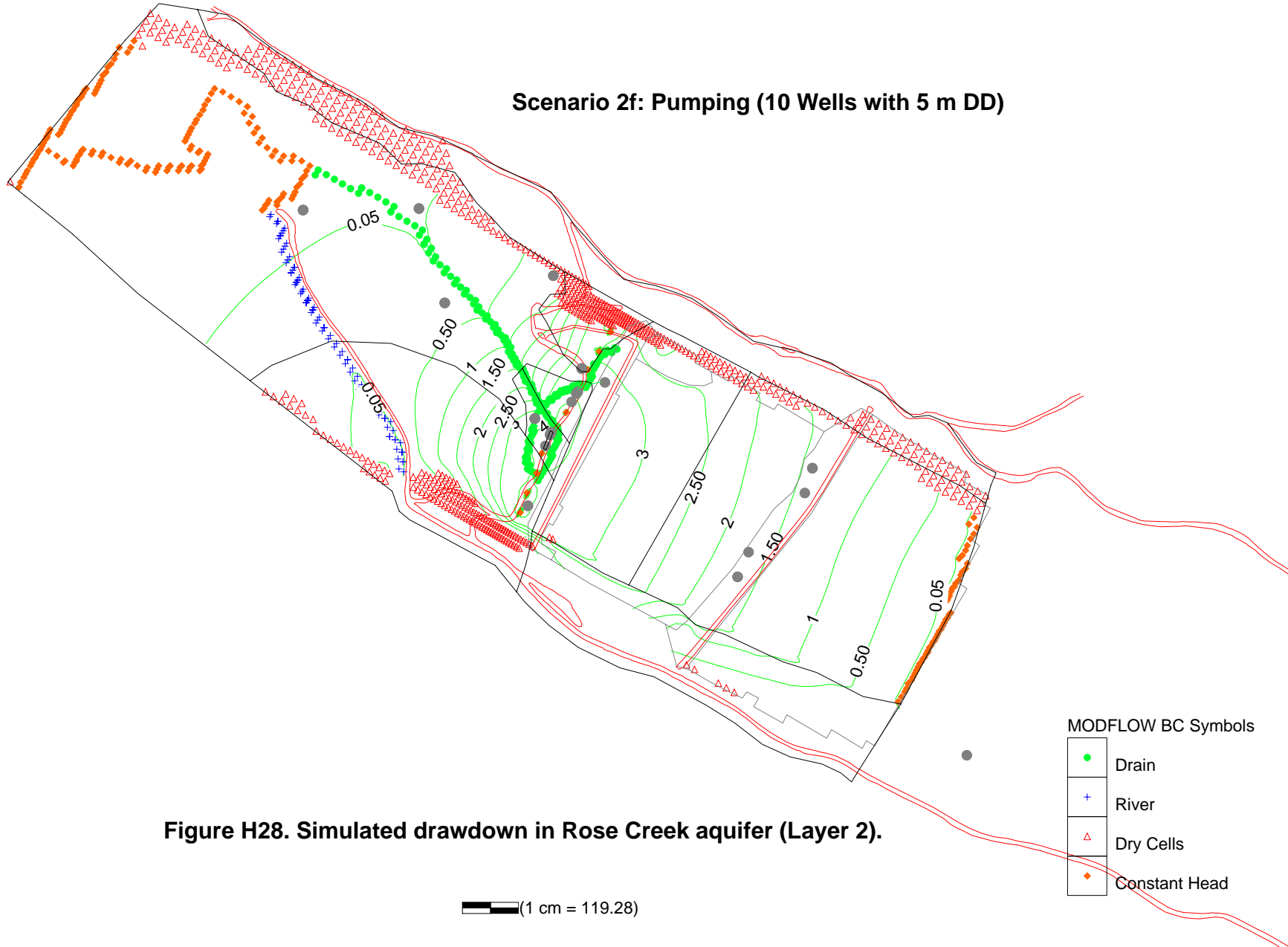


Figure H28. Simulated drawdown in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols**
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

1 cm = 119.28

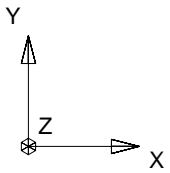


Table H16. Closure Scenario 2g (RCC33_2_11)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.933	1007.933	1007.933	9.000
PWA - Till	1016.927		1012.177	4.750
PWA - BR	1016.893		1013.723	3.170
PWB - All (L3,4)	1016.617	1006.617	1006.617	10.000
PWB - Till	1016.602		1009.343	7.259
PWB - BR	1016.501		1013.028	3.472
PWC - All (L3,4)	1016.070	1006.070	1006.070	10.000
PWC - Till	1016.059		1009.096	6.963
PWC - BR	1016.093		1012.588	3.505
PW1 - All (L2,4)	1015.541	1010.541	1010.541	5.000
PW1 - Till	1015.561		1010.983	4.578
PW1 - BR	1015.874		1012.297	3.577
PWD - All (L2-4)	1015.488	1010.488	1010.488	5.000
PWD - Till	1015.509		1010.924	4.586
PWD - BR	1015.832		1012.105	3.727
PW2 - All (L2,3)	1015.652	1010.652	1010.652	5.000
PW2 - Till	1015.695		1011.306	4.389
PW2 - BR	1016.167		1012.263	3.904
PWE - All (L2-4)	1016.004	1011.004	1011.004	5.000
PWE - Till	1016.210		1011.564	4.645
PWE - BR	1017.052		1012.918	4.134
PWF - All (L3,4)	1017.099	1007.099	1007.099	10.000
PWF - Till	1017.486		1011.164	6.322
PWF - BR	1018.697		1014.256	4.441
PWG - All (L3,4)	1019.149	1009.149	1009.149	10.000
PWG - Till	1019.555		1012.781	6.775
PWG - BR	1021.476		1017.172	4.304
PWH - All (L2-4)	1021.171	1011.171	1011.171	10.000
PWH - Till	1022.229		1016.118	6.111
PWH - BR	1025.539		1022.156	3.383

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	222	2.6
polygon	585.8	6.8	604	7.0
Total	801	9	826	10
POLISHING POND				
arc	22.4	0.3	66	0.8
polygon	1207.9	14.0	1533	17.7
Total	1230	14	1600	19
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-226	-2.6
Rest of RC	-1080	-12.5	-975	-11.3
RCDC	3291	38.1	3369	39.0
U/S CH	2463	28.5	2969	34.4
D/S CH	-781	-9.0	-779	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	4	12	0.14	2.2
PWB	3, 4	212	2.46	39.0
PWC	3, 4	399	4.62	73
PW1	2, 4	1,313	15.20	241
PWD	2, 3, 4	1,922	22.24	353
PW2	2, 3	1,908	22.09	350
PWE	2, 3, 4	681	7.88	124.9
PWF	3, 4	138	1.59	25.2
PWG	3, 4	113	1.31	20.7
PWH	2, 3, 4	85	0.98	15.6
TOTAL		6784	79	1245

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5907	68.4
Flow Past X13 (j76 into RF)	16	0.2
% Bypass	0.3%	

Scenario 2g: Pumping (10 Wells with 5 & 10 m DD)

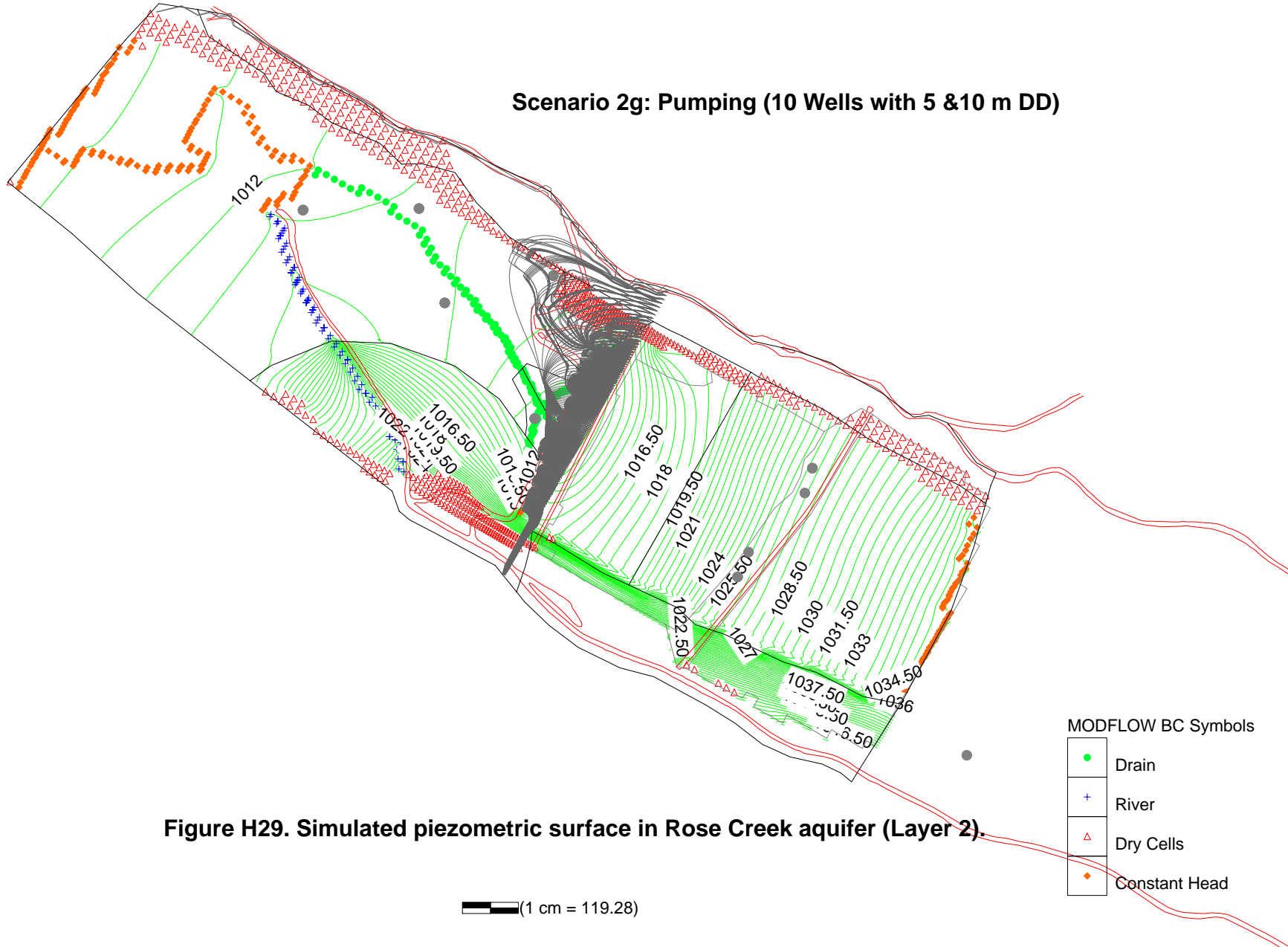
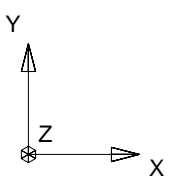


Figure H29. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols**
- Drain
 - + River
 - △ Dry Cells
 - ◇ Constant Head

█ (1 cm = 119.28)



Scenario 2g: Pumping (10 Wells with 5 & 10 m DD)

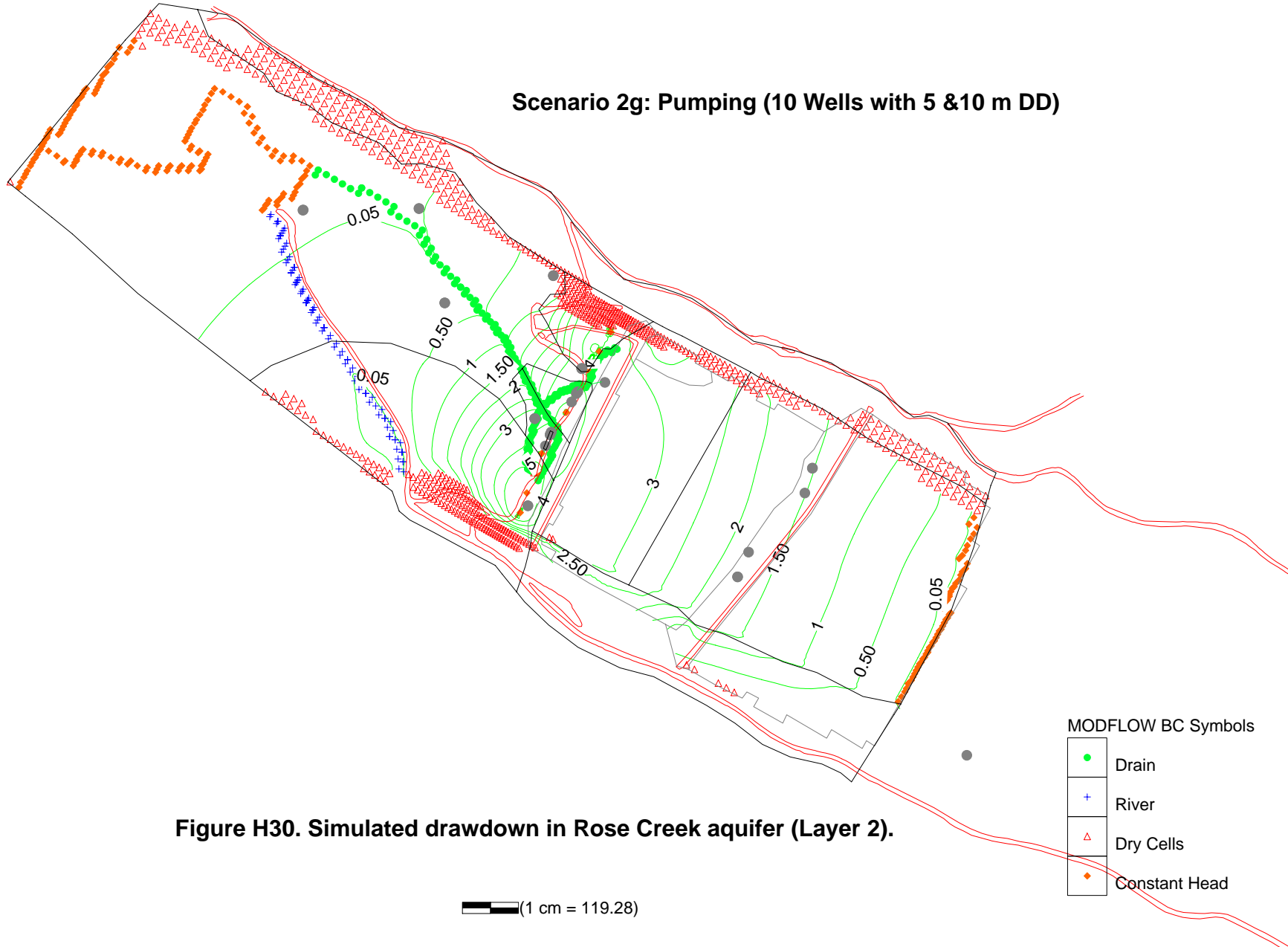


Figure H30. Simulated drawdown in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - ◆ Constant Head

1 cm = 119.28

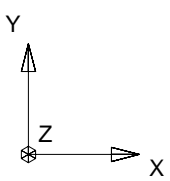


Table H17. Closure Scenario 3a (RCC33_2_17)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1014.604	2.323
PWA - BR	1016.893		1015.530	1.363
PWB - All (L2)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1015.078	1.525
PWB - BR	1016.501		1015.144	1.356
PWC - All (L2)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1014.512	1.547
PWC - BR	1016.093		1014.649	1.444
PW1 - All (L2)	1015.541	1010.541	1010.541	5.000
PW1 - Till	1015.561		1013.639	1.923
PW1 - BR	1015.874		1014.201	1.673
PWD - All (L2)	1015.488	1010.488	1010.488	5.000
PWD - Till	1015.509		1013.279	2.230
PWD - BR	1015.832		1013.893	1.939
PW2 - All (L2)	1015.652	1010.652	1010.652	5.000
PW2 - Till	1015.695		1012.780	2.915
PW2 - BR	1016.167		1013.897	2.270
PWE - All (L2)	1016.004	1011.004	1011.004	5.000
PWE - Till	1016.210		1013.259	2.951
PWE - BR	1017.052		1014.685	2.367
PWF - All (L2)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1014.858	2.628
PWF - BR	1018.697		1016.406	2.290
PWG - All (L2)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1016.718	2.837
PWG - BR	1021.476		1019.340	2.137
PWH - All (L2)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1019.394	2.835
PWH - BR	1025.539		1023.800	1.740

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	219	2.5
polygon	585.8	6.8	598	6.9
Total	801	9	817	9
POLISHING POND				
arc	22.4	0.3	48	0.6
polygon	1207.9	14.0	1410	16.3
Total	1230	14	1458	17
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	-1	0.0
CVS1	-3270	-37.8	-994	-11.5
Rest of RC	-1080	-12.5	-1056	-12.2
RCDC	3291	38.1	3331	38.5
U/S CH	2463	28.5	2751	31.8
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2	30	0.34	5.5
PWB	2	45	0.52	8.3
PWC	2	36	0.42	7
PW1	2	818	9.47	150
PWD	2	851	9.85	156
PW2	2	3,014	34.88	553
PWE	2	611	7.08	112.1
PWF	2	30	0.35	5.6
PWG	2	39	0.45	7.1
PWH	2	50	0.58	9.1
TOTAL		5524	64	1013

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5538	64.1
Flow Past X13 (j76 into RF)	326	3.8
% Bypass	5.9%	

Scenario 3a: Pumping (10 Wells with 5 m DD - Layer 2 only)

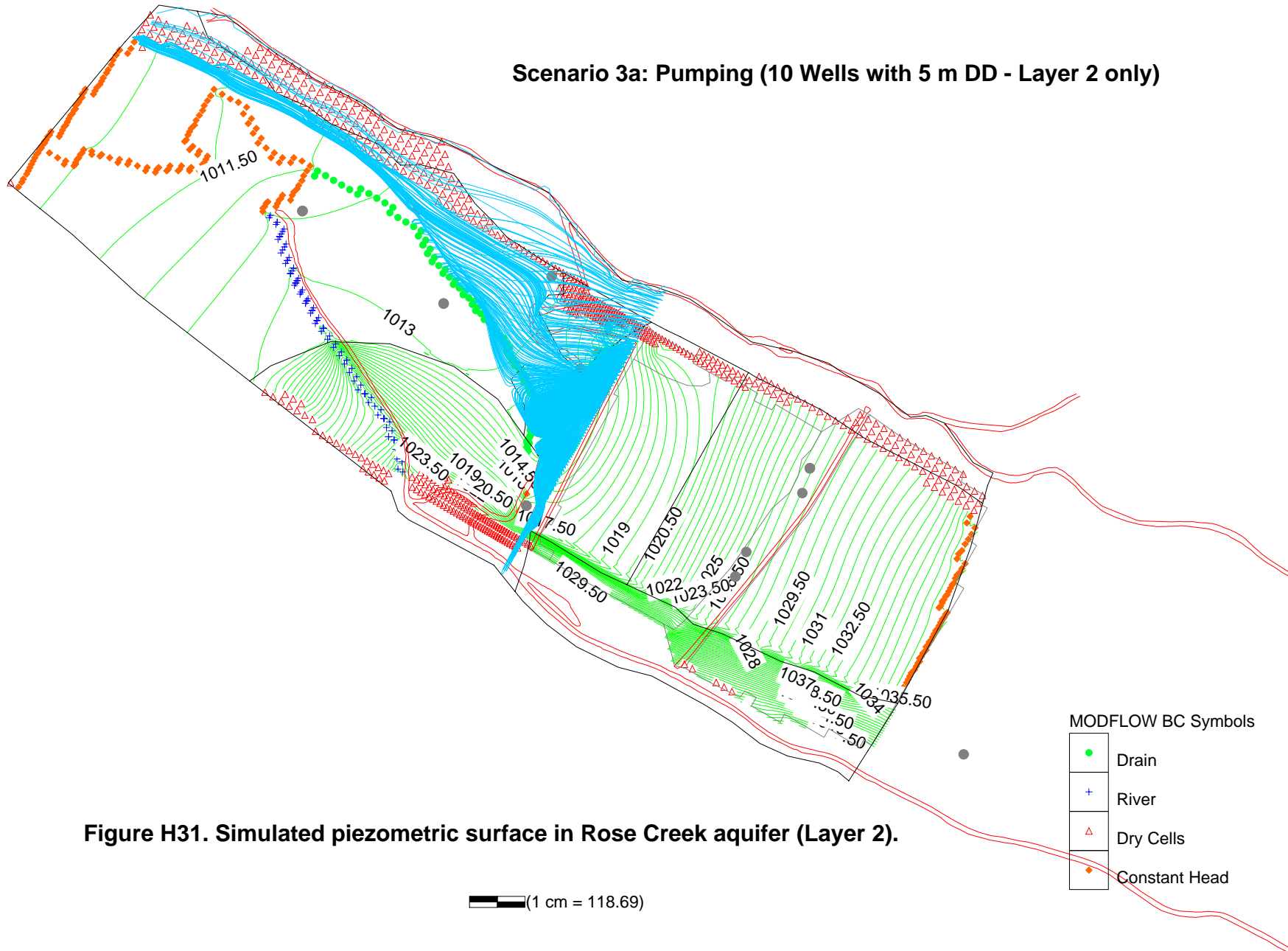


Figure H31. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 3a: Pumping (10 Wells in Layer 2 with 5 m DD)

