ENTERED

JUL 12 2007 MO

Arizona Department of Water Resources
Information Management Section
3550 N. Central Ave. • Phoenix, Arizona 85012
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

- Review instructions prior to completing form
- This report should be prepared by the driller in detail and filed with the Department within 30 days following completion of the well.

RECEIVED
JUN 18 2007
INFO MGMT

FILE NUMBER
D(5-7)14CAB
WELL REGISTRATION NUMBER
55 - 215421
PERMIT NUMBER (IF ISSUED)
59-215420.0000

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Woodruff Water Company

MAILING ADDRESS: 2555 E. Camelback RD. Ste D00

CITY / STATE / ZIP CODE: Phoenix, Az 85016

CONTACT PERSON NAME AND TITLE:

TELEPHONE NUMBER:

FAX:

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
5S	7E	14	SW ¼	NE ¼	NW ¼

LATITUDE: ° ' "N

LONGITUDE: ° ' "W

LAND SURFACE ELEVATION AT WELL: Feet Above Sea Level

METHOD OF LATITUDE / LONGITUDE (CHECK ONE): ☐ Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ GPS: ☐ Survey-Grade

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED: Pinal

SECTION 2. DRILLING AUTHORIZATION

Drilling Firm

NAME: Layne CHristensen Co

DWR LICENSE NUMBER: #7

TELEPHONE NUMBER: 480-895-9404

FAX: 480-895-8699

SECTION 3. WELL CONSTRUCTION DETAILS

DATE WELL CONSTRUCTION STARTED: 4-18-07

DATE WELL CONSTRUCTION COMPLETED: 5-24-07

IF FLOWING WELL, METHOD OF FLOW REGULATION: ☐ Valve ☐ Other:

Drill Method

CHECK ONE

- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☒ Other *(please specify)*: Flooded Reverse

Method of Well Development

CHECK ONE

- ☒ Airlift
- ☐ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other *(please specify)*:

Water Level Information

STATIC WATER LEVEL: 151 Feet Below Land Surface

DATE MEASURED: 4-28-07

Method of Sealing at Reduction Points

CHECK ONE

- ☐ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other *(please specify)*:

81-4705

WELL REGISTRATION NUMBER

55 - 215421

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	40'	36"
40'	1254'	17½
40'	1130'	28"

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (✓) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (✓) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	40'	36 5/8	X				X						
0	800'	2"	X				X						
800'	900'	2"	X								X		.050
0	800'	18 3/4	X				X						
800'	1100'	18 5/8	X									Louvered	.050
1100'	1120'	18 5/8	X				X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (✓) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	100'			X								
100'	110'						X					3/8
110'	200'										X	3/8
200'	210'						X					3/8
210'	300'										X	3/8
300'	310'						X					3/8
310'	400'										X	3/8
400'	410'						X					3/8
410'	500'										X	3/8
500'	510'						X					3/8
510'	600'										X	3/8

DEPTH OF BORING: 1254' Feet Below Land Surface

DEPTH OF COMPLETED WELL: 1120' Feet Below Land Surface

Well Driller Report and Well Log

WELL REGISTRATION NUMBER

55 - 215421

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	40'	36"
40'	1254'	12½
40'	1130'	28"

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (✓) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (✓) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	40'		X				X						
0	800'		X				X						
800'	900'		X								X		.050
0	800'		X				X						
800'	1100'		X									Louvered	.050
1100'	1120		X				X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (✓) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
600'	610'						X					3/8
610'	730'										X	3/8
730'	750'						X					3/8
750'	760'									X		#60
760'	1130'									X		8-12
1130'	1254'										X	3/8

DEPTH OF BORING 1254' Feet Below Land Surface

DEPTH OF COMPLETED WELL 1120' Feet Below Land Surface

Well Driller Report and Well Log

WELL REGISTRATION NUMBER

55 - 215421

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	Description Describe material, grain size, color, etc.	Check (✓) every interval where water was encountered (if known)
0	40'	Sand Clay	
40'	140'	Sand, Gravel	
140'	160'	Sandy Clay with Gravel	
160'	220'	Clay	
220'	250'	Sand (Course)	
250'	280'	Course Sand + Calitche	
280'	720'	Clay	
720'	760'	Clay with Sand	
760'	800'	Gravel, Sand with little Clay	
800'	1240'	Course Sand and Gravel	
1240'	1254'	Granite	

Well Driller Report and Well Log

WELL REGISTRATION NUMBER

WOODRUFF
Water & Utility

RECEIVED
SEP 11 2008
PINAL AMA

September 10, 2008

Cynthia Pogue, Water Resource Specialist
Arizona Department of Water Resources
Pinal AMA
1729 North Trekell Road, Suite 105
Casa Grande, Arizona 85222

Re: Test Data for Hydrologic Testing of Well No. 55-215421
Hydrologic Testing Permit No. 59-215420.0001

Dear Ms. Pogue:

Enclosed is the test data related to groundwater withdrawal under the above referenced hydrologic test permit. I have also included a spreadsheet that I used for my annual report which summarizes the withdrawals for rig development, pump development, step testing and constant testing of the well.

I apologize for the delay in submitting this information. All other permit conditions have been met. If you have any questions or need further information please call me at (602) 956-7200. Thank you for your assistance in completing this requirement.

Sincerely,

Brian R. Hall

Brian R. Hall
General Manager

cc: File

The Esplanade
2555 East Camelback Road, Suite 700
Phoenix, Arizona 85016
(602) 956-7200 * FAX (602) 956-2313

RECEIVED
SEP 11 2008

APPENDIX G

WOODRUFF WELL #3 - FIELD RECORDS: WELL DEVELOPMENT AND TESTING

Well Rig Development Record

Southwest Ground-water Consultants, Inc.

Date: 5/21/2007 - 5/22/2007

Well Number: 55-215421 **Job Title:** Woodruff Well # 3 (a.k.a. Sandia)

Job Number: B.1505 **Reported By:** Scott Gompert

Pump Agency: Layne Drilling	Static Water Level (feet bls): 159' bls
Foreman: Martin	Measure Point:
Method of Evacuation: Airlift w/ 1.5" airline, 6" eductor, 10' screened tool, 1200-400 airline, 125 max psi w/ 450 cfm available.	Stick Up (feet):
Bailer/pump size, capacity, make:	Line Correction (feet):

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
5/21/2007								Worrking up (bottom to top)
	1080 - 1050' range of screen covered by swab							
0:00 - 2:00 AM							0.5	taken ~ 5 min. after swab.
							0.6	"
							0.5	"
							0.3	"
	1050 - 1020' range of screen covered by swab							
2:00 - 4:00 AM							0.2	"
							0.5	"
							0.2	"
							0.1	"
	1020 - 989' range of screen covered by swab							
4:00 - 6:00 AM							0.2	"
							0.2	"
							0.1	"
							0.1	"
	989 - 959' range of screen covered by swab							
6:00 - 8:00 AM							1.0	"
							0.4	"
							0.5	"
						high	0.2	"
8:00	**959 - 929' range of screen covered by swab**							
8:00	Swab x 3							
8:15						high	3.0	
8:30	Swab x 3							
8:45						high	1.2	
9:00	Swab x 3							
9:15		33.5	8.71	638	319	high	0.5	
9:30	Swab x 3							
9:45		33.6	8.49	591	291	med.	0.1	
10:00								** increased airline to 400 ft.
10:20	**929 - 899' range of screen covered by swab**							
10:20	Swab x 3							
10:30						med.	0.3	
10:35	Swab x 3					med.		
11:00	Swab x 3							
11:15		34.0	8.52	575	288	med.	0.7	
11:30	Swab x 3							
11:45						low	0.5	

Values collected by Layne employees

Notes:

* = clear, milky, low, medium, high

DTW = Depth to Water

µs/cm = microsiemens/centimeters

ppm = parts per million

(R)=Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
12:00	Swab x 3							
12:15						low	0.1	
12:30	**899-869' range of screen covered by swab**							
12:30	Swab x 3							
12:45						med.	0.3	
12:55	Swab x 3							
13:10		33.9	8.58	498	293	med.	0.5	
13:30	Swab x 3							
13:45		34.0	8.50	525	261	med.	0.4	
14:00	Swab x 3							
14:15						low	0.3	
14:30	Swab x 3							
15:20	**869 - 839' range of screen covered by swab**							
15:30	Swab x 3							
15:45						med.	2.0	
16:00	Swab x 3							
16:15						low	1.2	
16:30	Swab x 3							
16:45		34.1	8.52	556	278	low	0.5	
17:00	Swab x 3							
17:15						low	0.3	
18:00	**839 - 809' range of screen covered by swab**							
18:02	Swab x 3							
18:15						med	3.0	
18:30	Swab x 3							
18:45		33.8	8.48	520	260	med.	1.5	
19:00	Swab x 3							
19:15						low	0.2	
19:30	Swab x 3							
19:45						milky	0.1	
20:00	**809 - 800' range of screen covered by swab**							
20:30	Swab x 3							
20:32						low	1.5	
20:35						milky	0.5	
20:40						clear	0.2	
20:50	Swab x 3							
20:52						low	1.0	
20:55						milky	0.2	
21:00						clear	0.1	
21:20	Swab x 3							
21:22						low	0.5	
21:25						milky	0.1	
21:30						clear	trace	
21:35	Swab x 3							
21:37						milky	0.2	
21:40						clear	trace	
21:54	Swab x 3							
21:56						milky	0.2	
21:59						clear	trace	
22:10	**Added joint. Swab now covers 809 - 839'**							Working down (top to 959')
22:30	Swab x 3							Kelly set at top
22:32						low	1.5	
22:35						milky	0.2	
22:45	Swab x 3							Kelly set at top
22:47						low	0.8	
22:50						milky	0.2	
23:00	Swab x 3							Kelly set at top
23:02		33.2	8.50	515	258	low	1.5	