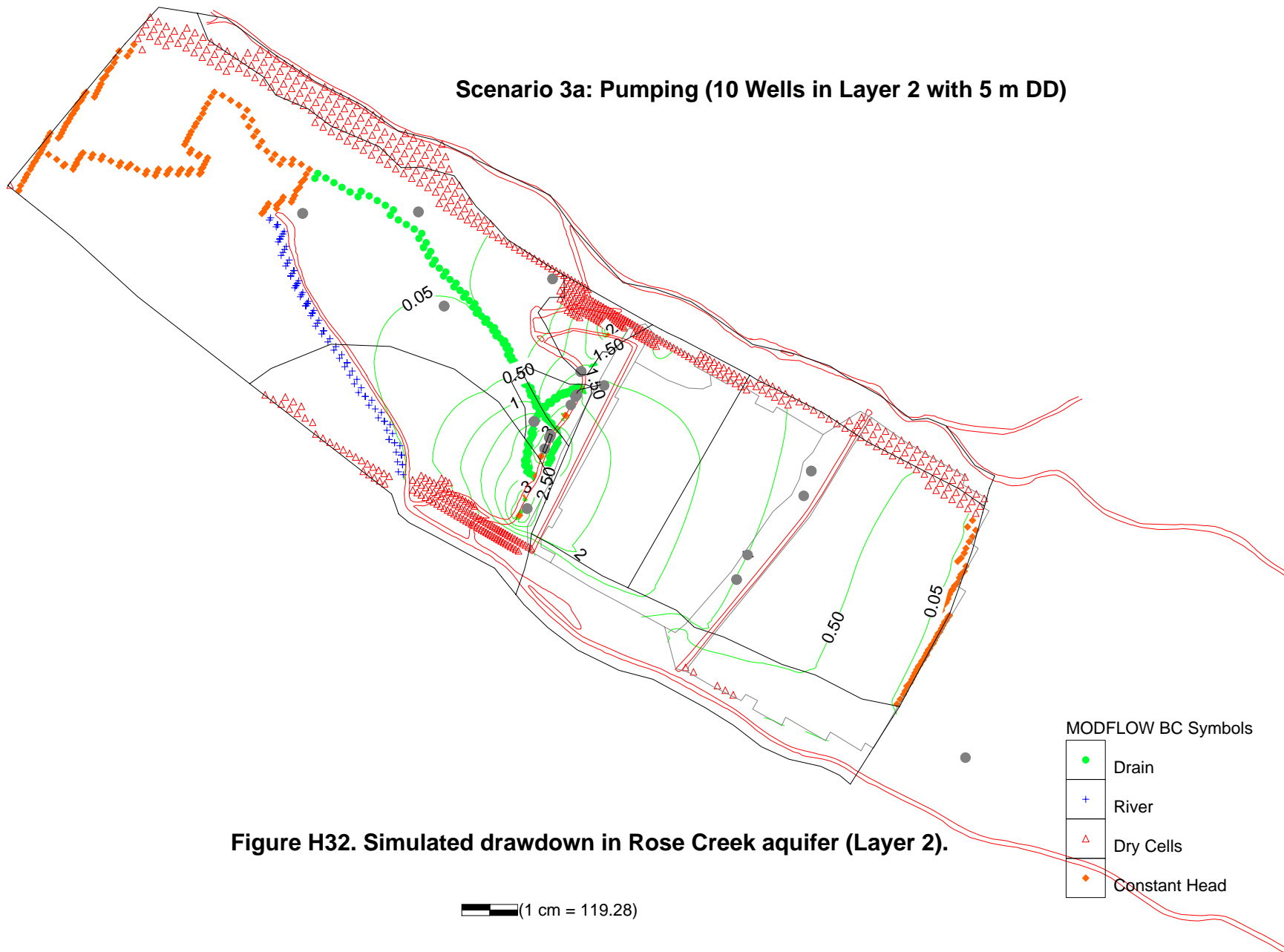


Figure H32. Simulated drawdown in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

1 cm = 119.28

Table H18. Closure Scenario 3b (RCC33_2_18)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L3)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1013.451	3.476
PWA - BR	1016.893		1014.372	2.521
PWB - All (L3)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1013.136	3.466
PWB - BR	1016.501		1013.810	2.691
PWC - All (L3)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1012.746	3.313
PWC - BR	1016.093		1013.219	2.874
PW1 - All (L3)	1015.541	1010.541	1010.541	5.000
PW1 - Till	1015.561		1011.742	3.819
PW1 - BR	1015.874		1012.707	3.167
PWD - All (L3)	1015.488	1010.488	1010.488	5.000
PWD - Till	1015.509		1011.574	3.936
PWD - BR	1015.832		1012.455	3.378
PW2 - All (L3)	1015.652	1010.652	1010.652	5.000
PW2 - Till	1015.695		1011.474	4.221
PW2 - BR	1016.167		1012.617	3.549
PWE - All (L3)	1016.004	1011.004	1011.004	5.000
PWE - Till	1016.210		1011.969	4.241
PWE - BR	1017.052		1013.508	3.544
PWF - All (L3)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1013.621	3.865
PWF - BR	1018.697		1015.363	3.334
PWG - All (L3)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1015.738	3.817
PWG - BR	1021.476		1018.521	2.956
PWH - All (L3)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1018.796	3.433
PWH - BR	1025.539		1023.242	2.298

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	222	2.6
polygon	585.8	6.8	602	7.0
Total	801	9	824	10
POLISHING POND				
arc	22.4	0.3	62	0.7
polygon	1207.9	14.0	1526	17.7
Total	1230	14	1588	18
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-318	-3.7
Rest of RC	-1080	-12.5	-992	-11.5
RCDC	3291	38.1	3355	38.8
U/S CH	2463	28.5	2922	33.8
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	3	17	0.20	3.2
PWB	3	75	0.87	13.8
PWC	3	101	1.17	19
PW1	3	1,654	19.15	304
PWD	3	1,554	17.98	285
PW2	3	2,411	27.90	442
PWE	3	686	7.94	125.8
PWF	3	39	0.45	7.2
PWG	3	39	0.45	7.2
PWH	3	31	0.36	5.7
TOTAL		6608	76	1212

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5862	67.9
Flow Past X13 (j76 into RF)	25	0.3
% Bypass	0.4%	

Scenario 3b: Pumping (10 Wells in Layer 3 with 5 m DD)

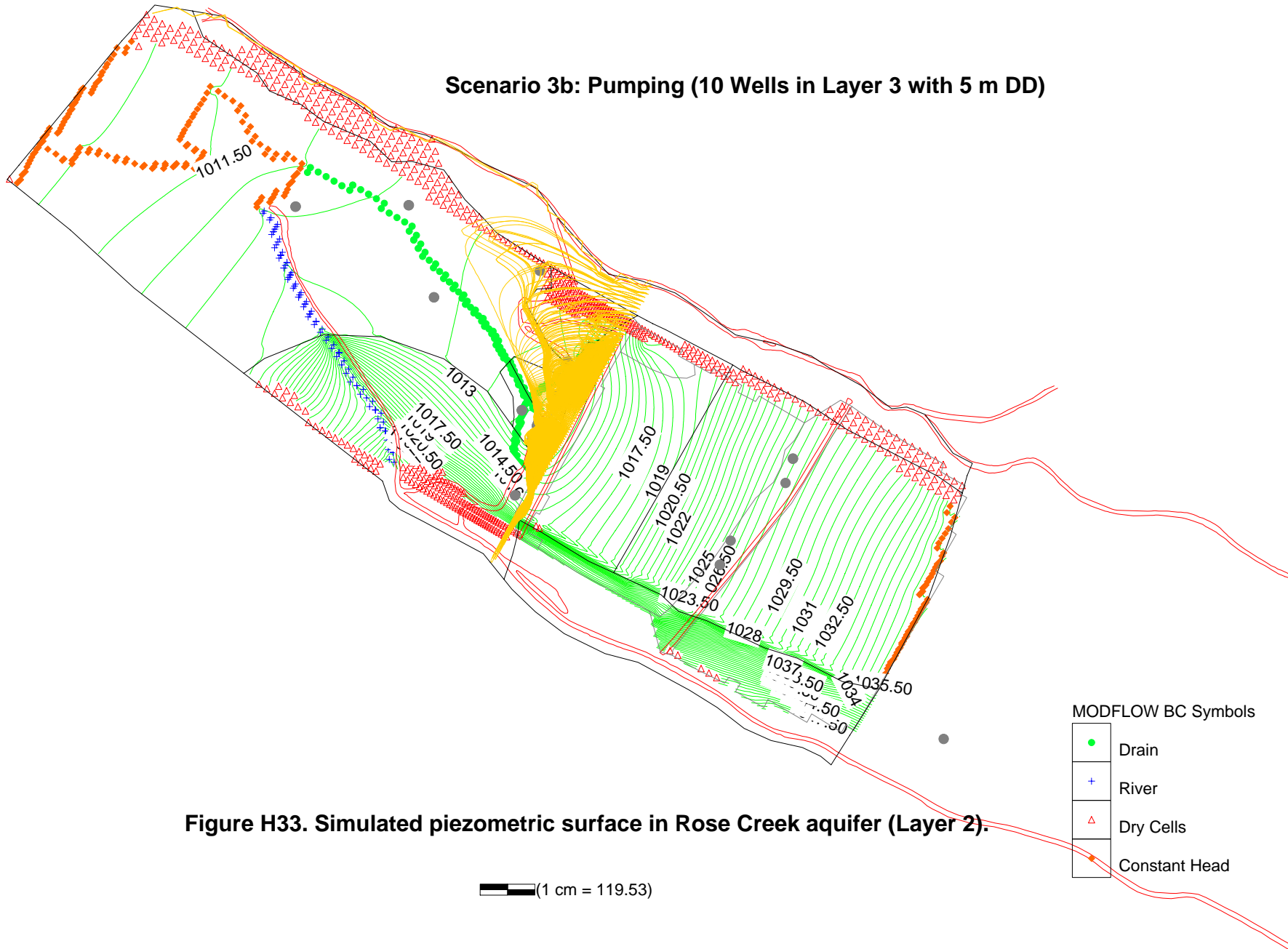


Figure H33. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Table H19. Closure Scenario 3c (RCC33_2_19)

Pumping Well ID	Current Heads (RC33_2b)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L3)	1016.933	1011.933	1011.933	5.000
PWA - Till	1016.927		1013.654	3.273
PWA - BR	1016.893		1014.614	2.279
PWB - All (L3)	1016.617	1011.617	1011.617	5.000
PWB - Till	1016.602		1012.783	3.819
PWB - BR	1016.501		1014.058	2.443
PWC - All (L3)	1016.070	1011.070	1011.070	5.000
PWC - Till	1016.059		1012.118	3.941
PWC - BR	1016.093		1013.449	2.644
PW1 - All (L3)	1015.541	1010.541	1010.541	5.000
PW1 - Till	1015.561		1011.207	4.354
PW1 - BR	1015.874		1012.925	2.949
PWD - All (L3)	1015.488	1010.488	1010.488	5.000
PWD - Till	1015.509		1011.213	4.297
PWD - BR	1015.832		1012.702	3.130
PW2 - All (L3)	1015.652	1010.652	1010.652	5.000
PW2 - Till	1015.695		1011.740	3.955
PW2 - BR	1016.167		1012.963	3.203
PWE - All (L3)	1016.004	1011.004	1011.004	5.000
PWE - Till	1016.210		1012.189	4.021
PWE - BR	1017.052		1013.868	3.184
PWF - All (L3)	1017.099	1012.099	1012.099	5.000
PWF - Till	1017.486		1013.887	3.599
PWF - BR	1018.697		1015.722	2.974
PWG - All (L3)	1019.149	1014.149	1014.149	5.000
PWG - Till	1019.555		1016.085	3.470
PWG - BR	1021.476		1018.857	2.619
PWH - All (L3)	1021.171	1016.171	1016.171	5.000
PWH - Till	1022.229		1019.109	3.119
PWH - BR	1025.539		1023.498	2.042

Low K Wells

FLUXES	CURRENT		CLOSURE	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	221	2.6
polygon	585.8	6.8	601	7.0
Total	801	9	822	10
POLISHING POND				
arc	22.4	0.3	59	0.7
polygon	1207.9	14.0	1500	17.4
Total	1230	14	1559	18
X11	-710	-8.2	0	0.0
X13	-2654	-30.7	0	0.0
CVS1	-3270	-37.8	-421	-4.9
Rest of RC	-1080	-12.5	-1008	-11.7
RCDC	3291	38.1	3347	38.7
U/S CH	2463	28.5	2883	33.4
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	4	19	0.22	3.5
PWB	4	44	0.50	8.0
PWC	4	76	0.88	14
PW1	4	1,722	19.93	316
PWD	4	1,942	22.47	356
PW2	4	1,556	18.01	285
PWE	4	957	11.07	175.5
PWF	4	32	0.37	5.9
PWG	4	28	0.32	5.1
PWH	4	27	0.31	5.0
TOTAL		6402	74	1174

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5795	67.1
Flow Past X13 (j76 into RF)	27	0.3
% Bypass	0.5%	

Scenario 3c: Pumping (10 Wells in Layer 4 with 5 m DD)

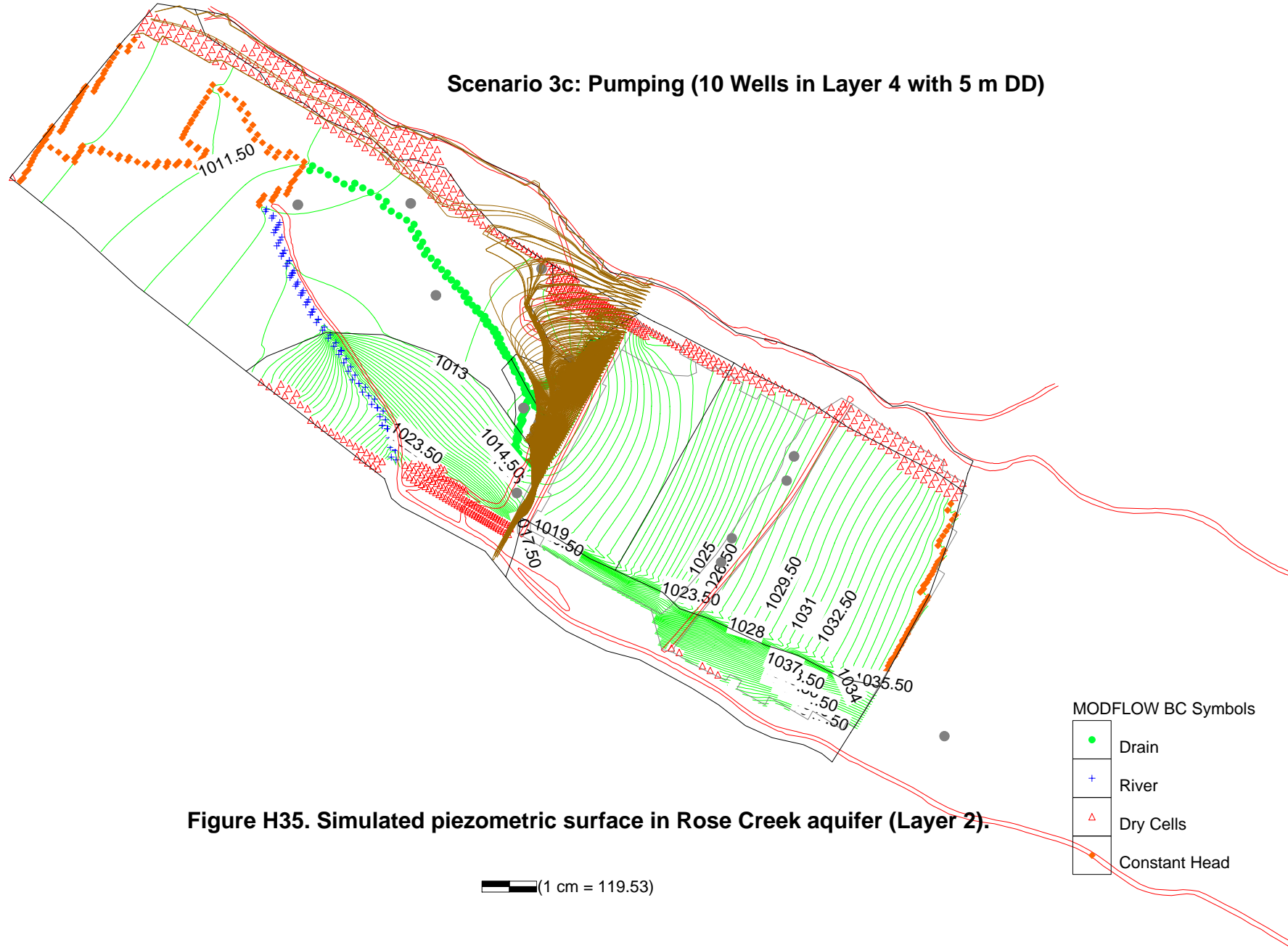


Figure H35. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - Constant Head

(1 cm = 119.53)

Scenario 3c: Pumping (10 Wells in Layer 4 with 5 m DD)

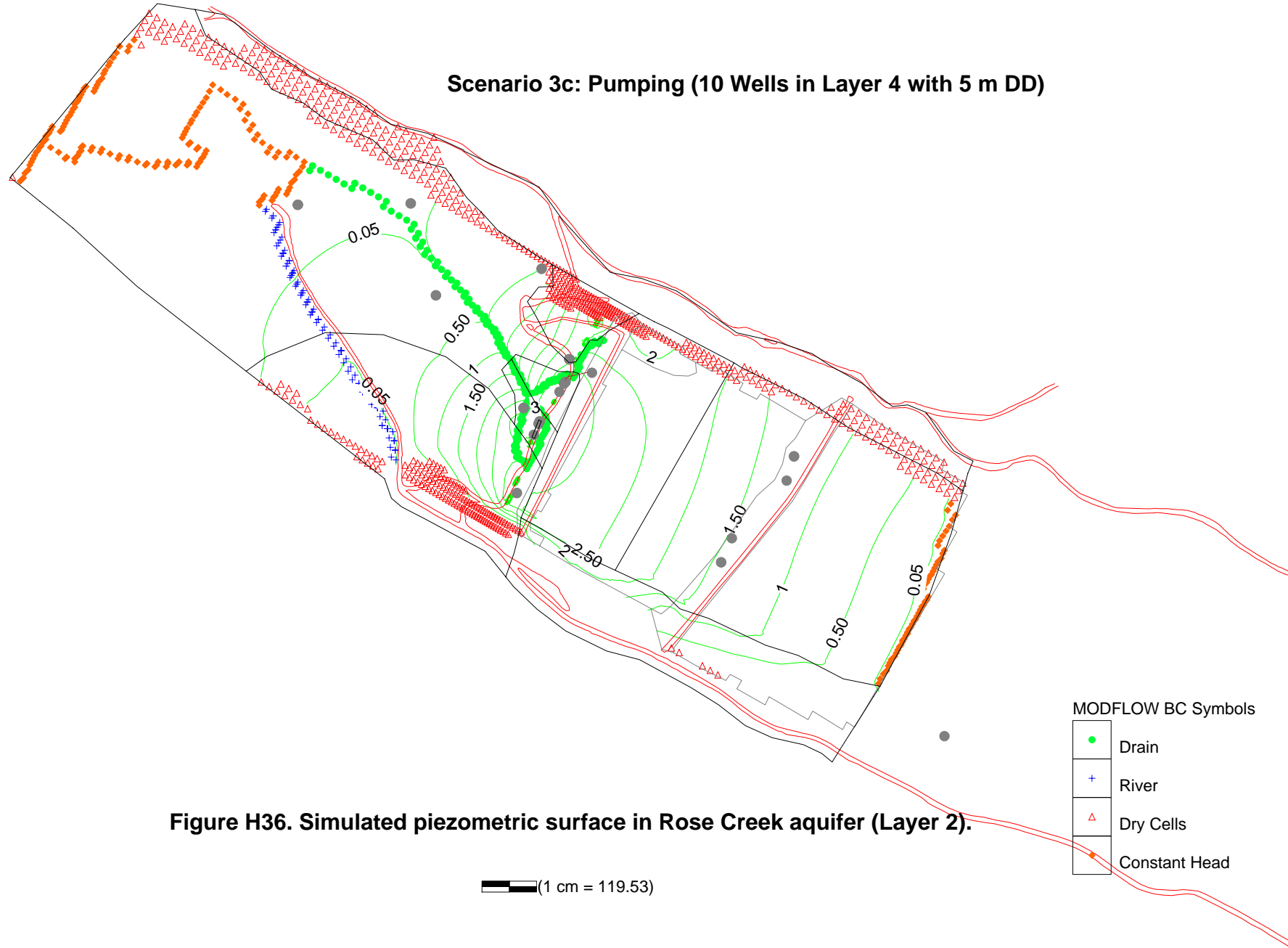


Figure H36. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - + River
 - △ Dry Cells
 - Constant Head

1 cm = 119.53

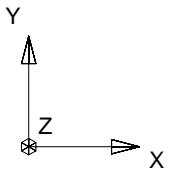


Table H20. Future conditions (without pumping) for Closure Scenario 4a (RCC36_2).

INPUT

Material	Layer	Hydraulic Conductivity	
		(m/d)	(m/s)
CVD	1	0.00864	1.0E-07
PP Sediments	1	0.000078	9.0E-10
PP Sed Window	1	0.026	3.0E-07
ID	1	0.026	3.0E-07
Tailings	1	0.0017	2.0E-08
Colluvium - S.	2,3,4	0.864	1.0E-05
Colluvium - N.	2,3,4	0.864	1.0E-05
U/S Alluvium	2,3,4	12.96	1.5E-04
D/S Alluvium	2,3,4	25.92	3.0E-04
Alluvium CVD	2,3,4	43.2	5.0E-04
Alluvium PW2	2,3	432	5.0E-03
Basal Till	5	0.026	3.0E-07
Slope Till	2,3,4,5	0.26	3.0E-06
Bedrock	6	0.017	2.0E-07

Other Parameters	m/d	m/s
Drain Conductance	51.84	6.0E-04
RCDC River Conductance L5	5.184	6.0E-05
RCDC River Conductance L2	5.184	6.0E-05
PP Spillway Cond. L2,L4,L5	-	-
Intermediate Pond WL (m)	1046.516	7-Sep-05
Polishing Pond WL (m)	1027.395	7-Sep-05
Upstream Constant Head (m)	1036.4	
Downstream Constant Head (m)	1010.8	

Horizontal flow barrier added with K = 1e-8 m/s (layer 2)

OUTPUT

Well ID	Layer	Observed Heads (Current)	Simulated Heads (Future)
P01-01A	3	1012.12	1012.56
P01-01B	6	1012.04	1012.59
P01-02A	2	1017.61	1020.00
P01-02B	5	1020.04	1020.63
P01-03 (North)	2	1028.02	1028.89
P01-04A (South)	4	1028.99	1027.64
P01-04B (South)	5	1028.46	1027.71
P01-11	3	1016.82	1016.82
X16A	2	1013.10	1012.45
X16B	4	1013.17	1012.44
X17A	2	1012.77	1012.85
X17B	4	1012.86	1012.85
X18A	3	1015.19	1012.99
X18B	6	1015.54	1013.83
X24A/C (North)	2	1027.77	1028.70
X24D (North)	5	1027.87	1028.69
X25A/B (South)	2	1027.54	1027.56
P03-09-01-02	5	1015.62	1014.84
P03-09-03-04	4	1015.26	1014.79
P03-09-05-06	3	1015.09	1014.78
P03-09-07-09	2	1014.87	1014.77
P05-01-01	6	1016.25	1015.81
P05-01-02	4	1016.10	1015.55
P05-01-03-04	3	1016.06	1015.56
P05-01-05-06	2	1015.63	1015.54
PW1	2,4	1014.98	1015.55
MW1	2,4	1015.05	1015.52
P05-02	2	1014.79	1015.49
MW2	2,3	1015.09	1015.63
PW2	2,3	1015.17	1015.66
P05-03	2	1015.20	1015.82

Average head provided

FLUXES	SIMULATED	
	Net m ³ /d	Net L/s
INTERMEDIATE POND		
arc	215.0	2.5
polygon	585.8	6.8
Total	801	9
POLISHING POND		
arc	22.4	0.3
polygon	1209.1	14.0
Total	1231	14
PP Spillway	0	0.0
X11	-724	-8.4
X13	-2716	-31.4
CVS1	-3210	-37.1
Rest of RC	-1079	-12.5
RCDC RIV	3291	38.1
U/S CH	2462	28.5
D/S CH	-781	-9.0

Negative or red numbers indicate flow out of model (i.e. into boundary condition)

Water Balance Error (%) 0.0
 # Iterations Converged

Scenario 4a: Future Conditions, No Pumping (Cutoff Wall in Layer 2 Only)

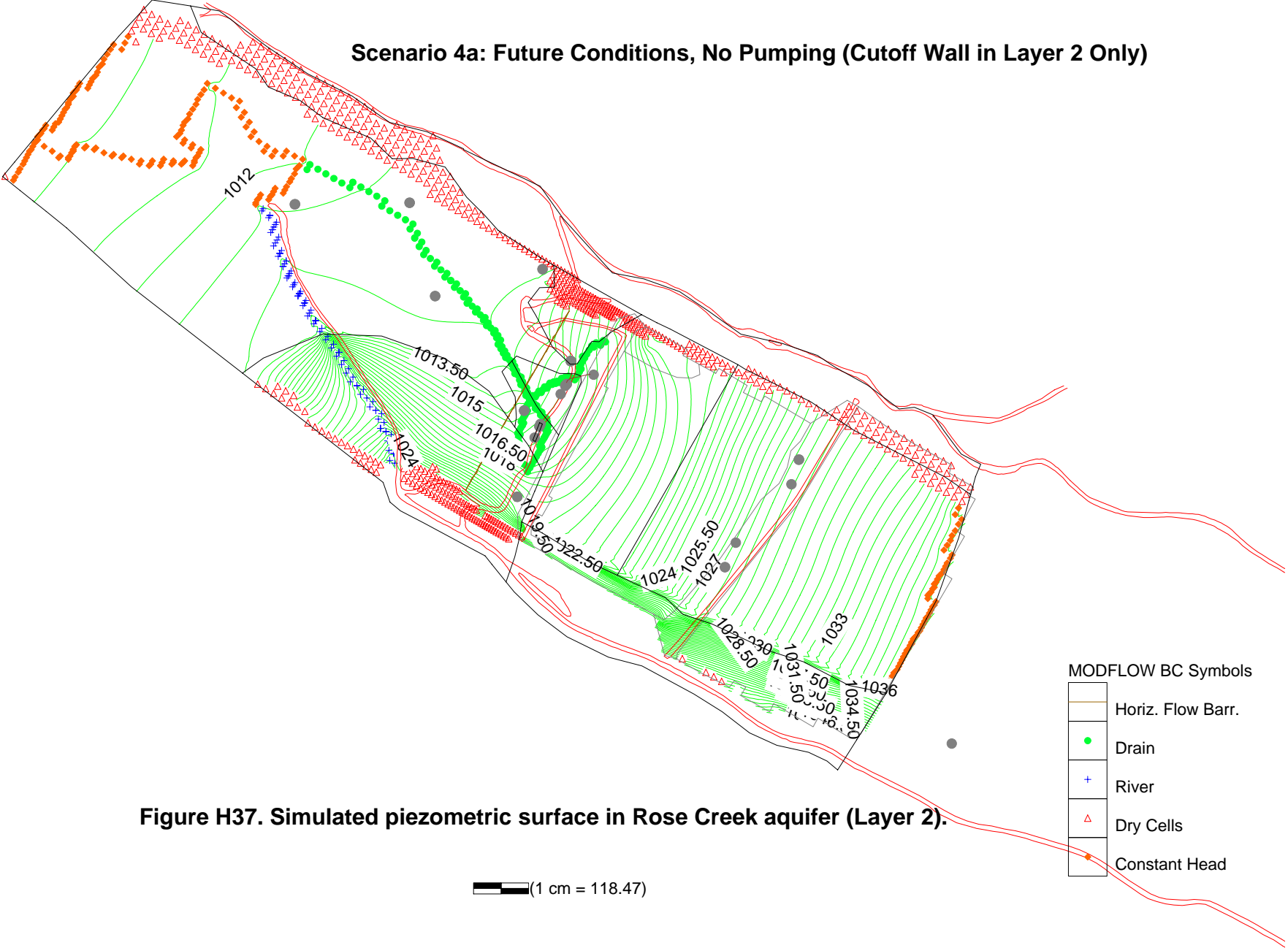
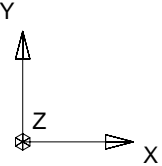


Figure H37. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Horiz. Flow Barr.
 - Drain
 - + River
 - △ Dry Cells
 - Constant Head

(1 cm = 118.47)



Scenario 4a: Future Conditions, No Pumping (Cutoff Wall in Layer 2 Only)

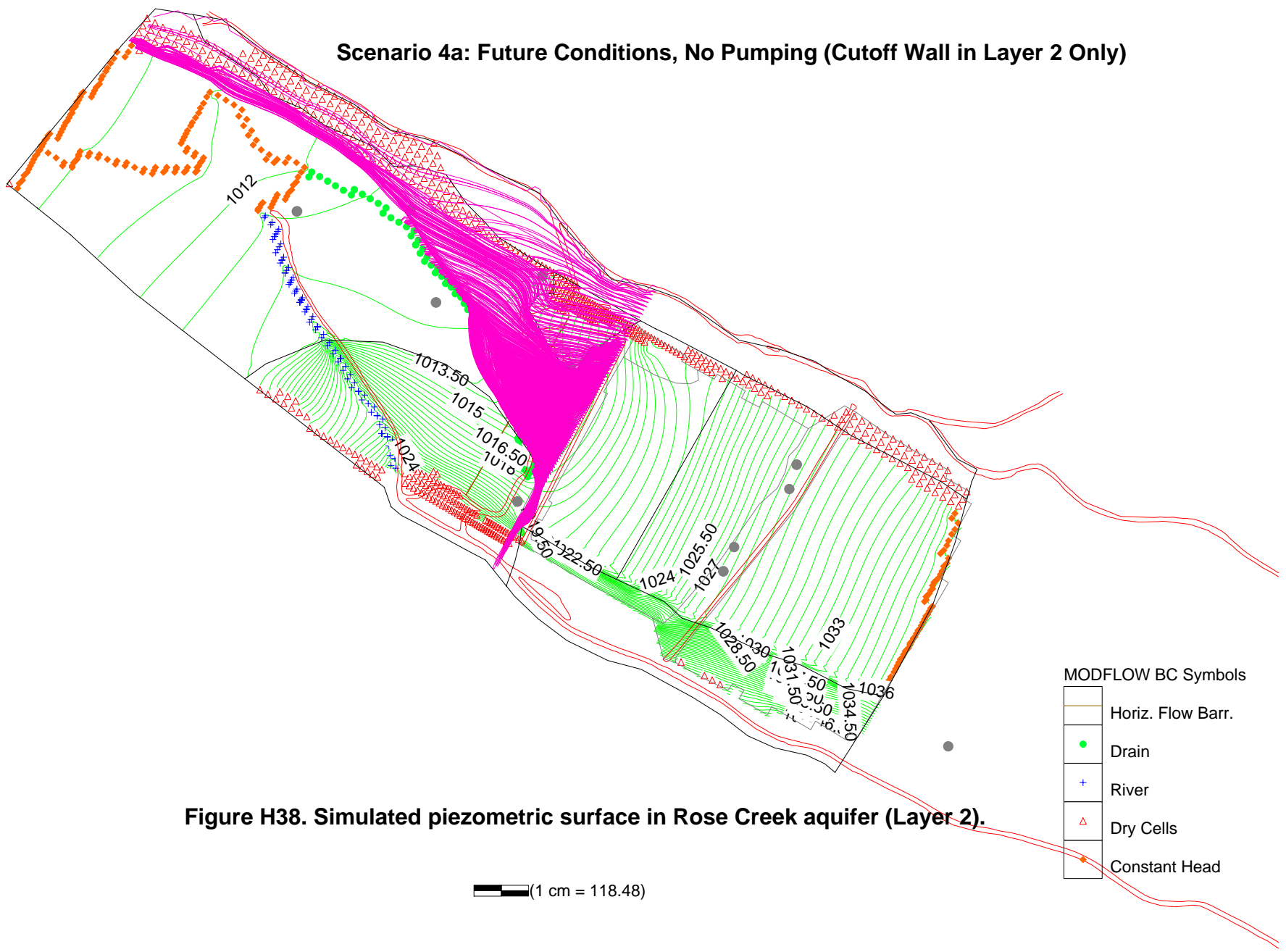


Figure H38. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

(1 cm = 118.48)

- MODFLOW BC Symbols
- Horiz. Flow Barr.
 - Drain
 - + River
 - △ Dry Cells
 - ◇ Constant Head

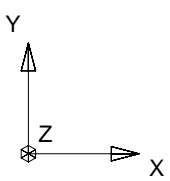


Table H21. Closure Scenario 4a (RCC36_2_1)

Pumping Well ID	Future Heads w/o Pumping (RCC36_2)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.950	1011.933	1011.933	5.017
PWA - Till	1016.943		1014.128	2.816
PWA - BR	1016.905		1015.528	1.377
PWB - All (L3,4)	1016.624	1011.617	1011.617	5.008
PWB - Till	1016.610		1013.136	3.474
PWB - BR	1016.510		1015.113	1.397
PWC - All (L3,4)	1016.073	1011.070	1011.070	5.004
PWC - Till	1016.063		1012.814	3.249
PWC - BR	1016.099		1014.782	1.317
PW1 - All (L2,4)	1015.546	1013.541	1013.541	2.005
PW1 - Till	1015.566		1013.782	1.784
PW1 - BR	1015.878		1014.582	1.297
PWD - All (L2-4)	1015.492	1013.488	1013.488	2.004
PWD - Till	1015.514		1013.737	1.777
PWD - BR	1015.835		1014.483	1.353
PW2 - All (L2,3)	1015.655	1013.652	1013.652	2.003
PW2 - Till	1015.698		1014.027	1.671
PW2 - BR	1016.169		1014.710	1.459
PWE - All (L2-4)	1016.006	1014.004	1014.004	2.003
PWE - Till	1016.212		1014.374	1.838
PWE - BR	1017.053		1015.413	1.640
PWF - All (L3,4)	1017.100	1012.099	1012.099	5.000
PWF - Till	1017.486		1014.557	2.930
PWF - BR	1018.697		1016.775	1.922
PWG - All (L3,4)	1019.148	1014.149	1014.149	4.999
PWG - Till	1019.554		1016.225	3.328
PWG - BR	1021.476		1019.475	2.001
PWH - All (L2-4)	1021.169	1016.171	1016.171	4.998
PWH - Till	1022.227		1019.100	3.127
PWH - BR	1025.538		1023.897	1.642

Low K Wells

FLUXES	CLOSURE - No Pumping		CLOSURE - w/ Pumping	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	215.0	2.5	218	2.5
polygon	585.8	6.8	594	6.9
Total	801	9	812	9
POLISHING POND				
arc	22.4	0.3	41	0.5
polygon	1209.1	14.0	1363	15.8
Total	1231	14	1404	16
X11	-724	-8.4	0	0.0
X13	-2716	-31.4	-60	-0.7
CVS1	-3210	-37.1	-1769	-20.5
Rest of RC	-1079	-12.5	-1064	-12.3
RCDC	3291	38.1	3322	38.5
U/S CH	2462	28.5	2664	30.8
D/S CH	-781	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	35	0.41	6.4
PWB	2, 3, 4	159	1.84	29.2
PWC	2, 3, 4	310	3.58	57
PW1	2, 4	873	10.11	160
PWD	2, 3, 4	1,198	13.87	220
PW2	2, 3	1,313	15.20	241
PWE	2, 3, 4	398	4.60	72.9
PWF	2, 3, 4	104	1.20	19.0
PWG	2, 3, 4	77	0.89	14.0
PWH	2, 3, 4	61	0.71	11.2
TOTAL		4528	52	831

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5380	62.3
Flow Past X13 (j76 into RF)	978	11.3
% Bypass	18.2%	

Scenario 4a: Pumping (10 Wells with 2 & 5 m DD)