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µs/cm = microsiemens/centimeters
ppm = parts per million

(R)=Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
23:05						milky	0.1	
23:15	Swab x 3							Kelly set at top
23:17						low	1.3	
23:20						milky	0.7	
23:30	Swab x 3							Kelly set at top
23:32						low	0.6	
23:35						milky	0.1	
23:45	Swab x 3							Kelly set at top
23:47						low	0.5	
23:50						milky	trace	
5/22/2007								
0:00	Swab x 3							Kelly set at top
0:02						milky	0.2	
0:05						milky	trace	
0:15	Swab x 3							Kelly set at top
0:17						milky	0.2	
0:20						clear	trace	
0:30	Swab x 3							Kelly set at middle
0:32						low	1.7	
0:35						milky	0.2	
0:45	Swab x 3							Kelly set at middle
0:47						low	1.2	
0:50						milky	0.1	
1:00	Swab x 3							Kelly set at middle
1:02						low	0.7	
1:05						clear	0.1	
1:15	Swab x 3							Kelly set at middle
1:17						low	0.3	
1:20						clear	0.1	
1:30	Swab x 3							Kelly set at middle
1:32						milky	0.1	
1:35						clear	trace	
1:45	Swab x 3							Kelly set at bottom
1:47						low	2.0	
1:50						milky	0.3	
2:00	Swab x 3							Kelly set at bottom
2:02						low	1.2	
2:05						milky	0.3	
2:15	Swab x 3							Kelly set at bottom
2:17						low	1.0	
2:20						milky	0.1	
2:30	Swab x 3	32.5	8.25	540	270			Kelly set at bottom
2:32						low	0.7	
2:35						milky	0.1	
2:45	Swab x 3							Kelly set at bottom
2:47						low	0.5	
2:50						milky	trace	
3:00	Swab x 3							Kelly set at bottom
3:02						milky	0.3	
3:05						clear	trace	
3:15	Swab x 3							Kelly set at bottom
3:17						milky	0.2	
3:20						clear	trace	
3:30	Swab x 3							Kelly set at bottom
3:32						milky	0.2	
3:35						clear	trace	
3:45	Swab x 3							Approved moving to next segment
3:50-4:10	**Added joint. Swab now covers 839 - 869'**							

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µs/cm = microsiemens/centimeters
ppm = parts per million

(R)=Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
4:15	Swab x 3							Kelly set at top
4:17						low	1.5	
4:20						milky	0.3	
4:30	Swab x 3							Kelly set at top
4:32						low	1.3	
4:35						milky	0.2	
4:45	Swab x 3							Kelly set at top
4:47						low	1.0	
4:50						milky	0.1	
5:00	Swab x 3							Kelly set at top
5:02						milky	0.6	
5:05						clear	0.1	
5:15	Swab x 3							Kelly set at top
5:17						milky	0.3	
5:20						clear	trace	
5:30	Swab x 3							Kelly set at top
5:32		31.4	8.26	624	312	milky	0.2	
5:35						clear	trace	
5:45	Swab x 3							Kelly set at middle
5:47						low	0.7	
5:50						milky	0.1	
6:00	Swab x 3							Kelly set at middle
6:02						low	0.5	
6:05						milky	0.1	
6:15	Swab x 3							Kelly set at middle
6:17						low	0.4	
6:20						milky	0.1	
6:30	Swab x 3							Kelly set at middle
6:32						low	0.3	
6:35						clear	0.1	
6:45	Swab x 3							Kelly set at middle
6:47						milky	0.3	
6:50						clear	trace	
7:00	Swab x 3							Kelly set at deck
7:02							NR	
7:05							NR	
7:15	Swab x 3							Kelly set at deck
7:17							NR	
7:20							NR	
7:30	Swab x 3							Kelly set at deck
7:32						low	0.7	
7:35						clear	0.1	
7:45	Swab x 3							Kelly set at deck
7:47						low	0.3	
7:50						milky	trace	
8:00	Swab x 3							Kelly set at deck
8:02						low	0.3	
8:05						milky	trace	
8:15	Swab x 3							Kelly set at deck
8:17						low	0.2	
8:20						milky	trace	
8:30	**Added joint. Swab now covers 869 - 899'**							
8:30	Swab x 3							Kelly set at top
8:32						med	2.0	pyrite & mica fleck start to appear
8:35		31.3	8.29	589	286	low	0.3	
8:45	Swab x 3							Kelly set at top
8:47						med	1.0	
8:50						low	0.3	

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µs/cm = microsiemens/centimeters
ppm = parts per million

(R)=Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
9:00	Swab x 3							Kelly set at top
9:02						low	0.7	
9:05						milky	0.1	
9:15	Swab x 3							Kelly set at top
9:17						low	0.5	
9:20						milky	0.1	
9:30	Swab x 3							Kelly set at top
9:32						low	0.3	
9:35						milky	0.1	
9:45	Swab x 3							Kelly set at top
9:47						milky	0.2	
9:50						milky	trace	
10:00	Swab x 3							Kelly set at middle
10:02						NR	NR	checking discharge area
10:05						NR	NR	
10:15	Swab x 3							Kelly set at middle
10:17						low	0.5	
10:20						milky	0.1	
10:30	Swab x 3							Kelly set at middle
10:32						low	0.3	
10:35						milky	0.1	
10:45	Swab x 3							Kelly set at deck
10:47						milky	0.3	pyrite & mica flecks diminish
10:50						milky	0.2	
11:00	Swab x 3							Kelly set at deck
11:02						milky	0.3	
11:05		31.7	8.34	589	286	milky	0.1	
11:15	Swab x 3							Kelly set at deck
11:17						milky	0.3	
11:20						milky	0.1	
12:00	**Added joint. Swab now covers 899 - 929'**							
12:03						high	3.0	heavy red cast in water.
12:05						low	1.0	
12:15	Swab x 3							Kelly set at top
12:17						med	2.0	red cast gone.
12:20						low	0.5	
12:30	Swab x 3							Kelly set at top
12:32						med	1.5	
12:35						low	0.7	
12:45	Swab x 3							Kelly set at top
12:47						low	1.0	
12:50						milky	0.5	
13:00	Swab x 3							Kelly set at top
13:02						low	0.7	
13:05						milky	0.3	
13:15	Swab x 3							Kelly set at top
13:17						low	0.5	
13:20						milky	0.2	
13:30	Swab x 3							Kelly set at top
13:32						NR	NR	
13:35						NR	NR	
13:45	Swab x 3							Kelly set at top
13:47						NR	NR	
13:50						NR	NR	
14:00	Swab x 3							Kelly set at top
14:02						low	0.3	
14:05						milky	trace	
14:15	Swab x 3							Kelly set at top

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µs/cm = microsiemens/centimeters
ppm = parts per million

(R)=Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
14:17		34.0	8.29	484	243	low	0.3	
14:20						milky	trace	
14:30	Swab x 3							Kelly set at middle
14:32						low	0.7	
14:35						milky	0.1	
14:45	Swab x 3							Kelly set at middle
14:47						low	0.5	
14:50						milky	0.1	
15:00	Swab x 3							Kelly set at middle
15:02						low	0.5	
15:05						milky	0.1	
15:15	Swab x 3							Kelly set at middle
15:17						low	0.5	
15:20						milky	0.1	
15:30	Swab x 3							Kelly set at deck
15:32						low	1.5	
15:35						milky	0.3	
15:45	Swab x 3							Kelly set at deck
15:47						low	1.0	
15:50						milky	0.3	
16:00	Swab x 3							Kelly set at deck
16:02						low	1.0	
16:05						milky	0.2	
16:15	Swab x 3							Kelly set at deck
16:17						low	0.7	
16:20						milky	0.2	
16:30	**Added joint. Swab now covers 929 - 959'**							
16:30	Swab x 3							Kelly set at top
16:32						low	1.5	
16:35						milky	0.3	
16:45	Swab x 3							Kelly set at top
16:47						low	1.0	
16:50						milky	0.3	
17:00	Swab x 3							Kelly set at top
17:02						NR		
17:05						NR		
17:15	Swab x 3							Kelly set at top
17:17						low	0.7	
17:20						milky	0.2	
17:30	Swab x 3							Kelly set at top
17:32						low	0.7	
17:35						milky	0.2	
17:45	Swab x 3							
17:47								Brakes overheating.
18:00-19:15								Tripped in to bottom.
19:30								Airlifting started. Swab = 1090-1100
19:32							2.0	
19:35							1.0	
19:40							0.5	
19:45							0.1	
19:50							trace	
19:55							trace	
20:00								Swab = 1080-1090
20:02							0.5	
20:05							0.1	
20:10							0.1	
20:15							trace	
20:20							trace	

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µs/cm = microsiemens/centimeters
ppm = parts per million