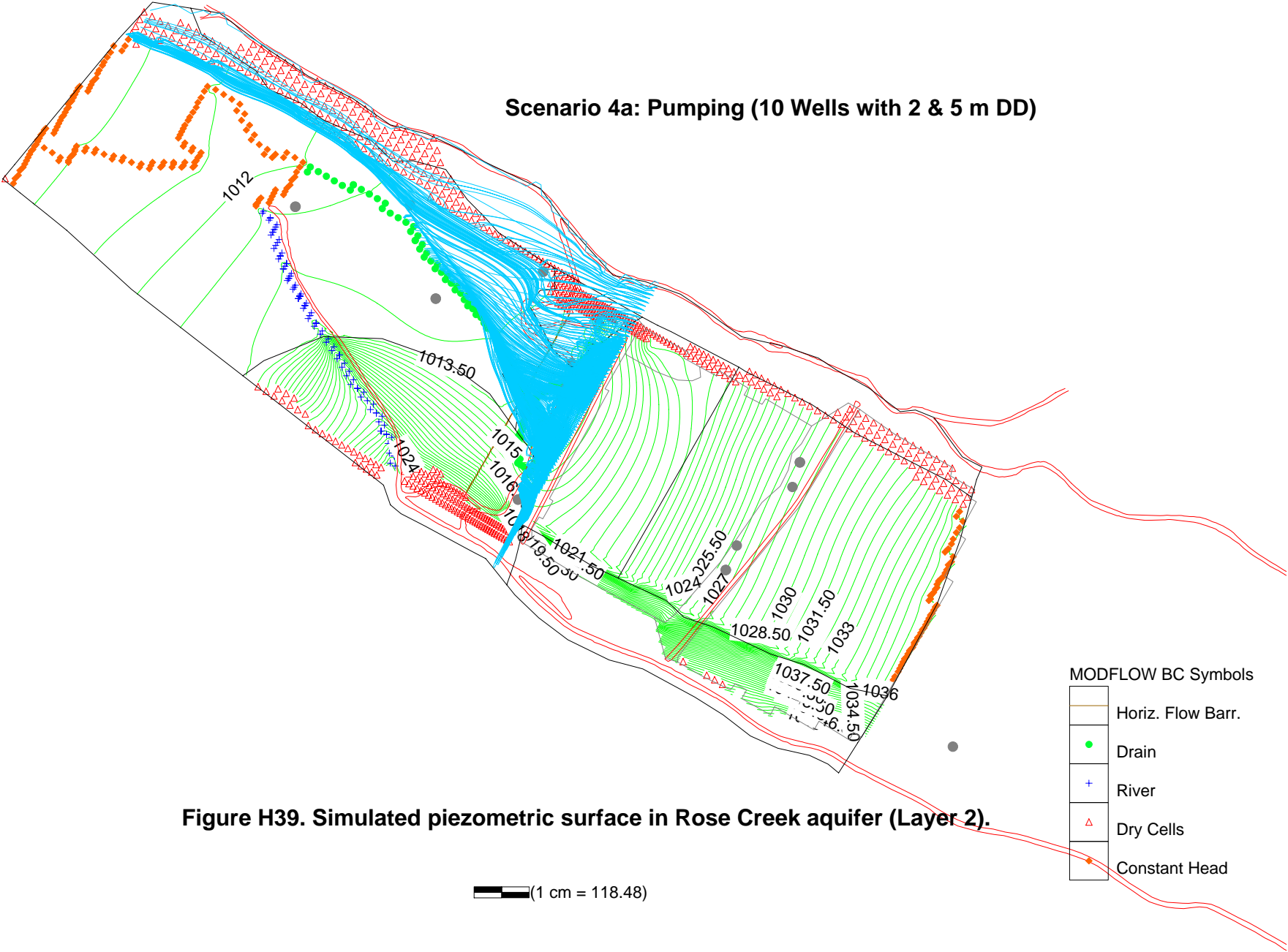






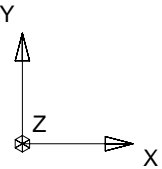


Figure H39. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
-  Horiz. Flow Barr.
 -  Drain
 -  River
 -  Dry Cells
 -  Constant Head

 (1 cm = 118.48)



Scenario 4a: Pumping (10 Wells with 2 & 5 m DD)

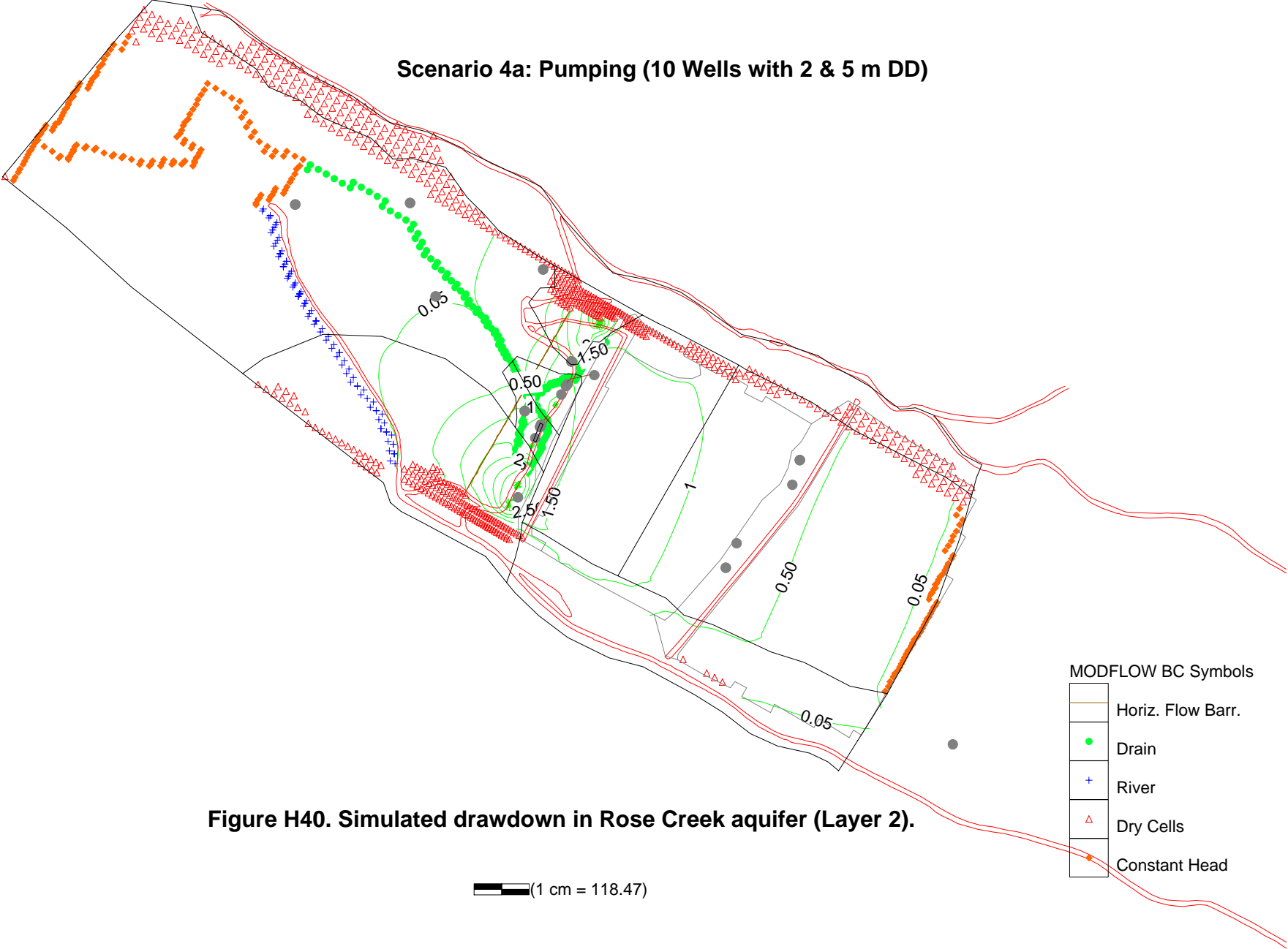


Figure H40. Simulated drawdown in Rose Creek aquifer (Layer 2).

Table H22. Future conditions (without pumping) for Closure Scenario 4b (RCC36_1).

INPUT

Material	Layer	Hydraulic Conductivity	
		(m/d)	(m/s)
CVD	1	0.00864	1.0E-07
PP Sediments	1	0.000078	9.0E-10
PP Sed Window	1	0.026	3.0E-07
ID	1	0.026	3.0E-07
Tailings	1	0.0017	2.0E-08
Colluvium - S.	2,3,4	0.864	1.0E-05
Colluvium - N.	2,3,4	0.864	1.0E-05
U/S Alluvium	2,3,4	12.96	1.5E-04
D/S Alluvium	2,3,4	25.92	3.0E-04
Alluvium CVD	2,3,4	43.2	5.0E-04
Alluvium PW2	2,3	432	5.0E-03
Basal Till	5	0.026	3.0E-07
Slope Till	2,3,4,5	0.26	3.0E-06
Bedrock	6	0.017	2.0E-07

Other Parameters	m/d	m/s
Drain Conductance	51.84	6.0E-04
RCDC River Conductance L5	5.184	6.0E-05
RCDC River Conductance L2	5.184	6.0E-05
PP Spillway Cond. L2,L4,L5	-	-
Intermediate Pond WL (m)	1046.516	7-Sep-05
Polishing Pond WL (m)	1027.395	7-Sep-05
Upstream Constant Head (m)	1036.4	
Downstream Constant Head (m)	1010.8	

Horizontal flow barrier added with K = 1e-8 m/s (layers 2-5)

OUTPUT

Well ID	Layer	Observed Heads (Current)	Simulated Heads (Future)
P01-01A	3	1012.12	1012.55
P01-01B	6	1012.04	1012.58
P01-02A	2	1017.61	1020.05
P01-02B	5	1020.04	1020.67
P01-03 (North)	2	1028.02	1028.93
P01-04A (South)	4	1028.99	1027.68
P01-04B (South)	5	1028.46	1027.75
P01-11	3	1016.82	1016.91
X16A	2	1013.10	1012.44
X16B	4	1013.17	1012.44
X17A	2	1012.77	1012.78
X17B	4	1012.86	1012.78
X18A	3	1015.19	1012.80
X18B	6	1015.54	1013.62
X24A/C (North)	2	1027.77	1028.74
X24D (North)	5	1027.87	1028.73
X25A/B (South)	2	1027.54	1027.60
P03-09-01-02	5	1015.62	1015.11
P03-09-03-04	4	1015.26	1015.08
P03-09-05-06	3	1015.09	1015.04
P03-09-07-09	2	1014.87	1014.99
P05-01-01	6	1016.25	1015.97
P05-01-02	4	1016.10	1015.85
P05-01-03-04	3	1016.06	1015.86
P05-01-05-06	2	1015.63	1015.84
PW1	2,4	1014.98	1015.73
MW1	2,4	1015.05	1015.71
P05-02	2	1014.79	1015.69
MW2	2,3	1015.09	1015.75
PW2	2,3	1015.17	1015.78
P05-03	2	1015.20	1015.93

Average head provided

FLUXES	SIMULATED	
	Net m ³ /d	Net L/s
INTERMEDIATE POND		
arc	214.8	2.5
polygon	585.2	6.8
Total	800	9
POLISHING POND		
arc	21.2	0.2
polygon	1199.7	13.9
Total	1221	14
PP Spillway	0	0.0
X11	-1281	-14.8
X13	-5020	-58.1
CVS1	-914	-10.6
Rest of RC	-1055	-12.2
RCDC RIV	3298	38.2
U/S CH	2450	28.4
D/S CH	-780	-9.0

Negative or red numbers indicate flow out of model (i.e. into boundary condition)

Water Balance Error (%) 0.0
 # Iterations Converged

Scenario 4b: Future Conditions, No Pumping (Cutoff Wall Layers 2-5)

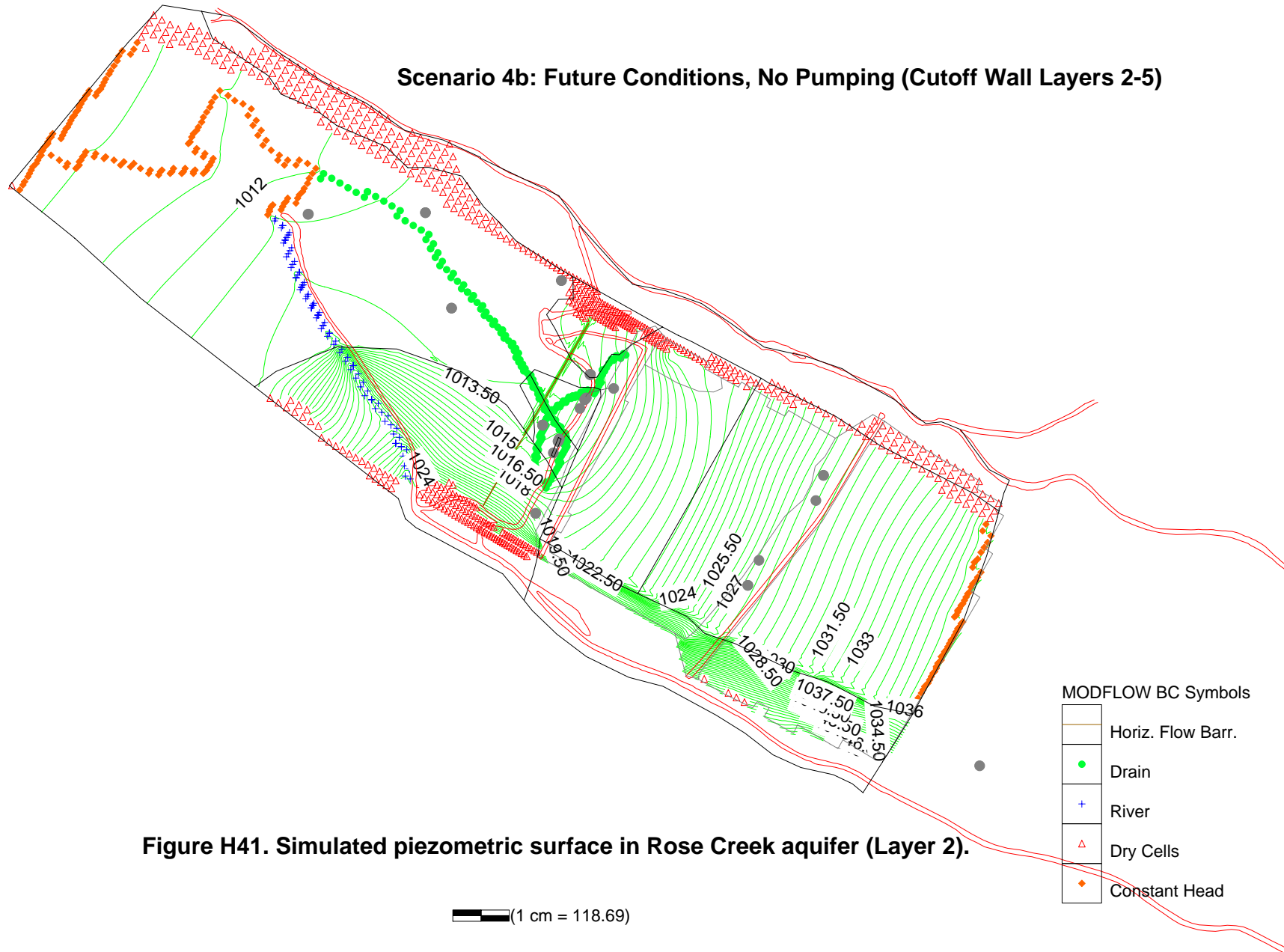






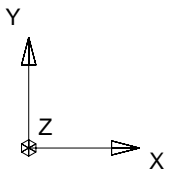


Figure H41. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
-  Horiz. Flow Barr.
 -  Drain
 -  River
 -  Dry Cells
 -  Constant Head

 (1 cm = 118.69)



Scenario 4b: Future Conditions, No Pumping (Cutoff Wall in Layers 2-5)

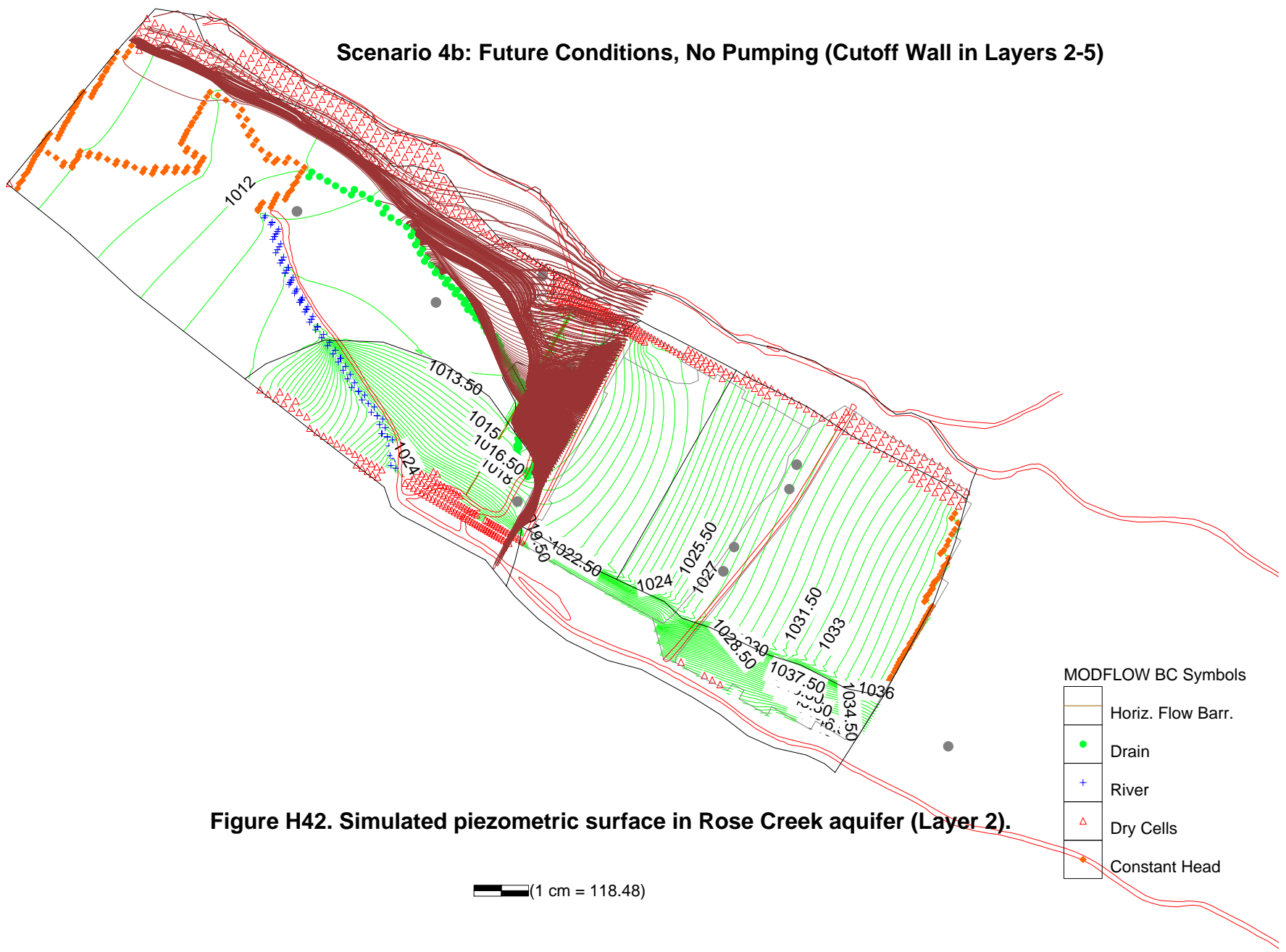







Figure H42. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

(1 cm = 118.48)

- MODFLOW BC Symbols**
-  Horiz. Flow Barr.
 -  Drain
 -  River
 -  Dry Cells
 -  Constant Head

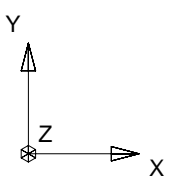


Table H23. Closure Scenario 4b (RCC36_1_1)

Pumping Well ID	Future Heads w/o Pumping (RCC36_1)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1017.121	1011.933	1011.933	5.187
PWA - Till	1017.118		1014.205	2.913
PWA - BR	1017.023		1015.618	1.406
PWB - All (L3,4)	1016.740	1011.617	1011.617	5.123
PWB - Till	1016.738		1013.189	3.549
PWB - BR	1016.636		1015.210	1.425
PWC - All (L3,4)	1016.199	1011.070	1011.070	5.130
PWC - Till	1016.209		1012.882	3.327
PWC - BR	1016.239		1014.892	1.348
PW1 - All (L2,4)	1015.727	1013.541	1013.541	2.186
PW1 - Till	1015.759		1013.832	1.926
PW1 - BR	1016.017		1014.684	1.333
PWD - All (L2-4)	1015.674	1013.488	1013.488	2.186
PWD - Till	1015.693		1013.781	1.913
PWD - BR	1015.946		1014.563	1.383
PW2 - All (L2,3)	1015.775	1013.652	1013.652	2.124
PW2 - Till	1015.820		1014.081	1.738
PW2 - BR	1016.223		1014.754	1.469
PWE - All (L2-4)	1016.101	1014.004	1014.004	2.098
PWE - Till	1016.295		1014.388	1.907
PWE - BR	1017.081		1015.422	1.659
PWF - All (L3,4)	1017.125	1012.099	1012.099	5.026
PWF - Till	1017.520		1014.535	2.985
PWF - BR	1018.714		1016.757	1.957
PWG - All (L3,4)	1019.185	1014.149	1014.149	5.036
PWG - Till	1019.588		1016.192	3.396
PWG - BR	1021.490		1019.446	2.044
PWH - All (L2-4)	1021.209	1016.171	1016.171	5.037
PWH - Till	1022.262		1019.073	3.188
PWH - BR	1025.553		1023.876	1.677

Low K Wells

FLUXES	CLOSURE - No Pumping		CLOSURE - w/ Pumping	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	214.8	2.5	218	2.5
polygon	585.2	6.8	594	6.9
Total	800	9	812	9
POLISHING POND				
arc	21.2	0.2	40	0.5
polygon	1199.7	13.9	1354	15.7
Total	1221	14	1395	16
X11	-1281	-14.8	0	0.0
X13	-5020	-58.1	-195	-2.3
CVS1	-914	-10.6	-865	-10.0
Rest of RC	-1055	-12.2	-1054	-12.2
RCDC	3298	38.2	3322	38.4
U/S CH	2450	28.4	2656	30.7
D/S CH	-780	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	37	0.42	6.7
PWB	2, 3, 4	165	1.91	30.2
PWC	2, 3, 4	321	3.72	59
PW1	2, 4	1,084	12.55	199
PWD	2, 3, 4	1,458	16.88	268
PW2	2, 3	1,537	17.79	282
PWE	2, 3, 4	452	5.23	82.9
PWF	2, 3, 4	103	1.19	18.8
PWG	2, 3, 4	75	0.86	13.7
PWH	2, 3, 4	60	0.69	11.0
TOTAL		5291	61	971

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5363	62.1
Flow Past X13 (j76 into RF)	27	0.3
% Bypass	0.5%	

Scenario 4b: Pumping (10 wells with 2 & 5 m DD)

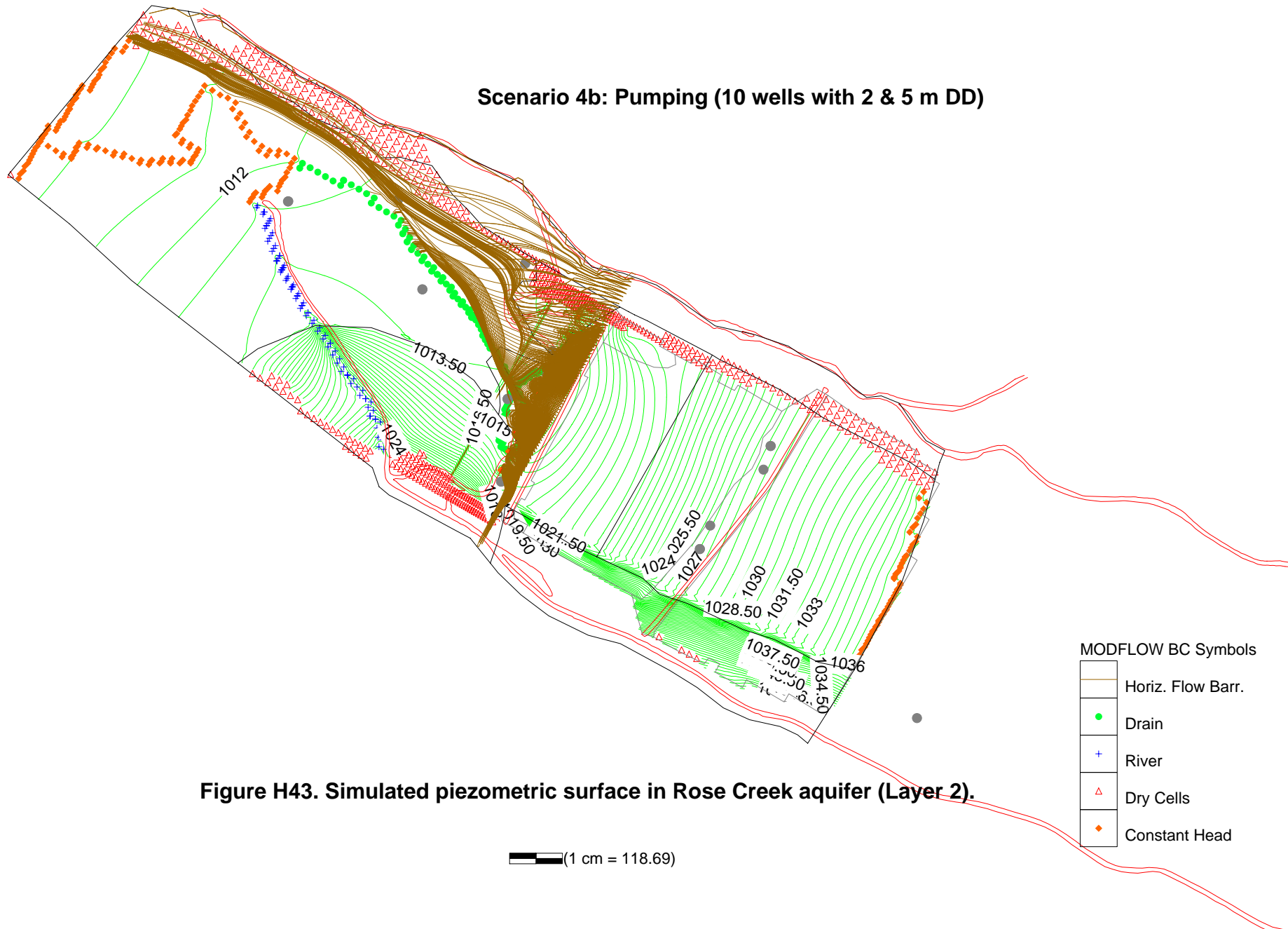


Figure H43. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 4b: Pumping (10 wells with 2 & 5 m DD)

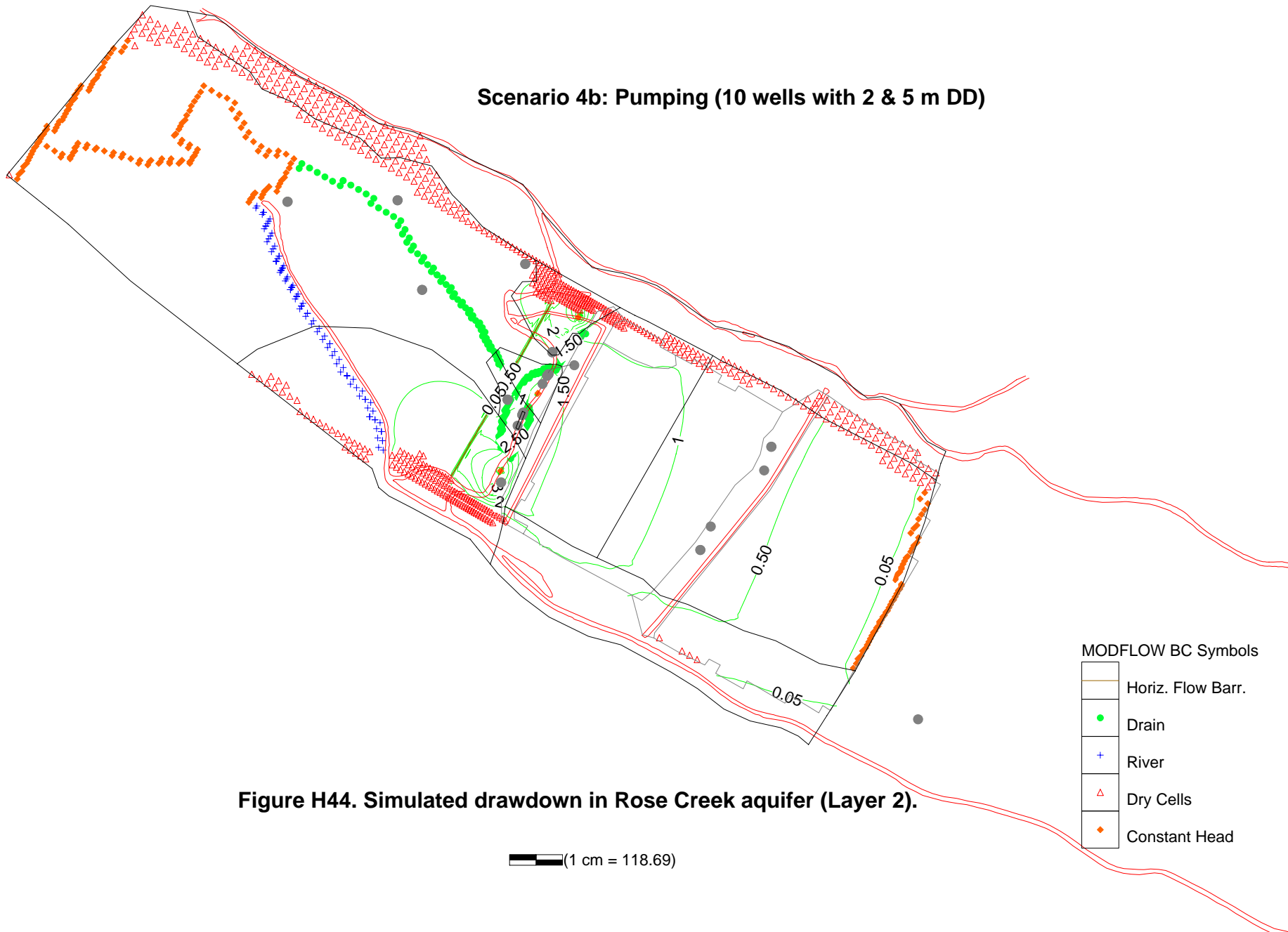


Figure H44. Simulated drawdown in Rose Creek aquifer (Layer 2).

(1 cm = 118.69)

- MODFLOW BC Symbols
- Horiz. Flow Barr.
 - Drain
 - River
 - Dry Cells
 - Constant Head

Table H24. Future conditions (without pumping) for Closure Scenario 5 (RCC35_1).

INPUT

Material	Layer	Hydraulic Conductivity	
		(m/d)	(m/s)
CVD	1	0.00864	1.0E-07
PP Sediments	1	0.000078	9.0E-10
PP Sed Window	1	0.026	3.0E-07
ID	1	0.026	3.0E-07
Tailings	1	0.0017	2.0E-08
Colluvium - S.	2,3,4	0.864	1.0E-05
Colluvium - N.	2,3,4	0.864	1.0E-05
U/S Alluvium	2,3,4	12.96	1.5E-04
D/S Alluvium	2,3,4	25.92	3.0E-04
Alluvium CVD	2,3,4	43.2	5.0E-04
Alluvium PW2	2,3	432	5.0E-03
Basal Till	5	0.026	3.0E-07
Slope Till	2,3,4,5	0.26	3.0E-06
Bedrock	6	0.017	2.0E-07

Other Parameters	m/d	m/s
Drain Conductance	51.84	6.0E-04
RCDC River Conductance L5	0	0.0E+00
RCDC River Conductance L2	0	0.0E+00
PP Spillway Cond. L2,L4,L5	-	-
Intermediate Pond WL (m)	1046.516	7-Sep-05
Polishing Pond WL (m)	1027.395	7-Sep-05
Upstream Constant Head (m)	1036.4	
Downstream Constant Head (m)	1010.8	

RCDC fully lined (zero leakage).

OUTPUT

Well ID	Layer	Observed Heads (Current)	Simulated Heads (Future)
P01-01A	3	1012.12	1012.35
P01-01B	6	1012.04	1012.37
P01-02A	2	1017.61	1017.66
P01-02B	5	1020.04	1017.62
P01-03 (North)	2	1028.02	1028.65
P01-04A (South)	4	1028.99	1027.27
P01-04B (South)	5	1028.46	1027.25
P01-11	3	1016.82	1016.77
X16A	2	1013.10	1012.15
X16B	4	1013.17	1012.14
X17A	2	1012.77	1012.60
X17B	4	1012.86	1012.60
X18A	3	1015.19	1012.91
X18B	6	1015.54	1013.74
X24A/C (North)	2	1027.77	1028.47
X24D (North)	5	1027.87	1028.46
X25A/B (South)	2	1027.54	1027.23
P03-09-01-02	5	1015.62	1014.76
P03-09-03-04	4	1015.26	1014.73
P03-09-05-06	3	1015.09	1014.73
P03-09-07-09	2	1014.87	1014.72
P05-01-01	6	1016.25	1015.75
P05-01-02	4	1016.10	1015.51
P05-01-03-04	3	1016.06	1015.52
P05-01-05-06	2	1015.63	1015.50
PW1	2,4	1014.98	1015.51
MW1	2,4	1015.05	1015.48
P05-02	2	1014.79	1015.44
MW2	2,3	1015.09	1015.57
PW2	2,3	1015.17	1015.60
P05-03	2	1015.20	1015.74

Average head provided

FLUXES	SIMULATED	
	Net m ³ /d	Net L/s
INTERMEDIATE POND		
arc	220.4	2.6
polygon	630.8	7.3
Total	851	10
POLISHING POND		
arc	50.3	0.6
polygon	1236.7	14.3
Total	1287	15
PP Spillway	0	0.0
X11	-604	-7.0
X13	-2176	-25.2
CVS1	-2122	-24.6
Rest of RC	315	3.6
RCDC RIV	0	0.0
U/S CH	2607	30.2
D/S CH	-763	-8.8

Negative or red numbers indicate flow out of model (i.e. into boundary condition)

Water Balance Error (%) 0.0
 # Iterations Converged

Scenario 5: Future Conditions, No Pumping (RCDC Fully Lined)

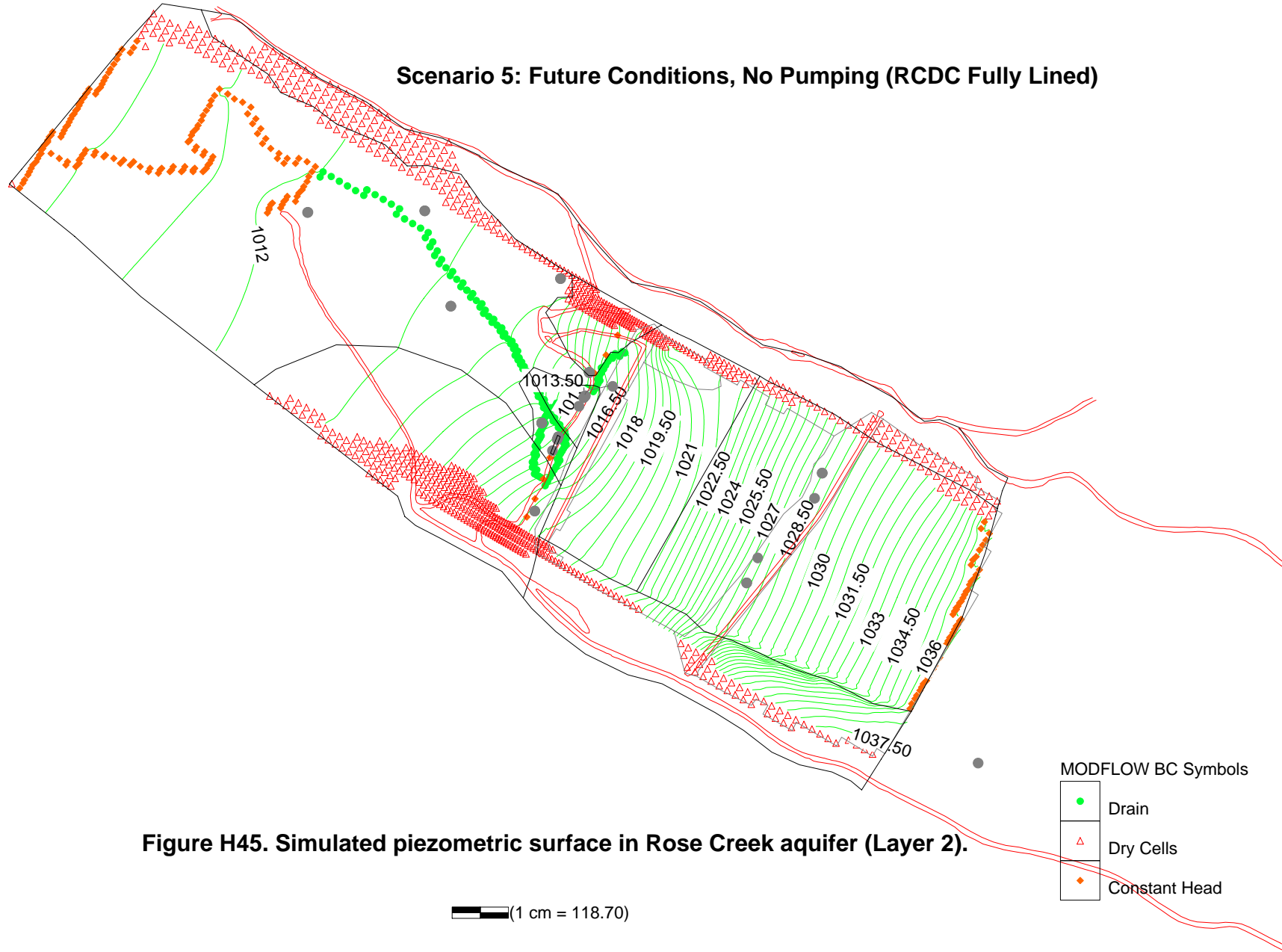
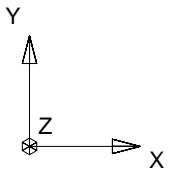


Figure H45. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

- MODFLOW BC Symbols
- Drain
 - △ Dry Cells
 - ◆ Constant Head

1 cm = 118.70



Scenario 5: Future Conditions, No Pumping (RCDC Fully Lined)