(R)=Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (° C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids (Imhoff cone)	Remarks
20:30								Swab = 1070-1080
20:35							0.3	
20:40								SG offsite
21:00							0.3	Joint # 35 removed. Swab = 1060-1070
21:30							0.2	Swab = 1050-1060
22:00							0.1	Swab = 1040-1050
22:30							0.4	Joint # 34 removed. Swab = 1030-1040
23:00							0.2	Swab = 1020-1030
23:30							0.1	Swab = 1010-1020
5/23/2007								
0:00								Joint # 33 removed. Swab = 980-1010
1:30								Joint # 32 removed. Swab = 950-980
3:00								Joint # 31 removed. Swab = 920-950
4:30								Joint # 30 removed. Swab = 890-920
6:00								Joint # 29 removed. Swab = 860-890
7:30		34.2	8.28	554	229	clear		SG onsite
7:45								Joint # 28 Removed, working Joint # 27
7:47						milky	0.5	Kelly Bar on deck. Swab = 850-860
7:50						milky	0.1	
7:55						"	trace	
8:00						"	trace	
8:03								Kelly bar moved up, Swab=840-850'
8:05						milky	0.7	
8:08						milky	0.1	
8:13						"	trace	
8:20						"	trace	
8:33								Kelly bar moved up, Swab=830-840'
8:35		34.1	8.20	560	280	milky	0.9	
8:38						milky	0.1	
8:43						"	trace	
8:55						"	trace	
9:00								Joint # 27 Removed, working Joint # 26
9:11								Kelly Bar on deck. Swab = 820-830
9:13						milky	1.2	
9:15						milky	0.1	
9:25						clear	trace	
9:33								Kelly bar moved up, Swab=810-820'
9:35						milky	0.7	
9:38						milky	0.1	
9:45		34.1	8.26	562	280	clear	trace	
10:00								Kelly bar moved up, Swab=800-810'
10:02						milky	0.5	
10:05						milky	0.1	
10:10						clear	trace	
10:30						"	trace	
End Rig Dev.								End Rig Dev.

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µs/cm = microsiemens/centimeters
ppm = parts per million

(R)=Rossum Sand Cone

Pump Development Record

Southwest Ground-water Consultants, Inc.

Date: June 13 - 14, 2007

Well Number: 55-215421 **Job Title:** Woodruff Well # 3 (a.k.a. Sandia)

Job Number: B.1505 **Reported By:** Scott Gompert

Pump Agency:	Layne	Static Water Level (feet bls):	164.38
Foreman:	Wes Van Halen	Measure Point:	Top of sounder tube
Method of Evacuation:	Pump and Surge	Stick Up (feet):	3' 2"
Bailer/pump size, capacity, make:	Simflow Model# SR14C 13 stages. Top of bowls set at 680' bls.	Line Correction (feet):	-0-

Time	DTW (ft, bgs)	Temp. (°C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Rossum (5 gpm x 5 min duration	Remarks
6/13/2007								T = 56747.5 x 1000 gpm
9:45	164.38							10" pipe, 8" orifice
10:00	PUMP ON							Q started at 500 gpm
10:10	184.03					high		
10:15						med	8.00	10 min Rossum reading.
10:50	182.33					low		
11:00	First Surge x 3							First Surge x 3
11:15						low		
11:30	Surge x 3							Surge x 3
11:45						milky		no air. Q ^ 1000 gpm
11:50	196.73							
11:59							1.00	30 min Rossum reading
12:00	Surge x 3							Surge x 3
12:25								
12:30	Surge x 3					low		Surge x 3
12:55	197.33					low		
13:00	Surge x 3							
13:10						low		no air. Q^ 1500 gpm
13:15	215.33	35.4	8.83	635	317	low		
13:29	215.92							
13:30	Surge x 3							Surge x 3
13:50	216.25							
14:00	Surge x 3							Surge x 3
14:10	215.83					low		
14:15		35.7	8.89	594	297	low		
14:25	214.83						1.50	25 min Rossum reading
14:30	Surge x 3							Surge x 3
								Q^2000 gpm
14:35	229.33							
14:55	234.38						0.30	25 min Rossum reading
15:00	PUMP OFF							T = 57021.25 x 1000 gpm
6/14/2007								
7:00	163.88							T = 57021.25 x 1000 gpm
7:15	PUMP ON							Q @ 2000 gpm
7:20	217.26							m=47 - 47.25" (~2070 gpm)
7:25	227.96							

Notes:
* = clear, milky, low, medium, high
DTW = Depth to Water
µs/cm = microsiemens/centimeter
ppm = parts per million
(R) = Rossum Sand Cone

Time	DTW (ft, bgs)	Temp. (°C)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Rossum (5 gpm x 5 min duration	Remarks
7:30	229.18					milky		
7:43	231.83					clear	1.20	25 min Rossum reading
7:45	Surge x 3							Surge x 3
8:13	229.88	35.5	8.88	582	291	clear	1.30	25 min Rossum reading
8:15	Surge x 3							Surge x 3
8:22	Q ^							Q incr. to 2500 gpm
8:25	241.58							m= ~ 71 (~2540 gpm)
8:39	246.00					clear	1.50	25 min Rossum reading
9:00	Surge x 3							
9:07	245.33							
9:28	247.68						0.70	25 min Rossum reading
9:35	Q ^							Q incr. to ~3000 gpm
9:40	Surge x 3					milky		Surge x 3
9:50	261.48							
10:00	264.54							
10:15	265.73	35.6	8.87	584	292	clear	1.10	25 min Rossum reading
10:20	Surge x 3							Surge x 3
10:40	266.88					clear	1.00	25 min Rossum reading
10:45	Surge x 3							Surge x 3
11:15	267.50					clear	1.00	Q @ 2959 gpm
11:15	Surge x 3							Surge x 3
11:45	264.38					clear	1.00	25 min Rossum reading
11:50	Surge x 3							Surge x 3
12:22	263.76	35.3	8.80	551	225	clear	0.20	Q @ 2956 gpm, 25 min Rossum
12:25	Surge x 3							Surge x 3
12:50	263.88					clear	0.50	25 min Rossum reading
12:55	Surge x 3							
13:20	264.03					clear	0.40	25 min Rossum reading
13:22	Surge x 3							
13:45	264.33					clear	0.40	25 min Rossum reading
13:50	Surge x 3							
14:30	PUMP OFF							Discharge area full. Pump Off.

Notes:
* = clear, milky, low, medium, high
DTW = Depth to Water
µs/cm = microsiemens/centimeter
ppm = parts per million
(R) = Rossum Sand Cone

Well Evacuation Record - Step Test

Southwest Ground-water Consultants, Inc.

Date: 6/27 - 6/28/07

Well Number: 55-215421 **Job Title:** Woodruff Well #3 (Sandia)

Job Number: B.1505 **Reported By:** DRE

Pump Agency:	Layne	Static Water Level (feet bls):	162.73
Foreman:	Doug / Wes	Measure Point:	Top of sounding tube
Method of Evacuation:	Pump - Step Test	Stick Up (feet):	3.17
Bailer/pump size, capacity, make:	Simflow Model No. SR14C 13-stage inline turbine shaft pump. Top of bowls at 680 feet bls	Line Correction (feet):	0

Time	Sounder Reading (feet bls)	Temp. (°F)	pH	Specific Cond. (µS/cm)	TDS (ppm)	Turbidity*	Solids** (Rossum cone)	Remarks
6:00	165.90							**Pump on - Step 1**
								Q = 1,980 gpm
7:00	226.68	98.6	8.74	320	150	clear	0.6	mostly rust
10:20	230.18	99.0	8.75	320	150	clear	0.6	mostly rust
11:00	230.44							**Step 2. ↑ Q to 2,534 gpm**
12:00	250.00	99.1	8.77	620	300	clear	1.0	mostly rust
13:20	252.22	99.1	8.75	580	280	clear	1.0	
16:00	253.51							**Step 3. ↑ Q to 3,062 gpm**
16:45	270.01	95.9	8.72	627	313	clear	1.0	
21:00	273.14							**Step 4. ↑ Q to 3,253 gpm**
22:00	281.31	95.7	8.73	590	285	clear	1.1	
1:00	282.61	95.2	8.74	536	266	clear	1.1	6/28/2007
2:00	282.93							**Pump off**
END OF STEP TEST								

Note: ** Continuous or cumulative Rossum readings.

Notes:

* = clear, milky, low, medium, high
DTW = Depth to Water

µS/cm = microSiemens/centimeter
ppm = parts per million

(R)=Rossum Sand Cone

Step Test Record

Southwest Ground-water Consultants, Inc.