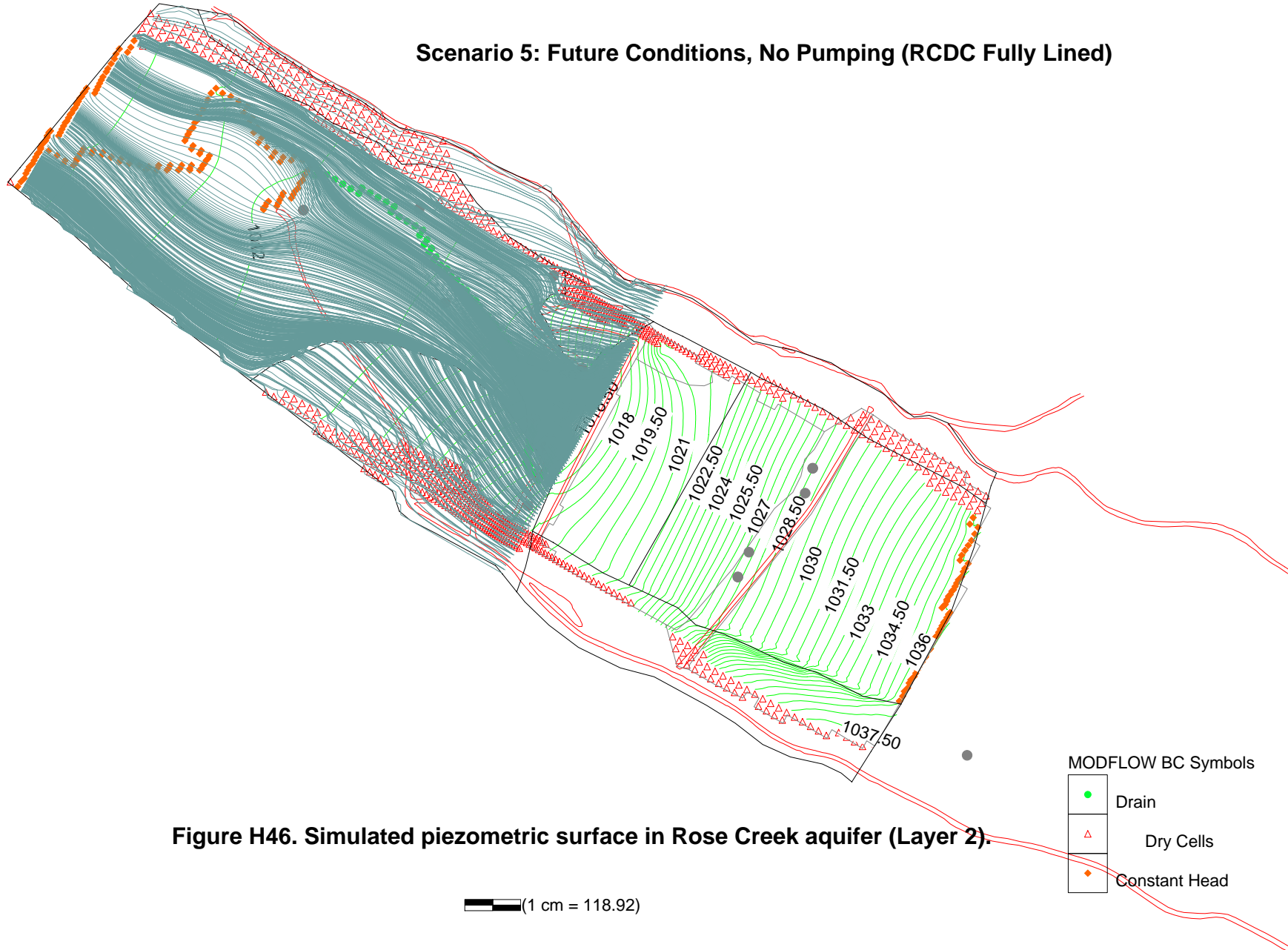


Table H25. Closure Scenario 5a (RCC35_1_1)

Pumping Well ID	Future Heads w/o Pumping (RCC35_1)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.903	1011.903	1011.903	5.000
PWA - Till	1016.891		1014.045	2.846
PWA - BR	1016.831		1015.407	1.423
PWB - All (L3,4)	1016.600	1011.600	1011.600	5.000
PWB - Till	1016.581		1013.082	3.499
PWB - BR	1016.446		1015.001	1.445
PWC - All (L3,4)	1016.049	1011.049	1011.049	5.000
PWC - Till	1016.034		1012.758	3.276
PWC - BR	1016.033		1014.669	1.364
PW1 - All (L2,4)	1015.509	1013.509	1013.509	2.000
PW1 - Till	1015.525		1013.730	1.795
PW1 - BR	1015.787		1014.448	1.339
PWD - All (L2-4)	1015.439	1013.439	1013.439	2.000
PWD - Till	1015.454		1013.665	1.789
PWD - BR	1015.675		1014.276	1.399
PW2 - All (L2,3)	1015.590	1013.590	1013.590	2.000
PW2 - Till	1015.591		1013.888	1.703
PW2 - BR	1015.742		1014.201	1.541
PWE - All (L2-4)	1015.921	1013.921	1013.921	2.000
PWE - Till	1015.983		1014.077	1.906
PWE - BR	1016.107		1014.307	1.800
PWF - All (L3,4)	1016.629	1011.629	1011.629	5.000
PWF - Till	1016.643		1013.514	3.129
PWF - BR	1016.658		1014.459	2.199
PWG - All (L3,4)	1017.249	1012.249	1012.249	5.000
PWG - Till	1017.220		1013.701	3.519
PWG - BR	1017.119		1014.671	2.448
PWH - All (L2-4)	1017.568	1012.568	1012.568	5.000
PWH - Till	1017.534		1014.021	3.513
PWH - BR	1017.422		1015.017	2.405

Low K Wells

FLUXES	CLOSURE - No Pumping		CLOSURE - w/ Pumping	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	220.4	2.6	223	2.6
polygon	630.8	7.3	634	7.3
Total	851	10	857	10
POLISHING POND				
arc	50.3	0.6	69	0.8
polygon	1236.7	14.3	1396	16.2
Total	1287	15	1465	17
X11	-604	-7.0	0	0.0
X13	-2176	-25.2	-37	-0.4
CVS1	-2122	-24.6	-603	-7.0
Rest of RC	315	3.6	358	4.1
RCDC	0	0.0	0	0.0
U/S CH	2607	30.2	2819	32.6
D/S CH	-763	-8.8	-762	-8.8

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	34	0.39	6.2
PWB	2, 3, 4	155	1.79	28.4
PWC	2, 3, 4	303	3.51	56
PW1	2, 4	804	9.30	147
PWD	2, 3, 4	1,114	12.89	204
PW2	2, 3	1,177	13.63	216
PWE	2, 3, 4	328	3.79	60.1
PWF	2, 3, 4	86	0.99	15.7
PWG	2, 3, 4	62	0.71	11.3
PWH	2, 3, 4	34	0.39	6.2
TOTAL		4096	47	751

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5142	59.5
Flow Past X13 (j76 into RF)	967	11.2
% Bypass	18.8%	

Scenario 5a: Pumping (10 Wells with 2 & 5 m DD)

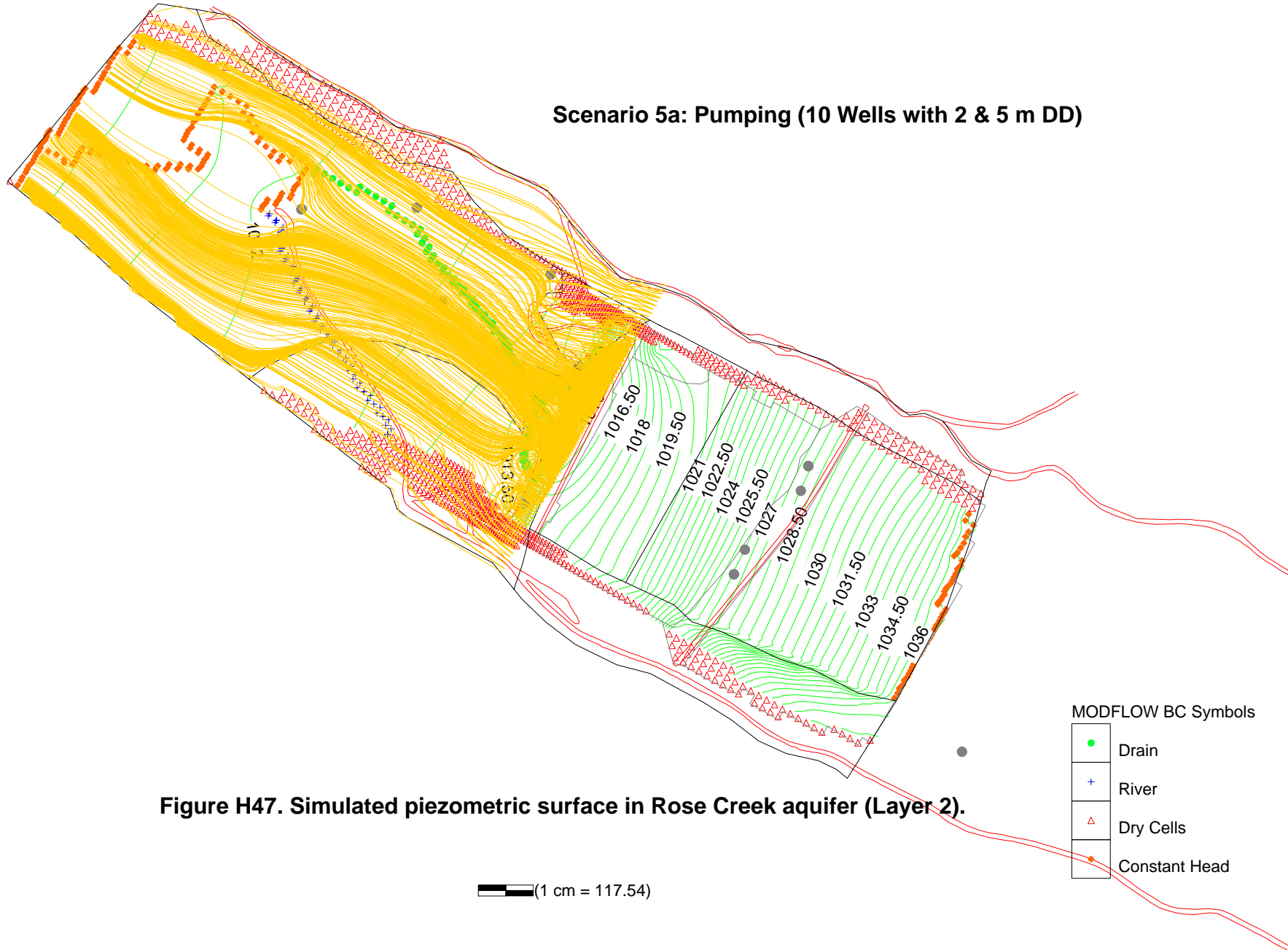


Figure H47. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 5a: Pumping (10 wells with 1 & 3 m DD)

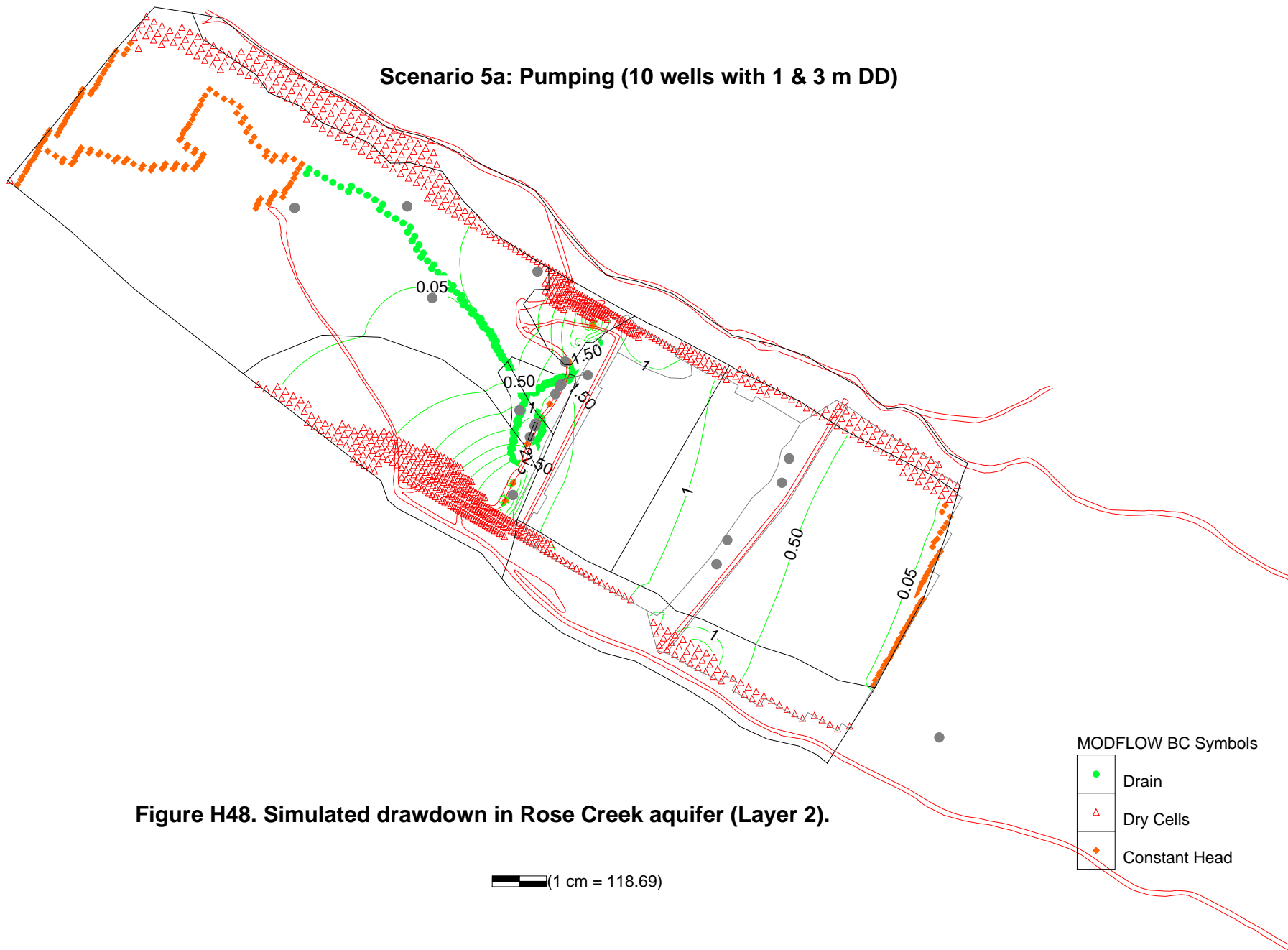


Figure H48. Simulated drawdown in Rose Creek aquifer (Layer 2).

(1 cm = 118.69)

MODFLOW BC Symbols

- Drain
- △ Dry Cells
- ◆ Constant Head

Table H26. Closure Scenario 5b (RCC35_1_2)

Pumping Well ID	Future Heads w/o Pumping (RCC35_1)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L4)	1016.903	1011.903	1011.903	5.000
PWA - Till	1016.891		1013.090	3.800
PWA - BR	1016.831		1013.897	2.934
PWB - All (L3,4)	1016.600	1011.600	1011.600	5.000
PWB - Till	1016.581		1012.346	4.236
PWB - BR	1016.446		1013.337	3.110
PWC - All (L3,4)	1016.049	1011.049	1011.049	5.000
PWC - Till	1016.034		1011.758	4.276
PWC - BR	1016.033		1012.749	3.284
PW1 - All (L2,4)	1015.509	1010.509	1010.509	5.000
PW1 - Till	1015.525		1010.948	4.577
PW1 - BR	1015.787		1012.232	3.555
PWD - All (L2-4)	1015.439	1010.439	1010.439	5.000
PWD - Till	1015.454		1010.848	4.605
PWD - BR	1015.675		1011.910	3.764
PW2 - All (L2,3)	1015.590	1010.590	1010.590	5.000
PW2 - Till	1015.591		1011.165	4.426
PW2 - BR	1015.742		1011.816	3.927
PWE - All (L2-4)	1015.921	1010.921	1010.921	5.000
PWE - Till	1015.983		1011.398	4.585
PWE - BR	1016.107		1012.082	4.025
PWF - All (L3,4)	1016.629	1011.629	1011.629	5.000
PWF - Till	1016.643		1012.191	4.453
PWF - BR	1016.658		1012.651	4.007
PWG - All (L3,4)	1017.249	1012.249	1012.249	5.000
PWG - Till	1017.220		1012.804	4.416
PWG - BR	1017.119		1013.192	3.928
PWH - All (L2-4)	1017.568	1012.568	1012.568	5.000
PWH - Till	1017.534		1013.190	4.344
PWH - BR	1017.422		1013.636	3.785

Low K Wells

FLUXES	CLOSURE - No Pumping		CLOSURE - w/ Pumping	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	220.4	2.6	226	2.6
polygon	630.8	7.3	641	7.4
Total	851	10	867	10
POLISHING POND				
arc	50.3	0.6	93	1.1
polygon	1236.7	14.3	1541	17.8
Total	1287	15	1633	19
X11	-604	-7.0	0	0.0
X13	-2176	-25.2	0	0.0
CVS1	-2122	-24.6	0	0.0
Rest of RC	315	3.6	951	11.0
RCDC	0	0.0	0	0.0
U/S CH	2607	30.2	3108	36.0
D/S CH	-763	-8.8	-757	-8.8

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	16	0.19	3.0
PWB	2, 3, 4	77	0.89	14.0
PWC	2, 3, 4	124	1.44	23
PW1	2, 4	1,302	15.07	239
PWD	2, 3, 4	1,813	20.99	333
PW2	2, 3	1,759	20.36	323
PWE	2, 3, 4	652	7.55	119.7
PWF	2, 3, 4	22	0.26	4.1
PWG	2, 3, 4	23	0.26	4.2
PWH	2, 3, 4	14	0.16	2.6
TOTAL		5803	67	1065

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	5609	64.9
Flow Past X13 (j76 into RF)	27	0.3
% Bypass	0.48%	

Scenario 5b: Pumping (10 wells with 5 m DD)

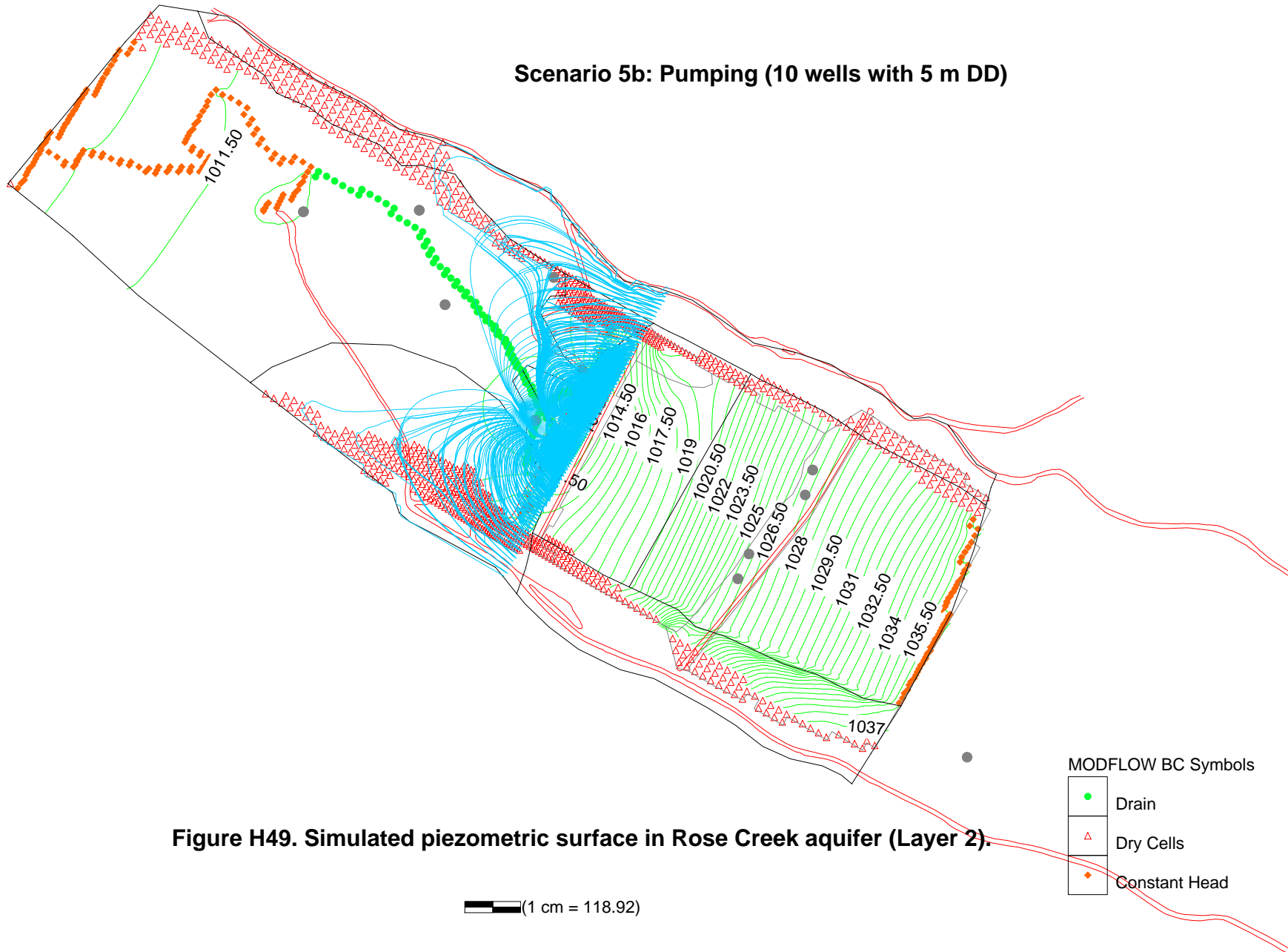


Figure H49. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 5b: Pumping (10 wells with 5 m DD)