Date: 6/27 - 6/28/07

Well Number: 55-215421 **Job Title:** Woodruff Well #3 (Sandia)

Job Number: B.1505 **Reported By:** DRE & SAG

Pump Agency:	Layne	Static Water Level:	162.73 feet bls
Foreman:	Doug / Wes	Measure Point:	Top of sounding tube
Bailer/pump size, capacity, make:	Simflow Model No. SR14C 13-stage inline turbine shaft pump. Top of bowls at 680 feet bls	Stick Up:	3.17 feet
Average Q:	Four, 5-hour steps @ 1980, 2534, 3062 and 3253 gpm	Line Correction:	0 feet

Clock Time	Time Since Pump Start	Sounder Reading	Water Level	Draw Down (s)	Dis-Charge (Q)	Specific Capacity	Specific Draw Down	Remarks
	minutes	feet	feet	feet	gpm	gpm/ft	ft/gpm	
6:00	0	165.90	162.73	0	0			**Pump on. Step 1**
6:01	1							Tot1= 58,032,000 g
6:02	2	215.00	211.83	49.10	1,980	40.326	0.025	**6/27/2007**
6:03	3	217.05	213.88	51.15	1,980	38.710	0.026	
6:04	4	218.30	215.13	52.40	1,980	37.786	0.026	
6:05	5	219.38	216.21	53.48	1,980	37.023	0.027	
6:06	6	220.03	216.86	54.13	1,980	36.579	0.027	
6:07	7	220.54	217.37	54.64	1,980	36.237	0.028	
6:08	8	221.03	217.86	55.13	1,980	35.915	0.028	
6:09	9	221.40	218.23	55.50	1,980	35.676	0.028	
6:10	10	221.70	218.53	55.80	1,980	35.484	0.028	Tot1= 58,052,000 g
6:20	20	223.34	220.17	57.44	1,980	34.471	0.029	
6:30	30	224.69	221.52	58.79	1,980	33.679	0.030	
6:40	40	225.50	222.33	59.60	1,980	33.221	0.030	
6:50	50	226.19	223.02	60.29	1,980	32.841	0.030	Tot1= 58,129,000 g
7:00	60	226.68	223.51	60.78	1,980	32.577	0.031	
7:20	80	227.90	224.73	62.00	1,980	31.935	0.031	Tot1= 58,190,000 g
7:40	100	228.28	225.11	62.38	1,980	31.741	0.032	
8:00	120	228.40	225.23	62.50	1,980	31.680	0.032	
8:20	140	228.78	225.61	62.88	1,980	31.489	0.032	
8:40	160	229.06	225.89	63.16	1,980	31.349	0.032	
9:00	180	229.34	226.17	63.44	1,980	31.211	0.032	
9:40	220	229.89	226.72	63.99	1,980	30.942	0.032	
10:20	260	230.18	227.01	64.28	1,980	30.803	0.032	
11:00	**300**	**230.44**	**227.27**	**64.54**	**1,980**	**30.679**	**0.033**	**Tot1.=58,626,000 g**
11:01	301	234.63	231.46	68.73	2,534	36.869	0.027	Tot2=591,900 g
11:02	302				2,534			**Step 2**
11:03	303	243.84	240.67	77.94	2,534	32.512	0.031	↑ Q
11:04	304	246.20	243.03	80.30	2,534	31.557	0.032	↑ Q
11:05	305	248.30	245.13	82.40	2,534	30.752	0.033	↓ Q
11:06	306	247.58	244.41	81.68	2,534	31.024	0.032	

Clock Time	Time Since Pump Start	Sounder Reading	Water Level	Draw Down (s)	Dis-Charge (Q)	Specific Capacity	Specific Draw Down	Remarks
	minutes	feet	feet	feet	gpm	gpm/ft	ft/gpm	
11:07	307	247.69	244.52	81.79	2,534	30.982	0.032	
11:08	308	247.80	244.63	81.90	2,534	30.940	0.032	
11:09	309	247.98	244.81	82.08	2,534	30.872	0.032	
11:10	310	248.11	244.94	82.21	2,534	30.824	0.032	Tot2=614,000 g
11:20	320	248.90	245.73	83.00	2,534	30.530	0.033	
11:30	330	249.31	246.14	83.41	2,534	30.380	0.033	Tot2=666,000 g
11:40	340	249.60	246.43	83.70	2,534	30.275	0.033	Tot2=692,000 g
11:50	350	249.94	246.77	84.04	2,534	30.152	0.033	
12:00	360	250.00	246.83	84.10	2,534	30.131	0.033	Tot2=742,000 g
12:20	380	250.67	247.50	84.77	2,534	29.893	0.033	
12:40	400	251.20	248.03	85.30	2,534	29.707	0.034	
13:00	420	251.78	248.61	85.88	2,534	29.506	0.034	
13:20	440	252.22	249.05	86.32	2,534	29.356	0.034	Tot2=946,000 g
13:40	460	252.44	249.27	86.54	2,534	29.281	0.034	
14:00	480	252.60	249.43	86.70	2,534	29.227	0.034	Tot2=1,045,000 g
14:40	520	252.92	249.75	87.02	2,534	29.120	0.034	Tot2=1,151,000 g
15:20	560	253.22	250.05	87.32	2,534	29.020	0.034	Tot2=1,254,000 g
16:00	**600**	**253.51**	**250.34**	**87.61**	**2,534**	**28.924**	**0.035**	**Tot2=1,352,000 g**
16:01	601							**Step 3**
16:02	602							
16:03	603							
16:04	604							
16:05	605	269.45	266.28	103.55	3,062	29.570	0.034	
16:06	606	268.98	265.81	103.08	3,062	29.705	0.034	
16:07	607	269.11	265.94	103.21	3,062	29.668	0.034	
16:08	608	269.21	266.04	103.31	3,062	29.639	0.034	
16:09	609	269.28	266.11	103.38	3,062	29.619	0.034	
16:10	610	269.37	266.20	103.47	3,062	29.593	0.034	
16:11	611	269.44	266.27	103.54	3,062	29.573	0.034	
16:12	612	269.55	266.38	103.65	3,062	29.542	0.034	Q = 3,030 gpm
16:13	613	269.64	266.47	103.74	3,062	29.516	0.034	↓ Q
16:14	614	269.03	265.86	103.13	3,062	29.691	0.034	
16:15	615	269.12	265.95	103.22	3,062	29.665	0.034	
16:25	625	269.50	266.33	103.60	3,062	29.556	0.034	
16:35	635	269.68	266.51	103.78	3,062	29.505	0.034	
16:45	645	270.01	266.84	104.11	3,062	29.411	0.034	
16:55	655	270.77	267.60	104.87	3,062	29.198	0.034	
17:05	665	270.99	267.82	105.09	3,062	29.137	0.034	
17:15	675	271.07	267.90	105.17	3,062	29.115	0.034	
17:25	685	271.30	268.13	105.40	3,062	29.051	0.034	Tot2=1,613,500 g
17:35	695	271.43	268.26	105.53	3,062	29.015	0.034	
17:45	705	271.53	268.36	105.63	3,062	28.988	0.034	
18:00	720	271.69	268.52	105.79	3,062	28.944	0.035	Tot2=1,719,400 g
19:00	780	272.18	269.01	106.28	3,062	28.811	0.035	
20:00	840	272.77	269.60	106.87	3,062	28.652	0.035	
21:00	**900**	**273.14**	**269.97**	**107.24**	**3,062**	**28.553**	**0.035**	**Tot2= ?**
21:01	901							**Step 4**
21:02	902							↑ Q. (Max. RPMs)
21:03	903							

Clock Time	Time Since Pump Start	Sounder Reading	Water Level	Draw Down (s)	Dis-Charge (Q)	Specific Capacity	Specific Draw Down	Remarks
	minutes	feet	feet	feet	gpm	gpm/ft	ft/gpm	
21:04	904	280.70	277.53	114.80	3,253	28.336	0.035	
21:05	905	281.17	278.00	115.27	3,253	28.221	0.035	
21:06	906	281.20	278.03	115.30	3,253	28.213	0.035	
21:07	907	281.28	278.11	115.38	3,253	28.194	0.035	
21:08	908	281.33	278.16	115.43	3,253	28.182	0.035	
21:09	909	281.37	278.20	115.47	3,253	28.172	0.035	
21:10	910	281.39	278.22	115.49	3,253	28.167	0.036	
21:20	920	281.11	277.94	115.21	3,253	28.235	0.035	
21:30	930	280.91	277.74	115.01	3,253	28.284	0.035	
21:40	940	281.10	277.93	115.20	3,253	28.238	0.035	
21:50	950	281.13	277.96	115.23	3,253	28.230	0.035	
22:00	960	281.31	278.14	115.41	3,253	28.186	0.035	
22:10	970	281.38	278.21	115.48	3,253	28.169	0.035	
22:20	980	281.46	278.29	115.56	3,253	28.150	0.036	
22:30	990	281.52	278.35	115.62	3,253	28.135	0.036	
22:40	1000	281.60	278.43	115.70	3,253	28.116	0.036	Tot2=2,590,000 g
23:00	1020	281.75	278.58	115.85	3,253	28.079	0.036	
0:00	1080	282.24	279.07	116.34	3,253	27.961	0.036	**6/28/2007**
1:00	1140	282.61	279.44	116.71	3,253	27.873	0.036	
2:00	**1200**	**282.93**	**279.76**	**117.03**	**3,253**	**27.796**	**0.036**	**Tot2=3,240,600 gal**
2:01	1201							**Pump off**
END OF STEP TEST								

Well Evacuation Record - Constant Rate Test

Southwest Ground-water Consultants, Inc.

Date: 7/10 - 7/11/2007

Well Number: 55-215421 **Job Title:** Woodruff Well #3 (Sandia)

Job Number: B.1505 **Reported By:** SAG & DRE

Pump Agency:	Layne	Static Water Level (feet bls):	168.46
Foreman:	Doug / Grant	Measure Point:	Top of sounding tube
Method of Evacuation:	Pump - Constant Rate Test Q ≈ 3,067 GPM	Stick Up (feet):	3.17
Bailer/pump size, capacity, make:	Simflow Model No. SR14C 13-stage inline turbine shaft pump. Top of bowls at 680 feet bls	Line Correction (feet):	0

Time	Sounder Reading (feet bls)	Temp. (°F)	pH	Specific Cond. (µs/cm)	TDS (ppm)	Turbidity*	Solids** (Rossum cone)	Remarks
8:00	171.63							**SWL - Pump on**
8:10	263.50							Rossum started
9:00	270.75	94.8	8.91	511	255	clear	0.05	**7/10/2007**
10:00	~273						0.10	
12:00	~276	93.4	8.88	502	251	clear		
13:00	276.42						0.13	
15:00	~278	93.6	8.83	488	244	clear		
16:00	~278						0.18	
18:00	278.75	93.6	8.81	481	240	clear	0.19	
20:00	~279	96.1	8.69	660	330	clear		DRE measurements
22:00	~280	95.0	8.67	660	330	clear		
0:00	~281	95.4	8.67	660	330	clear		**7/11/2007**
4:00	281.60	96.1	8.67	650	320	clear		
7:20	281.68	95.7	8.68	650	720	clear		
7:50	~282	96.6	8.68	640	320	clear		
8:00	281.77							NS sample taken
								Pump off
END OF CONSTANT RATE TEST								

Note: ** Continuous or cumulative Rossum readings.

Notes:

* = clear, milky, low, medium, high µs/cm = microsiemens/centimeter (R)=Rossum Sand Cone

DTW = Depth to Water ppm = parts per million

Constant Rate Test Record

Southwest Ground-water Consultants, Inc.

Date: 7/10 - 7/11/2007

Well Number: 55-215421 **Job Title:** Woodruff Well #3 (Sandia)

Job Number: B.1505 **Reported By:** SAG & DRE

Pump Agency:	Layne	Static Water Level:	168.46 feet bls
Foreman:	Doug / Grant	Measure Point:	Top of sounding tube
Bailer/pump size, capacity, make:	Simflow Model No. SR14C 13-stage inline turbine shaft pump. Top of bowls at 680 ft bls	Stick Up:	3.17 feet
Average Q:	Ave. Q = 3,067 gpm	Line Correction:	0 feet

Clock Time	Time Since Pump Start	Sounder Reading	Water Level	Draw Down (s)	Dis-Charge (Q)	Specific Capacity	Specific Draw Down	Remarks
	minutes	feet	feet	feet	gpm	gpm/ft	ft/gpm	
8:00	0	171.63	168.46	0.00	0			**Pump on. 7/10/07**
8:01	1	253.71	250.54	82.08	2960	36.062	0.0277	Tot.=3,240,800 gal
8:02	2	256.83	253.66	85.20	2960	34.742	0.0288	
8:03	3	259.54	256.37	87.91	2960	33.671	0.0297	
8:04	4	260.81	257.64	89.18	2960	33.191	0.0301	
8:05	5				2960			
8:06	6	261.50	258.33	89.87	2960	32.936	0.0304	
8:07	7	262.23	259.06	90.60	2960	32.671	0.0306	
8:08	8	262.65	259.48	91.02	2960	32.520	0.0308	
8:09	9	263.17	260.00	91.54	2960	32.336	0.0309	
8:10	10	263.50	260.33	91.87	2960	32.219	0.0310	
8:20	20	266.33	263.16	94.70	2960	31.257	0.0320	
8:30	30	267.81	264.64	96.18	2960	30.776	0.0325	
8:40	40	268.99	265.82	97.36	3,080	31.635	0.0316	
8:50	50	269.98	266.81	98.35	3,060	31.113	0.0321	
9:00	60	270.75	267.58	99.12	3,040	30.670	0.0326	
9:10	70	271.35	268.18	99.72	3,050	30.586	0.0327	
9:20	80	271.96	268.79	100.33	3,060	30.499	0.0328	
9:30	90	272.21	269.04	100.58	3,080	30.622	0.0327	
9:40	100	272.77	269.60	101.14	3,050	30.156	0.0332	
11:20	200	275.23	272.06	103.60	3,055	29.488	0.0339	
13:00	300	276.42	273.25	104.79	3,053	29.134	0.0343	
14:40	400	277.48	274.31	105.85	3,050	28.814	0.0347	
16:20	500	278.08	274.91	106.45	3,047	28.624	0.0349	
18:00	600	278.75	275.58	107.12	3,051	28.482	0.0351	Tot.=5,087,000 gal
19:40	700				3,051			
21:20	800	279.72	276.55	108.09	3,052	28.236	0.0354	
23:00	900	280.75	277.58	109.12	3,073	28.162	0.0355	
0:40	1000	281.75	278.58	110.12	3,073	27.906	0.0358	**7/11/2007**
4:00	1200	281.60	278.43	109.97	3,070	27.917	0.0358	
7:20	1400	281.68	278.51	110.05	3,074	27.933	0.0358	
8:00	1440	281.77	**278.60**	**110.14**	3,070	27.874	0.0359	NS sample taken
								Pump off
								Tot.=7,657,300 gal

END OF CONSTANT RATE TEST

110.14 Max. Ddn

278.60 Max. PWL

Constant Rate Test Recovery Record

Southwest Ground-water Consultants, Inc.

Date: 7/11 - 7/12/2007

Well Number: 55-215421 **Job Title:** Woodruff Well #3 (Sandia)

Job Number: B.1505 **Reported By:** DRE

Pump Agency:	Layne	Static Water Level:	168.46 feet bls
Foreman:	Doug / Grant	Measure Point:	Top of sounding tube
Bailer/pump size, capacity, make:	Simflow Model No. SR14C 13-stage inline turbine shaft pump. Top of bowls at 680 feet bls	Stick Up:	3.17 feet
Average Q:	Ave Q ≈ 3,067 gpm	Line Correction:	0 feet

Clock Time	Time Since Pump Start (t)	Time Since Pump Stop (t')	Ratio t/t'	Sounder Reading	Water Level	Resid. Draw Down (s')	Remarks
	minutes	minutes		feet	feet	feet	
8:00	1440	0		281.77	278.60	110.14	**Pump off**
8:01	1441	1	1441.0	188.72	185.55	17.09	**7/11/2007**
8:02	1442	2	721.0	193.52	190.35	21.89	
8:03	1443	3	481.0				
8:04	1444	4	361.0				
8:05	1445	5	289.0				
8:06	1446	6	241.0	191.90	188.73	20.27	
8:07	1447	7	206.7	191.11	187.94	19.48	
8:08	1448	8	181.0	190.63	187.46	19.00	
8:09	1449	9	161.0	190.30	187.13	18.67	
8:10	1450	10	145.0	189.82	186.65	18.19	
8:20	1460	20	73.0	185.81	182.64	14.18	
8:30	1470	30	49.0	184.50	181.33	12.87	
8:40	1480	40	37.0	183.28	180.11	11.65	
8:50	1490	50	29.8	182.37	179.20	10.74	
9:00	1500	60	25.0	181.60	178.43	9.97	91 % recovery
9:10	1510	70	21.6	181.02	177.85	9.39	
9:20	1520	80	19.0	180.40	177.23	8.77	
9:30	1530	90	17.0	179.90	176.73	8.27	
9:40	1540	100	15.4	179.53	176.36	7.90	
9:50	1550	110	14.1	179.18	176.01	7.55	
10:00	1560	120	13.0	178.87	175.70	7.24	93% recovery
							7/12/2007
8:20	2900	1440	2.0	171.65	168.48	0.02	100% recovery
END OF RECOVERY TEST							

SEP 11 2008

Water Delivered 2007

Delivered Through Service Area Right 56-001359.0000 Well # 1 (1065)						
	Residential		Non-residential		Total	
	Gallons	Acre-Feet	Gallons	Acre-Feet	Gallons	Acre-Feet
Service Deliveries	1,009,300	3.10	17,600	0.05	1,026,900	3.15
Construction Water			3,923,000	12.04	3,923,000	12.04
Total Service Area	1,009,300	3.10	3,940,600	12.09	4,949,900	15.19

Hydrologic Testing Permit No. 59-215420.0001 Well # 3 (New Well)						
	Residential		Non-residential		Total	
	Gallons	Acre-Feet	Gallons	Acre-Feet	Gallons	Acre-Feet
New Well Pump Testing						
Drill Rig Development*			172,260	0.53	172,260	0.53
Pump Development			1,284,500	3.94	1,284,500	3.94
Step Pump Testing			3,242,700	9.95	3,242,700	9.95
Constant Rate Pump Testing			4,416,700	13.55	4,416,700	13.55
Total Under Test Permit			9,116,160	27.98	9,116,160	27.98

* Drill Rig Development was estimated; 58 hours X 75 gpm X .66 (1/3 of time swabbing, and 2/3 of time airlifting)

Arizona Department of Water Resources
Information Management Section
3550 N. Central Ave. • Phoenix, Arizona 85012
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

- Review instructions prior to completing form
- This report should be prepared by the driller in detail and filed with the Department within 30 days following completion of the well.