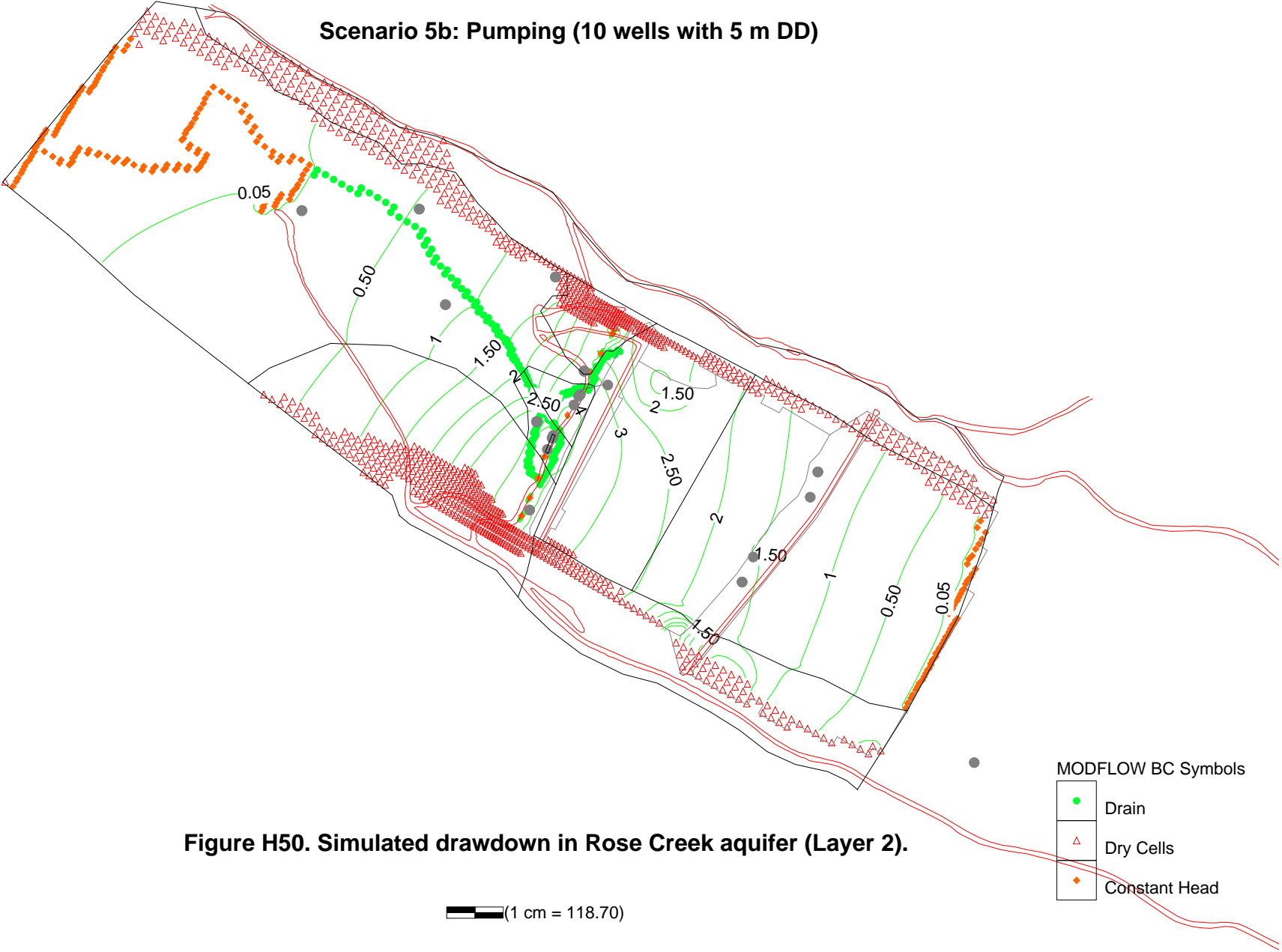


Figure H50. Simulated drawdown in Rose Creek aquifer (Layer 2).

(1 cm = 118.70)

- MODFLOW BC Symbols
- Drain
 - △ Dry Cells
 - ◆ Constant Head

Table H27. Future conditions (without pumping) for Closure Scenario 6 (RCC34_3).

INPUT

Material	Layer	Hydraulic Conductivity	
		(m/d)	(m/s)
ID	1	0.026	3.0E-07
Tailings	1	0.0017	2.0E-08
Colluvium - S.	2,3,4	0.864	1.0E-05
Colluvium - N.	2,3,4	0.864	1.0E-05
U/S Alluvium	2,3,4	12.96	1.5E-04
D/S Alluvium	2,3,4	25.92	3.0E-04
Alluvium CVD	2,3,4	43.2	5.0E-04
Alluvium PW2	2,3	432	5.0E-03
Basal Till	5	0.026	3.0E-07
Slope Till	2,3,4,5	0.26	3.0E-06
Bedrock	6	0.017	2.0E-07

Other Parameters	m/d	m/s
Drain Conductance	51.84	6.0E-04
RCDC River Conductance L5	5.184	6.0E-05
RCDC River Conductance L2	5.184	6.0E-05
PP Spillway Cond. L2,L4,L5	-	-
Intermediate Pond WL (m)	1046.516	7-Sep-05
ID Toe Drain Elevation	surface of L2	
Sidehill Drain (PP)	surface of L2	
Upstream Constant Head (m)	1029.4	
Downstream Constant Head (m)	1010.8	

CVD, PP Sediments removed, toe drain added to ID, sidehill drain on south side in PP footprint

OUTPUT

Well ID	Layer	Observed Heads (Current)	Simulated Heads (Future)
P01-01A	3	1012.12	1012.56
P01-01B	6	1012.04	1012.57
P01-02A	2	1017.61	1017.38
P01-02B	5	1020.04	1018.09
P01-03 (North)	2	1028.02	1020.21
P01-04A (South)	4	1028.99	1018.60
P01-04B (South)	5	1028.46	1018.77
P01-11	3	1016.82	1014.42
X16A	2	1013.10	1012.44
X16B	4	1013.17	1012.44
X17A	2	1012.77	1012.81
X17B	4	1012.86	1012.82
X18A	3	1015.19	1012.88
X18B	6	1015.54	1013.15
X24A/C (North)	2	1027.77	1020.19
X24D (North)	5	1027.87	1020.19
X25A/B (South)	2	1027.54	1018.28
P03-09-01-02	5	1015.62	1013.93
P03-09-03-04	4	1015.26	1013.90
P03-09-05-06	3	1015.09	1013.90
P03-09-07-09	2	1014.87	1013.90
P05-01-01	6	1016.25	1014.08
P05-01-02	4	1016.10	1014.05
P05-01-03-04	3	1016.06	1014.05
P05-01-05-06	2	1015.63	1014.05
PW1	2,4	1014.98	1014.09
MW1	2,4	1015.05	1014.08
P05-02	2	1014.79	1014.08
MW2	2,3	1015.09	1014.20
PW2	2,3	1015.17	1014.22
P05-03	2	1015.20	1014.27

Average head provided

FLUXES	SIMULATED	
	Net m ³ /d	Net L/s
INTERMEDIATE POND		
arc	228.2	2.6
polygon	694.7	8.0
Total	923	11
ID Toe Drain	-2675	-31.0
PP Side Drain	-139	-1.6
X11	0	0.0
X13	-84	-1.0
CVS1	-2005	-23.2
Rest of RC	-1067	-12.3
RCDC RIV	3404	39.4
U/S CH	2423	28.0
D/S CH	-780	-9.0

Negative or red numbers indicate flow out of model (i.e. into boundary condition)

Water Balance Error (%) 0.0
 # Iterations 25 (Did not converge)

Scenario 6: Future Conditions, No Pumping (Polishing Pond Removed)

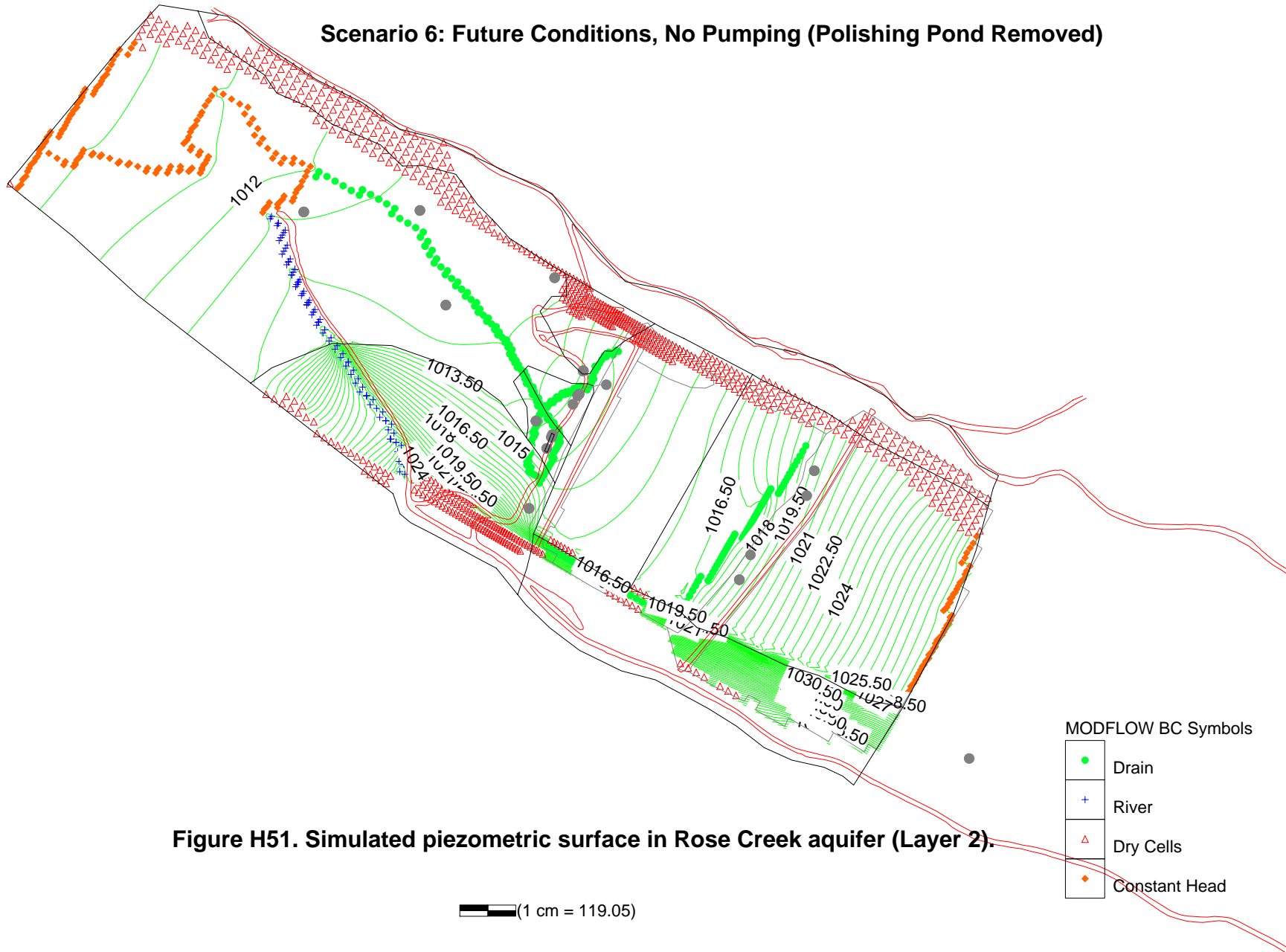
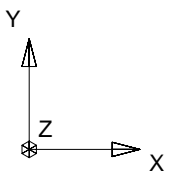


Figure H51. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

1 cm = 119.05



Scenario 6: Future Conditions, No Pumping (Polishing Pond Removed)

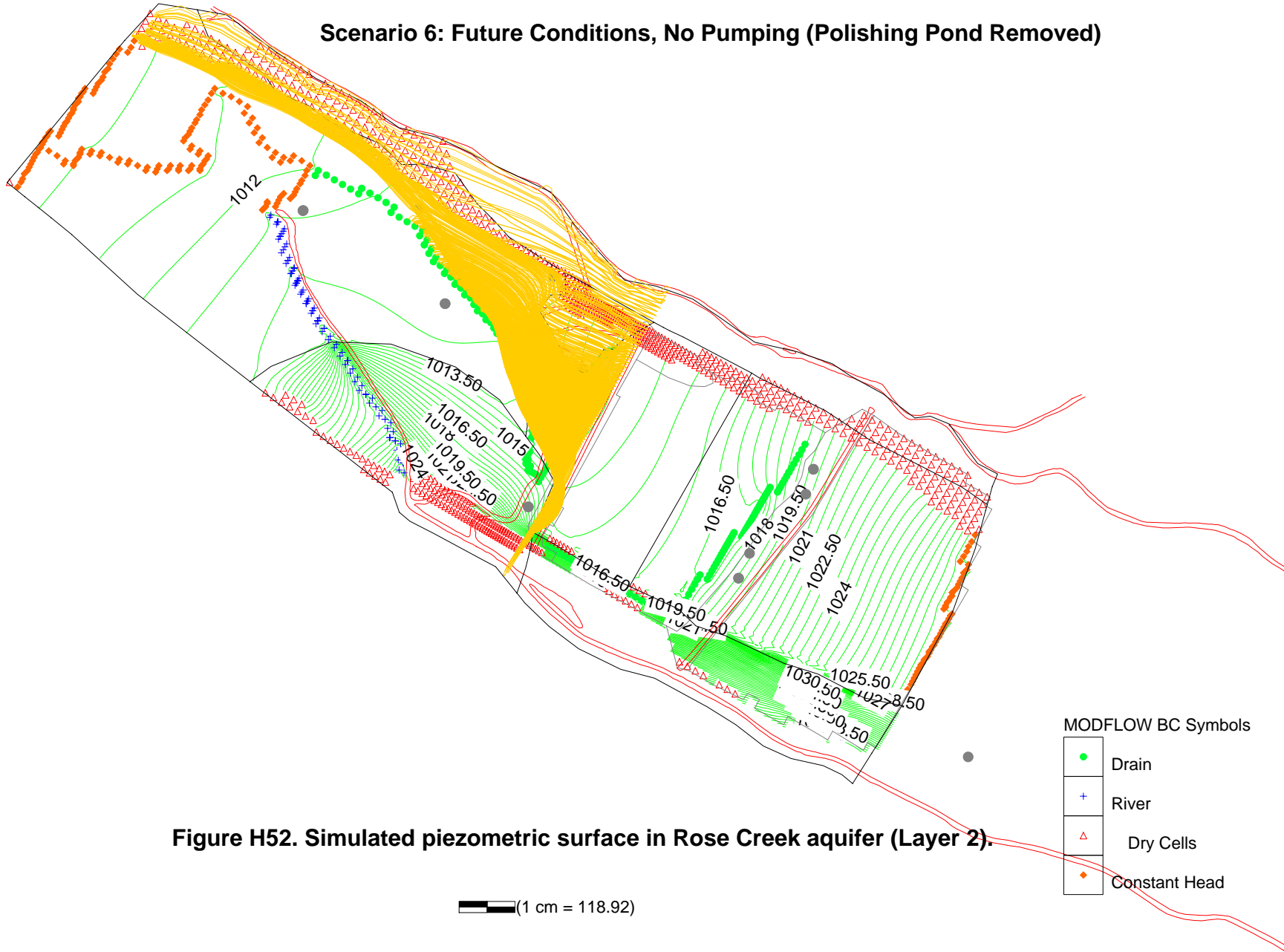


Table H28. Closure Scenario 6a (RCC34_3_1)

Pumping Well ID	Future Heads w/o Pumping (RCC34_3)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1014.376	1011.376	1011.376	3.000
PWA - Till	1014.350		1012.499	1.851
PWA - BR	1014.263		1013.273	0.990
PWB - All (L2-4)	1014.373	1011.373	1011.373	3.000
PWB - Till	1014.356		1012.151	2.205
PWB - BR	1014.226		1013.231	0.995
PWC - All (L2-4)	1014.230	1011.230	1011.230	3.000
PWC - Till	1014.218		1012.197	2.022
PWC - BR	1014.164		1013.270	0.894
PW1 - All (L2,4)	1014.087	1013.087	1013.087	1.000
PW1 - Till	1014.092		1013.146	0.945
PW1 - BR	1014.164		1013.358	0.807
PWD - All (L2-4)	1014.103	1013.103	1013.103	1.000
PWD - Till	1014.113		1013.179	0.934
PWD - BR	1014.246		1013.448	0.797
PW2 - All (L2,3)	1014.213	1013.213	1013.213	1.000
PW2 - Till	1014.250		1013.342	0.909
PW2 - BR	1014.607		1013.762	0.845
PWE - All (L2-4)	1014.342	1013.342	1013.342	1.000
PWE - Till	1014.546		1013.551	0.995
PWE - BR	1015.341		1014.382	0.959
PWF - All (L2-4)	1015.439	1012.439	1012.439	3.000
PWF - Till	1015.669		1013.867	1.801
PWF - BR	1016.756		1015.605	1.151
PWG - All (L2-4)	1016.899	1013.899	1013.899	3.000
PWG - Till	1017.333		1015.323	2.011
PWG - BR	1019.407		1018.234	1.173
PWH - All (L2-4)	1018.826	1015.826	1015.826	3.000
PWH - Till	1020.020		1018.189	1.831
PWH - BR	1023.626		1022.706	0.920

Low K Wells

FLUXES	CLOSURE - No Pumping		CLOSURE - w/ Pumping	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	228.2	2.6	228	2.6
polygon	694.7	8.0	695	8.0
Total	923	11	923	11
ID Toe Drain	-2675	-31.0	-2394	-27.7
Sidehill Drain	-139	-1.6	-140	-1.6
X11	0	0.0	0	0.0
X13	-84	-1.0	-5	-0.1
CVS1	-2005	-23.2	-1032	-11.9
Rest of RC	-1067	-12.3	-1056	-12.2
RCDC	3404	39.4	3417	39.5
U/S CH	2423	28.0	2435	28.2
D/S CH	-780	-9.0	-780	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	13	0.16	2.5
PWB	2, 3, 4	77	0.89	14.1
PWC	2, 3, 4	171	1.98	31
PW1	2, 4	203	2.35	37
PWD	2, 3, 4	340	3.94	62
PW2	2, 3	339	3.93	62
PWE	2, 3, 4	89	1.03	16.3
PWF	2, 3, 4	55	0.63	10.0
PWG	2, 3, 4	43	0.50	7.9
PWH	2, 3, 4	36	0.42	6.6
TOTAL		1367	16	251

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	1441	16.7
Flow Past X13 (j76 into RF)	252	2.9
% Bypass	17.5%	