FILE NUMBER: D(5-7)14CAB
WELL REGISTRATION NUMBER: 55 - 215421
PERMIT NUMBER (IF ISSUED): 59-215420.0000

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Woodruff Water Company
MAILING ADDRESS: 2555 E. Camelback Rd. Ste 700
CITY / STATE / ZIP CODE: Phoenix, Az 85016
CONTACT PERSON NAME AND TITLE:
TELEPHONE NUMBER:
FAX:

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
5S	7E	14	SW¼	NE¼	NW¼

LATITUDE: ° ' "N
LONGITUDE: ° ' "W
LAND SURFACE ELEVATION AT WELL: Feet Above Sea Level
METHOD OF LATITUDE / LONGITUDE (CHECK ONE): ☐ Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ GPS: ☐ Survey-Grade
COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK | MAP | PARCEL
COUNTY WHERE WELL IS LOCATED: Pinal

SECTION 2. DRILLING AUTHORIZATION

Drilling Firm

NAME: Layne CHristensen Co
DWR LICENSE NUMBER: #7
TELEPHONE NUMBER: 480-895-9404
FAX: 480-895-8699

SECTION 3. WELL CONSTRUCTION DETAILS

DATE WELL CONSTRUCTION STARTED: 4-18-07
DATE WELL CONSTRUCTION COMPLETED: 5-24-07
IF FLOWING WELL, METHOD OF FLOW REGULATION: ☐ Valve ☐ Other:

Drill Method

CHECK ONE
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☒ Other (please specify): Flooded Reverse

Method of Well Development

CHECK ONE
- ☒ Airlift
- ☐ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (please specify):

Water Level Information

STATIC WATER LEVEL: 151 Feet Below Land Surface
DATE MEASURED: 4-28-07

Method of Sealing at Reduction Points

CHECK ONE
- ☐ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify):

81-4705

WELL REGISTRATION NUMBER

55 - 215421

SECTION 4: WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	40'	36"
40'	1254'	17½
40'	1130'	28"

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (✓) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (✓) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	40'	36 5/8	X				X						
0	800'	2"	X				X						
800'	900'	2"	X								X		.050
0	800'	18 3/4	X				X						
800'	1100'	18 5/8	X									Louvered	.050
1100'	1120'	18 5/8	X				X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (✓) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	100'			X								
100'	110'						X					3/8
110'	200'										X	3/8
200'	210'						X					3/8
210'	300'										X	3/8
300'	310'						X					3/8
310'	400'										X	3/8
400'	410'						X					3/8
410'	500'										X	3/8
500'	510'						X					3/8
510'	600'										X	3/8

DEPTH OF BORING 1254' Feet Below Land Surface

DEPTH OF COMPLETED WELL 1120' Feet Below Land Surface

Well Driller Report and Well Log

WELL REGISTRATION NUMBER

55 - 215421

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	40'	36"
40'	1254'	17½
40'	1130'	28"

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (✓) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (✓) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (Inches)
0	40'		X				X						
0	800'		X				X						
800'	900'		X								X		.050
0	800'		X				X						
800'	1100'		X									Louvered	.050
1100'	1120		X				X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (✓) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
600'	610'						X					3/8
610'	780'										X	3/8
780'	750'						X					3/8
750'	760'									X		#60
760'	1130'									X		8-12
1130'	1254'										X	3/8

DEPTH OF BORING 1254' Feet Below Land Surface

DEPTH OF COMPLETED WELL 1120' Feet Below Land Surface

Well Driller Report and Well Log

WELL REGISTRATION NUMBER

55 - 215421

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	Description Describe material, grain size, color, etc.	Check (✓) every interval where water was encountered (if known)
0	40'	Sand Clay	
40'	140'	Sand, Gravel	
140'	160'	Sandy Clay with Gravel	
160'	220'	Clay	
220'	250'	Sand (Course)	
250'	280'	Course Sand + Calitche	
280'	720'	Clay	
720'	760'	Clay with Sand	
760'	800'	Gravel, Sand with little Clay	
800'	1240'	Course Sand and Gravel	
1240'	1254'	Granite	

Well Driller Report and Well Log

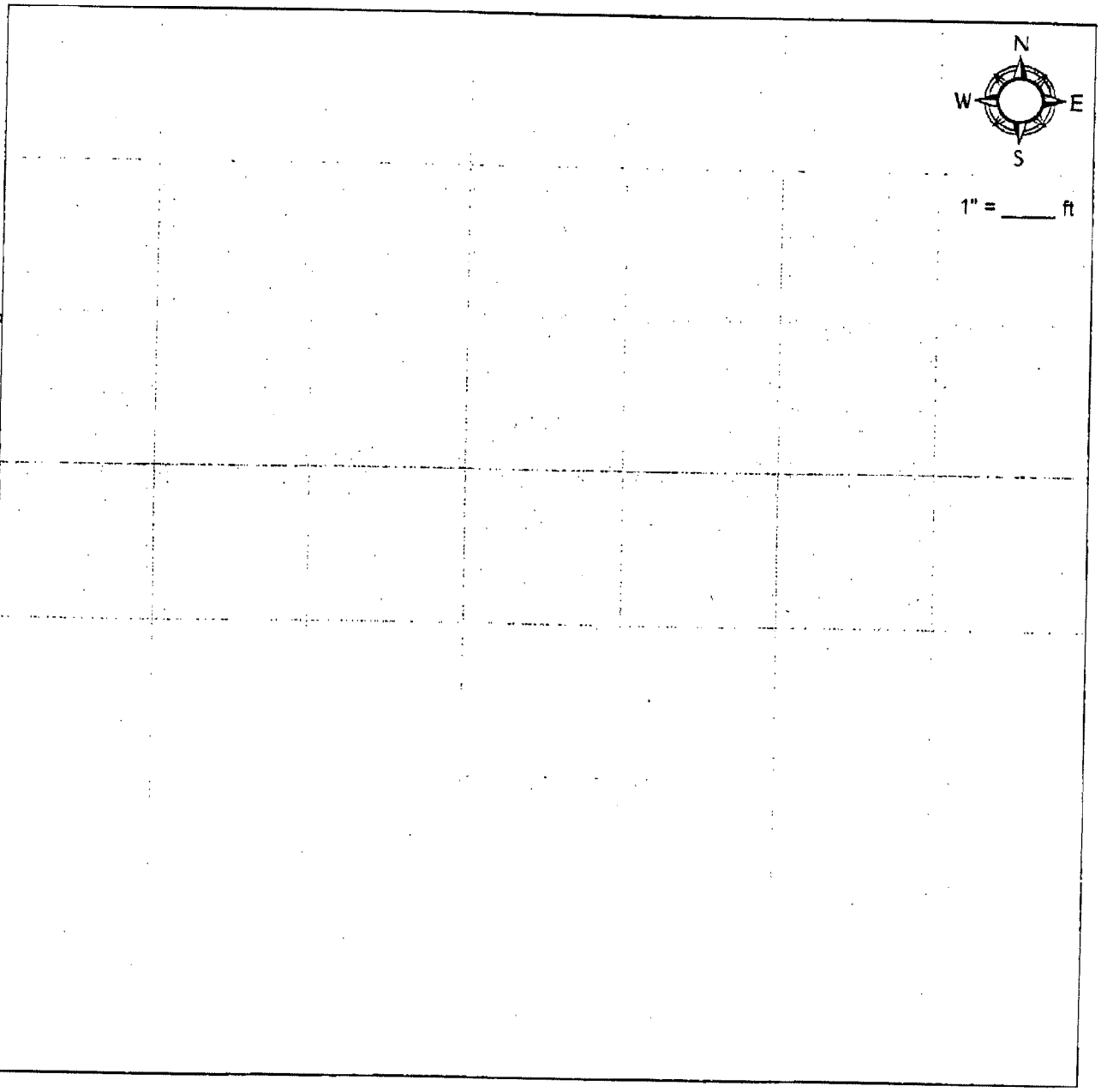
WELL REGISTRATION NUMBER

55 - 215421

SECTION 6. - WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER		
Woodruff Water Co	BOOK	MAP	PARCEL

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

DRILLING FIRM	SIGNATURE OF QUALIFYING PARTY	DATE
Layne Christensen Co.	Larry G Kraft	6/12/07

ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT DIVISION
3550 North Central Avenue
Phoenix, Arizona 85012

CORRECTED

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILLING OPERATIONS

WELL REGISTRATION NO: 55-215421 PERMIT NO: 59-215420.0000

AUTHORIZED DRILLER: LAYNE CHRISTENSEN COMPANY LICENSE NO: 7

AUTHORITY TO DRILL A NON-EXEMPT WELL(s) INSIDE THE PINAL ACTIVE MANAGEMENT AREA FOR HYDROTEST HAS BEEN GRANTED TO:

WELL OWNER: WOODRUFF WATER COMPANY 2555 E. Camelback Rd., Ste 700 Phoenix, AZ 85016

The well(s) is/are to be located in the:

NW ¼ of the NE ¼ of the SW ¼ Section 14 Township 5 South Range 7 East

No. of well(s) in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 16TH DAY OF APRIL, 2008.

Sandra Fabritz-Whitney

WATER MANAGEMENT DIVISION

THE DRILLER MUST FILE A LOG OF THE WELL
WITHIN 30 DAYS OF COMPLETION OF DRILLING

GREAT SEAL OF THE STATE OF ARIZONA
DITAT DEUS
1912

Run Date: 11/02/2007

AZ DEPARTMENT OF WATER RESOURCES

WELL REGISTRY REPORT - WELLS55

Location D 5.0 7.0 14 C A B

Well Reg.No 55 - 215421

AMA PINAL AMA

Registered Name WOODRUFF WATER COMPANY
2555 E. CAMELBACK ROAD, SUITE 700
PHOENIX AZ 85016

File Type NEW WELLS (INTENTS OR APPLICATIONS)
Application/Issue Date 03/27/2007

Owner OWNER
Driller No. 7
Driller Name LAYNE CHRISTENSEN COMPANY
Driller Phone 480-895-9336
County PINAL

Intended Capacity GPM 1,500.00

Well Type WITHDRAWAL PERMIT
SubBasin ELOY
Watershed UPPER GILA RIVER
Registered Water Uses TEST
Registered Well Uses WATER PRODUCTION
Discharge Method NO DISCHARGE METHOD LISTED
Power NO POWER CODE LISTED

Well Depth	1,254.00	**Case Diam**	19.00	**Tested Cap**	0.00
Pump Cap.	0.00	**Case Depth**	1,120.00	**CRT**	
Draw Down	0.00	**Water Level**	151.00	**Log**	X
		Acres Irrig	0.00	**Finish**	STEEL - PERFORATED OR SLOTTED CASING

Contamination Site: NO - NOT IN ANY WQARF SITE

Comments Corrected permit reflecting qqq change from original entry (per site inspection) cp

Places Of Use

D 5 0 7 0 14 C B A

Current Action

8/13/2007 866 APP/NOI SENT TO HYDRO/WQARF FOR REVIEW
Action Comment: SAP

Action History

8/14/2007 867 APP/NOI REVIEW BY HYDRO/WQARF COMPLETE
Action Comment: SAP

8/13/2007 305 APP RCVD FOR A WELL PERMIT FOR A CONVERSION
Action Comment: SAP

8/13/2007 365 APP SENT TO HYDROLOGY FOR REVIEW
Action Comment: SAP

8/13/2007 355 APP SENT TO AMA FOR REVIEW
Action Comment: SAP

7/5/2007 600 PERMIT ISSUED
Action Comment: SAP

6/27/2007 867 APP/NOI REVIEW BY HYDRO/WQARF COMPLETE
Action Comment: SAP

6/18/2007 750 WELL LOG RECEIVED
Action Comment: mo

6/18/2007 700 SITE VERIFIED AS ACCURATE
Action Comment: April 17, 2007

5/24/2007 755 WELL CONSTRUCTION COMPLETED
Action Comment: mo

4/17/2007 550 DRILLING AUTHORITY ISSUED
Action Comment: JRS

Run Date: 11/02/2007

AZ DEPARTMENT OF WATER RESOURCES

WELL REGISTRY REPORT - WELLS55

4/2/2007	855	CHANGE OF WELL LEGAL DESCRIPTION
Action Comment:		OLD LEGAL DESC: D(5.0-7.0) 14 CBA
4/2/2007	867	APP/NOI REVIEW BY HYDRO/WQARF COMPLETE
Action Comment:		SAP
3/27/2007	315	APP RCVD FOR A WITHDRAWAL PERMIT FOR A NEW WELL
Action Comment:		
3/27/2007	355	APP SENT TO AMA FOR REVIEW
Action Comment:		
3/27/2007	866	APP/NOI SENT TO HYDRO/WQARF FOR REVIEW
Action Comment:		

Well Registration No. 55-215421 Application/Right No. _____ Permit/License No. 59-215420

Regulated Person: Woodruff Water Co Address: 2555 E Camelback Ste: 700
Phx AZ 85016 Phone: 602-956-7200

ARIZONA DEPARTMENT OF WATER RESOURCES
500 North Third Street, Phoenix, Arizona 85004
NOTIFICATION OF INSPECTION AND DUE PROCESS RIGHTS

In compliance with A.R.S. § 41-1009, this document is being provided to you by the Arizona Department of Water Resources (ADWR) to inform you of your rights concerning this inspection of the following described property:
D(5-7)14 CBA Corrected location D(5-7)14 CAB
on the following date(s): April 12, 2007
ADWR must present this document for your signature, or the signature of an authorized representative, indicating that you have been informed of your rights concerning this inspection and have read both sides of this document. If you decline to sign, or signature is unavailable, ADWR must note that fact on this document and the inspection will proceed.

1. **ADWR Inspector.** This inspection is being conducted by an inspector for ADWR who must present photo identification upon entry of the inspected property, and whose name and phone number are indicated below. The ADWR inspector will be available to answer questions regarding this inspection.
   Name: Cindy Pogue Phone: 520 836 4857
2. **Purpose of Inspection.** This inspection is being conducted by an ADWR inspector either for the purpose of ☐ issuing a permit/license, or ☐ determining compliance with permit/license requirements.
3. **Legal Authority.** This inspection is being conducted under the following legal authority:
   ARS 45-598, 45-599, & 45-633
4. **Fees.** The following inspection fees apply and will be billed separately: ———
5. **Ombudsmen.** Questions regarding due process rights described in paragraph 10 on the reverse should be directed to one of the following Ombudsmen:

Name (ADWR): _____ Phone: _____

Name (Arizona): _____ Phone: _____

(continued on reverse)

Signature. This signature below is made by either the regulated person or the regulated person's authorized representative who has been informed of inspection and due process rights relating to this inspection and who has read both sides of this Notification.

Name (please print): Martin E. Quiñones

Signature: _____ Title: Drilling Supervisor

Signature Declined. The regulated person or the regulated person's authorized representative indicated below was present during the inspection but declined to sign this Notification.

Name: Title:

Signature Unavailable. Neither the regulated person nor the regulated person's authorized representative was present during this inspection. The ADWR inspector contacted or attempted to contact the regulated person by the following method:

ARIZONA DEPARTMENT OF WATER RESOURCES

Agency Inspector: Cindy Pogue (SIGNATURE) Date: 4:00pm

☐ Photo identification presented.

☐ Copy provided prior to inspection to: Martin Quinones Time: 4/17/07

ARIZONA DEPARTMENT OF WATER RESOURCES
Pinal Active Management Area Office
1729 North Trekell Road, Suite 105
Casa Grande, Arizona 85222
Telephone 520-836-4857
Fax 520-836-9208

JANET NAPOLITANO
Governor

HERB GUENTHER
Director

Date: 4/17/07

FIELD VERIFICATION REPORT
NEW OR REPLACEMENT WELL

File Number: D (5 - 7) 14 ~~C~~ ~~B~~ ~~A~~ C A B
Quadrant Tns & Rng Section 160ac 40ac 10ac

Registration Number: 55-215421

Type of Permit & Number: T____ S____ HydroTest

Location of Permit: NE 1/4 NW 1/4 SW 1/4 Section 14, T 5 S, R 7 E
10 Acre 40 Acre 160 Acre

Verified Location: NW 1/4 NE 1/4 SW 1/4 Section 14, T 5 S, R 7 E
10 Acre 40 Acre 160 Acre

Latitude: N (**example** N 32° 09' 27.0") 32 ° 59' 185"

Longitude: W (**example** W 111° 12' 18.3") 111 ° 36' 491"

Latitude/Longitude Determined By: GPS Y Topo Map C Other O

Correct driller on card? YES Y NO ____

Drill Card in possession of: Driller:____ None:____ Corrected dc Copy

Card given to: _____ To be issued
Name, Company, Address

~~Replacement~~ Well: Distance from ~~the original~~ well: N/A ft,

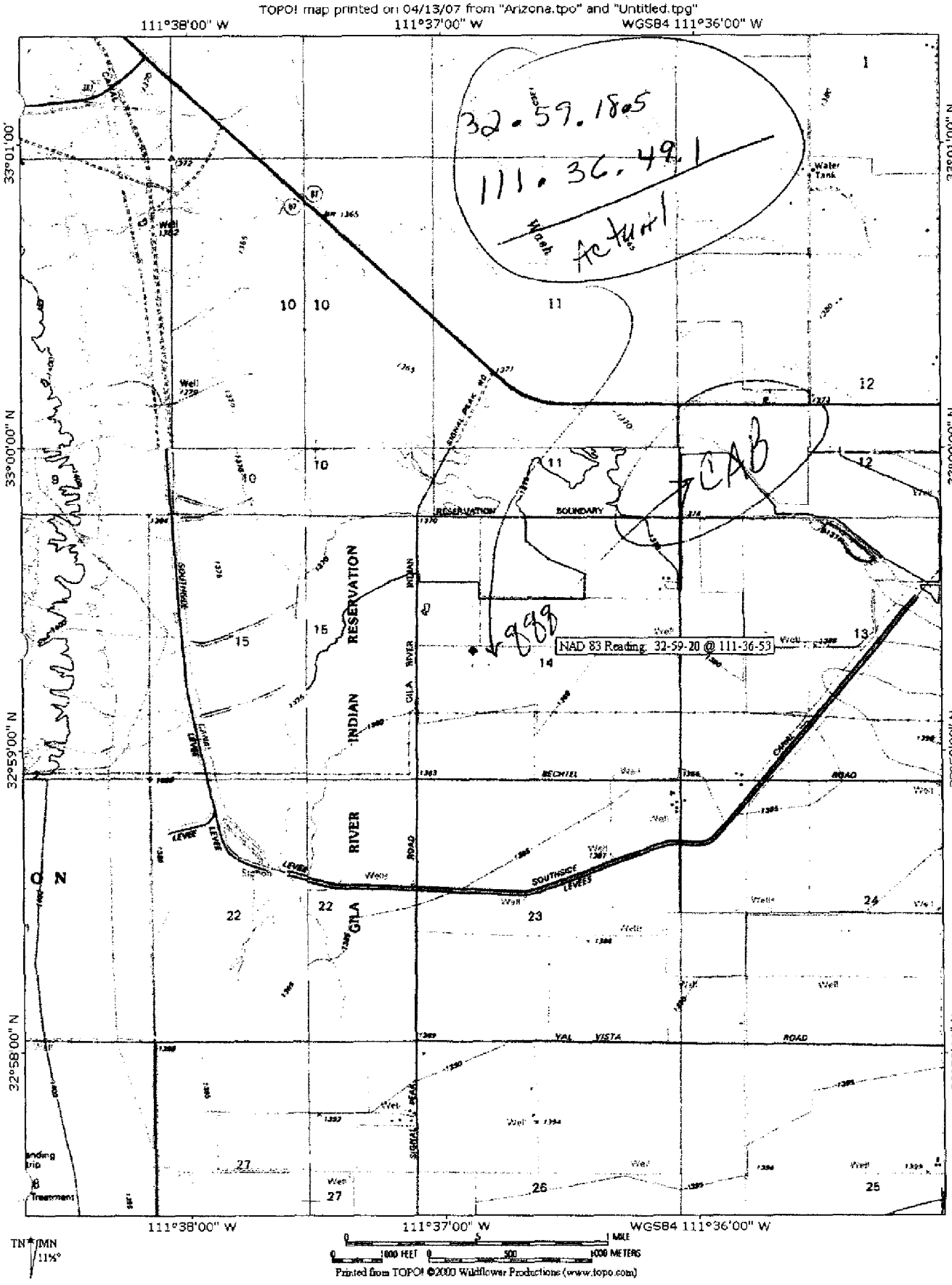
~~Replacement Well Registration No. 55~~ _____ File No _(_-_)_____