Scenario 6a: Pumping (10 Wells with 1 & 3 m DD)

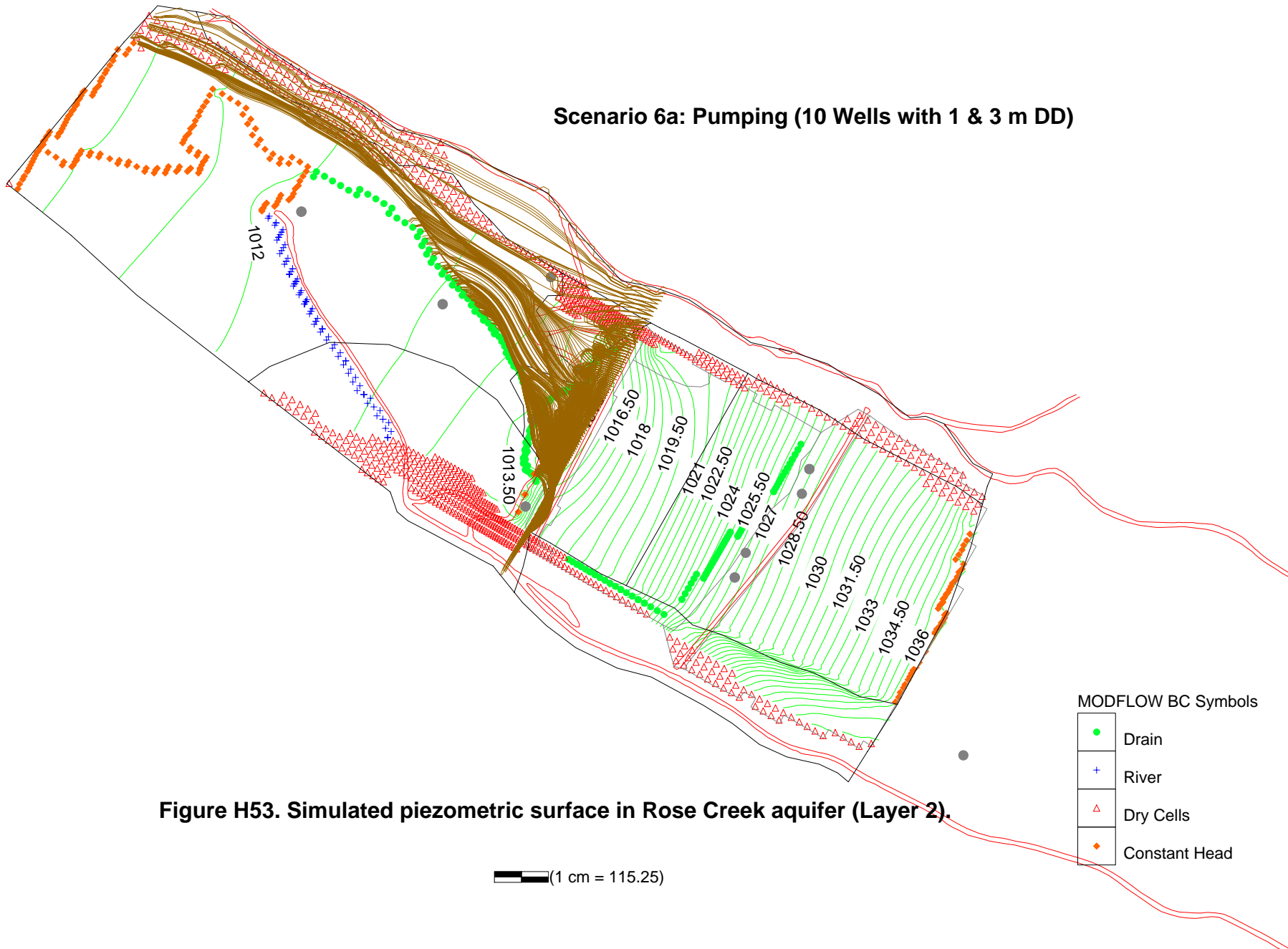


Figure H53. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

Scenario 6a: Pumping (10 Wells with 1 & 3 m DD)

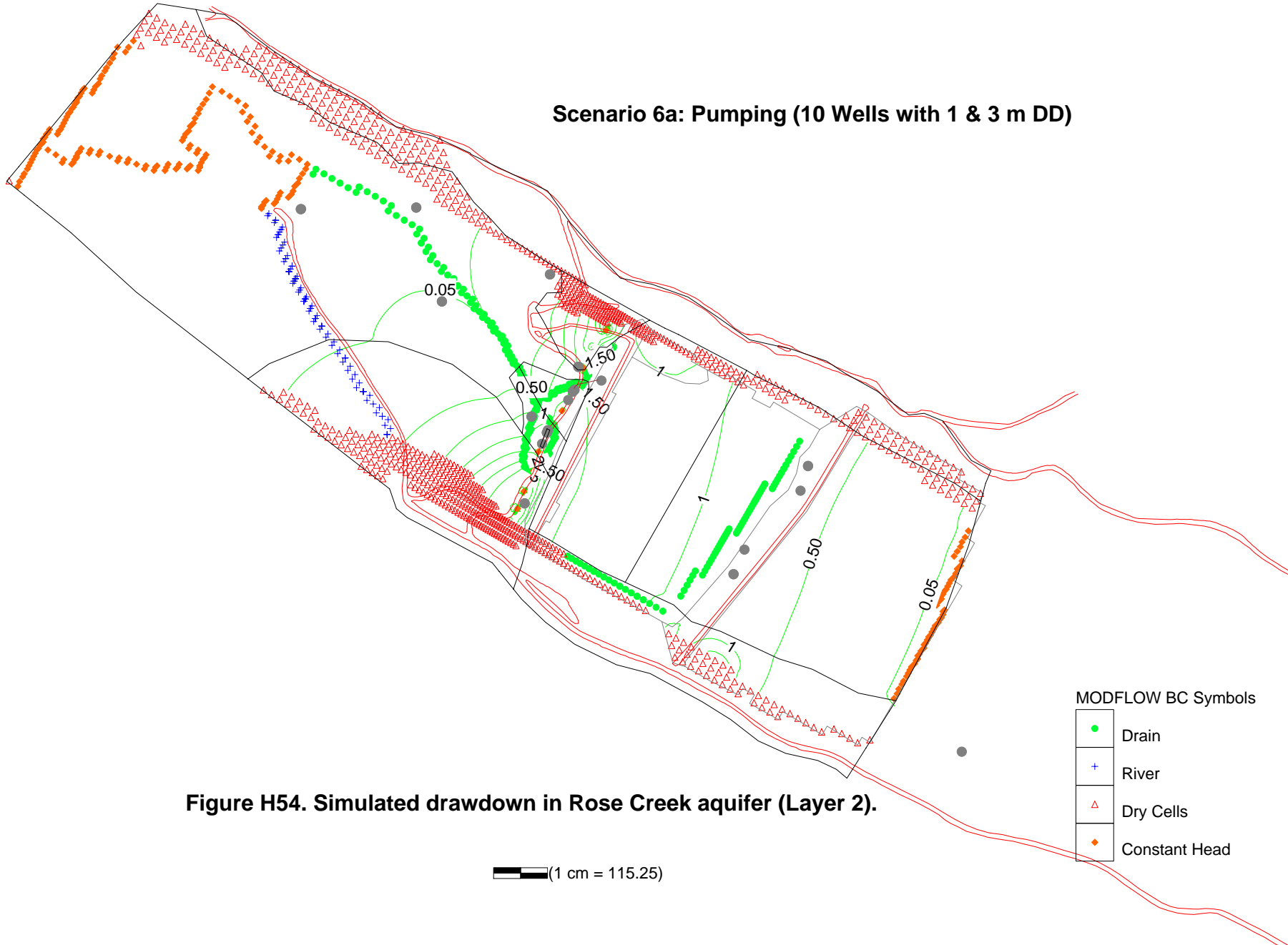


Figure H54. Simulated drawdown in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

1 cm = 115.25

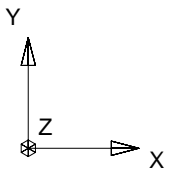


Table H29. Closure Scenario 6b (RCC34_3_2)

Pumping Well ID	Future Heads w/o Pumping (RCC34_3)	PW Input Heads	Closure	
			Heads	Drawdown
PWA - All (L2-4)	1014.376	1011.376	1011.376	3.000
PWA - Till	1014.350		1011.842	2.508
PWA - BR	1014.263		1012.276	1.987
PWB - All (L2-4)	1014.373	1011.373	1011.373	3.000
PWB - Till	1014.356		1011.635	2.721
PWB - BR	1014.226		1012.106	2.120
PWC - All (L2-4)	1014.230	1011.230	1011.230	3.000
PWC - Till	1014.218		1011.508	2.711
PWC - BR	1014.164		1011.971	2.193
PW1 - All (L2,4)	1014.087	1011.087	1011.087	3.000
PW1 - Till	1014.092		1011.278	2.813
PW1 - BR	1014.164		1011.864	2.301
PWD - All (L2-4)	1014.103	1011.103	1011.103	3.000
PWD - Till	1014.113		1011.293	2.820
PWD - BR	1014.246		1011.867	2.379
PW2 - All (L2,3)	1014.213	1011.213	1011.213	3.000
PW2 - Till	1014.250		1011.518	2.732
PW2 - BR	1014.607		1012.194	2.413
PWE - All (L2-4)	1014.342	1011.342	1011.342	3.000
PWE - Till	1014.546		1011.772	2.774
PWE - BR	1015.341		1012.961	2.380
PWF - All (L2-4)	1015.439	1012.439	1012.439	3.000
PWF - Till	1015.669		1013.040	2.628
PWF - BR	1016.756		1014.535	2.221
PWG - All (L2-4)	1016.899	1013.899	1013.899	3.000
PWG - Till	1017.333		1014.839	2.494
PWG - BR	1019.407		1017.518	1.889
PWH - All (L2-4)	1018.826	1015.826	1015.826	3.000
PWH - Till	1020.020		1017.890	2.129
PWH - BR	1023.626		1022.263	1.363

Low K Wells

FLUXES	CLOSURE - No Pumping		CLOSURE - w/ Pumping	
	Net m3/d	Net L/s	Net m3/d	Net L/s
INTERMEDIATE POND				
arc	228.2	2.6	228	2.6
polygon	694.7	8.0	695	8.0
Total	923	11	924	11
ID Toe Drain	-2675	-31.0	-1947	-22.5
Sidehill Drain	-139	-1.6	-152	-1.8
X11	0	0.0	0	0.0
X13	-84	-1.0	0	0.0
CVS1	-2005	-23.2	-279	-3.2
Rest of RC	-1067	-12.3	-985	-11.4
RCDC	3404	39.4	3435	39.8
U/S CH	2423	28.0	2454	28.4
D/S CH	-780	-9.0	-779	-9.0

Negative numbers indicate flow out of model (into boundary condition).

Pumping Well	Layers Pumped	Pumping Rates		
		m ³ /d	L/s	US GPM
PWA	2, 3, 4	4	0.05	0.8
PWB	2, 3, 4	25	0.28	4.5
PWC	2, 3, 4	47	0.55	9
PW1	2, 4	588	6.81	108
PWD	2, 3, 4	836	9.68	153
PW2	2, 3	803	9.30	147
PWE	2, 3, 4	308	3.57	56.6
PWF	2, 3, 4	14	0.16	2.6
PWG	2, 3, 4	20	0.23	3.7
PWH	2, 3, 4	24	0.28	4.4
TOTAL		2670	31	490

CAPTURE EFFICIENCY	m3/d	L/s
Flow Under CVD (j99 out of LF)	1918	22.2
Flow Past X13 (j76 into RF)	14	0.2
% Bypass	0.7%	

Scenario 6b: Pumping (10 wells with 3 m DD)

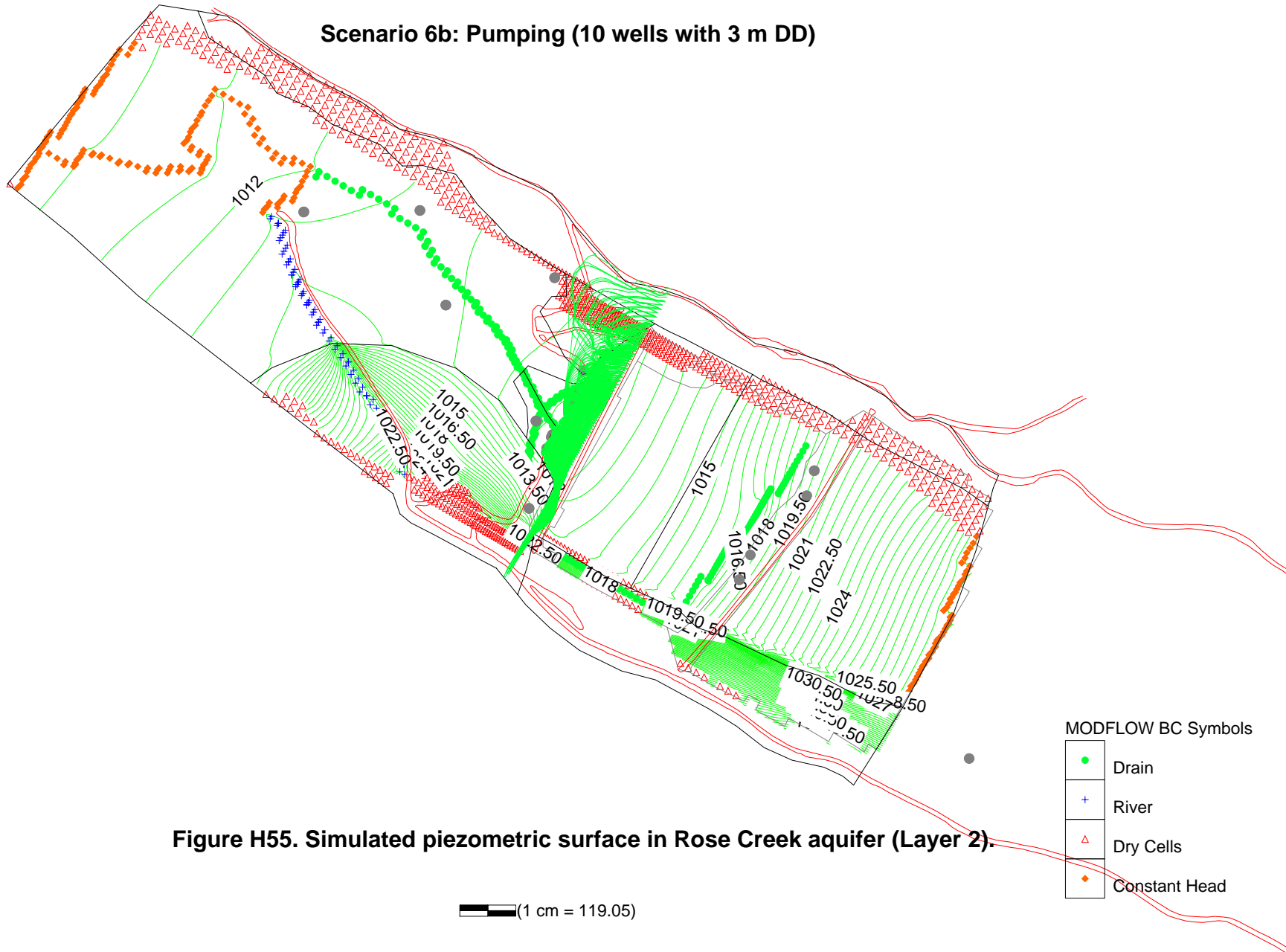


Figure H55. Simulated piezometric surface in Rose Creek aquifer (Layer 2).

1 cm = 119.05

Scenario 6b: Pumping (10 wells with 3 m DD)

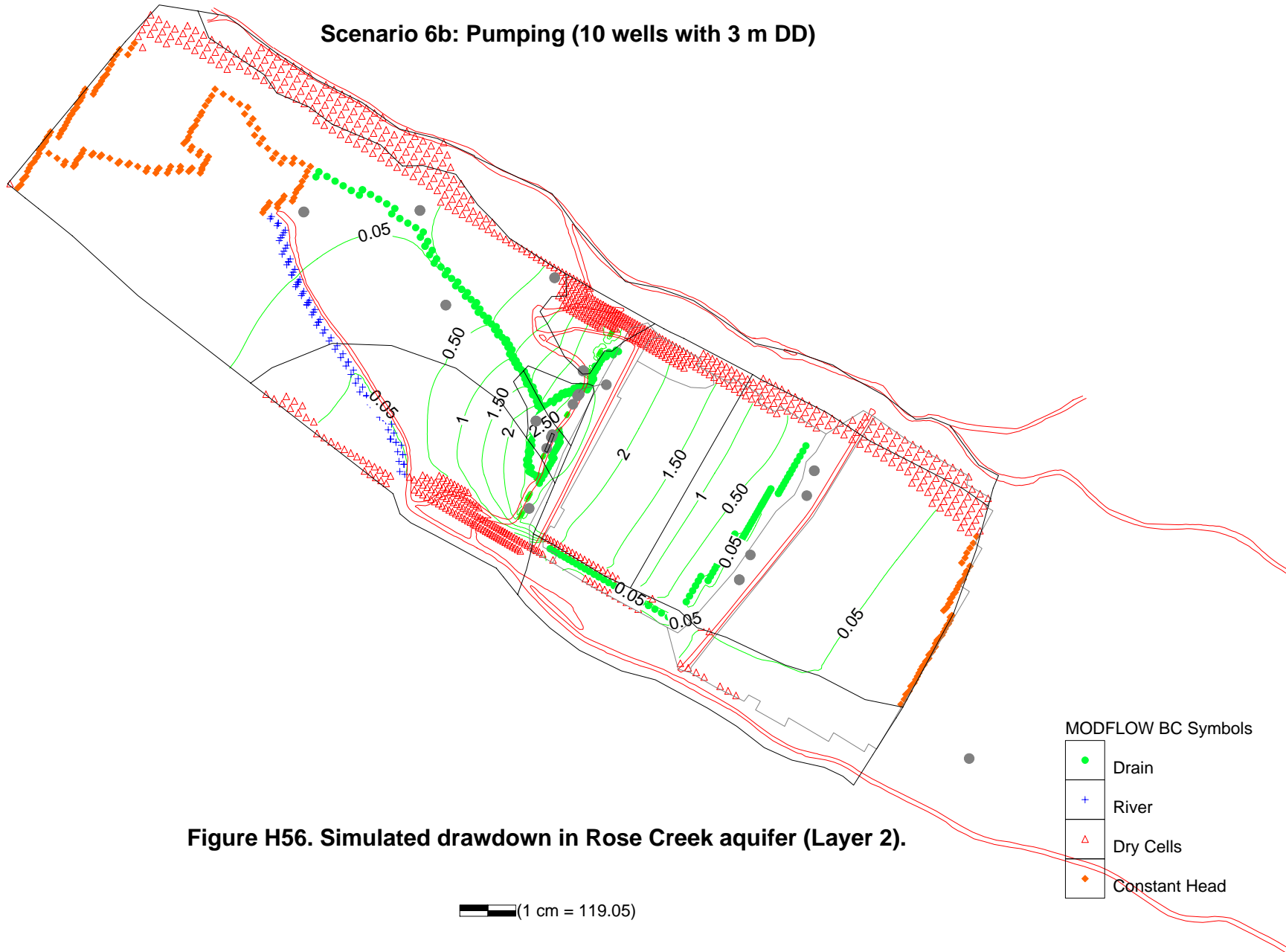


Figure H56. Simulated drawdown in Rose Creek aquifer (Layer 2).

MODFLOW BC Symbols

- Drain
- + River
- △ Dry Cells
- ◆ Constant Head

1 cm = 119.05