X Date and time of inspection: _____

Report filed by: (ADWR Employee Name) Cindy Pryor

Comments: New "Corrected" drill card to be issued
to correct 999 D(5-7)14 CAB

TOPO! map printed on 04/13/07 from "Arizona.tpo" and "Untitled.tpg"



Printed from TOPO! ©2000 Wildflower Productions (www.topo.com)

COPY

ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT DIVISION
3550 North Central Avenue, Phoenix, Arizona 85012
Telephone 602 771-8585
Fax 602 771-8688

Janet Napolitano
Governor

Herbert R. Guenther
Director

July 5, 2007

Woodruff Water Company
2555 East Camelback Road, Suite 700
Phoenix AZ 85013

RE: Permit to Withdraw Groundwater for Hydrologic Testing No. 59-21420.0001
Well Registration No. 55-215421; File No. D(5-7)14CAB

Dear Permittee:

Your permit as referenced above is enclosed for your records.

Pursuant to the provisions of A.R.S. § 45-604, any person withdrawing groundwater from a well is required to use a water measuring device to record rates of withdrawal in order to provide or allow the computation of an annual volume of pumpage from the well. The total volume of pumpage shall be reported on an annual report. The first annual reporting period shall be from the date of issuance of this permit until the end of the year 2007, or the expiration date of the permit, whichever comes first. Additionally, within sixty (60) days upon completion of the hydrologic testing, the permittee shall provide the results of the test data to the Arizona Department of Water Resources, to J.R. Snyder Jr., Water Management Division office for evaluation.

Under A.R.S. § 45-593, the person to whom a well is registered must notify the Department of a change in ownership, physical characteristics or any other data about the well in order to keep the well registration records current and accurate. For future changes, a Request to Change Well Information form is enclosed.

The Department has issued this hydrologic testing permit pursuant to A.R.S. § 45-519.01 of the Groundwater Code. The legal nature of the water withdrawn from your well may be the subject of court action in the future as part of a determination of surface water rights in your area. If there are court proceedings that could affect your well, you will be notified and be given the opportunity to participate.

The permit has been issued by this Department without a hearing. As such, it is an appealable agency action. You are entitled to appeal and your rights are described in the enclosed notice of right to appeal.

If you have any questions about the permit, please call Cindy Pogue of the Pinal Active Management Area office at 520-836- 4857, extension 6.

Sincerely,

JRSnyder

J.R. Snyder Jr.
Water Resources Specialist

Enclosure
cc: Cindy Pogue, Pinal AMA

COPY

ARIZONA DEPARTMENT OF WATER RESOURCES

PERMIT TO WITHDRAW GROUNDWATER FOR HYDROLOGIC TESTING

PURSUANT TO A.R.S. § 45-519.01

PERMIT NO. 59-215420.0001

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

This is to certify that Application No. 59-215420.0001 meets the requirements of Title 45, Chapter 2, Article 7 for a Permit to Withdraw Groundwater for Hydrologic Testing. The Director hereby grants authority to the Permittee to construct and operate a well for hydrologic testing pursuant to A.R.S. § 45-519.01, subject to the following limitations and conditions:

Permit Limitations

Permittee:	Woodruff Water Company 2555 East Camelback Road Suite 700 Phoenix AZ 85016
Active Management Area:	Pinal AMA
Sub-basin:	Eloy

COPY

PERMIT NO. 59-215420.0001

Authorized purpose of hydrologic testing:	Test aquifer transmissivity
Maximum Amount of Groundwater to be Withdrawn:	28 acre-feet per annum
Authorized Disposition of Groundwater:	To the extent possible, groundwater produced will be put to use on active irrigated land associated with IGFR 58-102332.0001

Authorized Points of Withdrawal:

Authorized Well Registration Numbers:	File Numbers:	Depth of Well	Casing Diameter	Casing Material
55-215421	D(5-7)14CAB	1540 feet	18¾ inches	Steel

Effective Date of Permit:	July 5, 2007
Expiration Date of Permit:	July 6, 2008

Permit Conditions

1. Within sixty (60) days upon completion of the hydrologic testing, the permittee shall provide the results of the test data to the Arizona Department of Water Resources for evaluation. Results shall be mailed to J.R. Snyder Jr., Water Management Support, Arizona Department of Water Resources, 3550 North Central, Phoenix, Arizona 85012.

2. This approval for test wells and pump test does not constitute a commitment by the Department for the granting of a right to withdraw groundwater or converting the test well into a production well.

3. The well drilled for this project shall be drilled in compliance with the Arizona Department of Water Resources minimum well construction standards, A.A.C. R12-15-811.

4. The permittee shall monitor withdrawals of groundwater and shall report the total amount of groundwater withdrawn on an Annual Water Withdrawal and Use Report. The first annual reporting period shall be from the date of issuance of this permit through December 31, 2007, or the expiration date of this permit, whichever comes first.

COPY

PERMIT NO. 59-215420.0001

5. The issuance of the permit does not waive any federal, state, county or local government ordinances, regulations or permits for which the facility may have to comply.

WITNESS my hand and seal of office this 5th day of July, 2007.

Sandra Fabritz-Whitney, Assistant Director

COPY

ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT DIVISION
3550 North Central Avenue, Phoenix, Arizona 85012
Telephone 602 771-8585
Fax 602 771-8688

Janet Napolitano
Governor

Herbert R. Guenther
Director

April 13, 2007

Brian Hall, General Manager
Woodruff Water Company
2555 E. Camelback Road, Suite 700
Phoenix, AZ 85016

RE: Corrected Permit to Withdraw Groundwater for Hydrologic Testing No. 59-215420.0000
Well Registration No. 55-215421; File No. D (05-07) 14 CAB

Dear Permittee:

Your permit as referenced above is enclosed for your records.

Pursuant to the provisions of A.R.S. § 45-604, any person withdrawing groundwater from a well is required to use a water measuring device to record rates of withdrawal in order to provide or allow the computation of an annual volume of pumpage from the well. The total volume of pumpage shall be reported on an annual report. The first annual reporting period shall be from the date of issuance of this permit until the end of the year 2007, or the expiration date of the permit, whichever comes first. Additionally, within sixty (60) days upon completion of the hydrologic testing, the permittee shall provide the results of the test data to the Arizona Department of Water Resources, to Darlene Sumpter-King, Water Management Division office for evaluation.

In the event the location of the proposed well changes, you must notify the Department of Water Resources of the change in writing. A drill card with the correct proposed well location must be in the possession of the driller before drilling may commence.

Under A.R.S. § 45-593, the person to whom a well is registered must notify the Department of a change in ownership, physical characteristics or any other data about the well in order to keep the well registration records current and accurate. For future changes, a Request to Change Well Information form is enclosed.

The Department has issued this hydrologic testing permit pursuant to A.R.S. § 45-519.01 of the Groundwater Code. The legal nature of the water withdrawn from your well may be the subject of court action in the future as part of a determination of surface water rights in your area. If there are court proceedings that could affect your well, you will be notified and be given the opportunity to participate.

The permit has been issued by this Department without a hearing. As such, it is an appealable agency action. You are entitled to appeal and your rights are described in the enclosed notice of right to appeal.

If you have any questions about the permit, please call Cindy Pogue of the Pinal AMA office at 520-836-4857.

Sincerely,

Jeff Tannler
Water Resources Supervisor

Enclosure

cc: Cindy Pogue, Pinal Active Management Area

COPY

ARIZONA DEPARTMENT OF WATER RESOURCES

PERMIT TO WITHDRAW GROUNDWATER FOR HYDROLOGIC TESTING

PURSUANT TO A.R.S. § 45-519.01

CORRECTED

PERMIT NO. 59-215420.0000

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

This is to certify that Application No. 59-215420.0000 meets the requirements of Title 45, Chapter 2, Article 7 for a Permit to Withdraw Groundwater for Hydrologic Testing. The Director hereby grants authority to the Permittee to construct and operate a well for hydrologic testing pursuant to A.R.S. § 45-519.01, subject to the following limitations and conditions:

Permit Limitations

Permittee:	Woodruff Water Company Brian Hall, General Manager 2555 E. Camelback Road, Suite 700 Phoenix, AZ 85016
Active Management Area:	Pinal AMA
Sub-basin:	Eloy

COPY

PERMIT NO. 59-215420.0000

Authorized purpose of hydrologic testing:	Test Aquifer TRnasmissivity
Maximum Amount of Groundwater to be Withdrawn:	12 acre-feet per annum
Authorized Disposition of Groundwater:	Use on irrigated land associated with Irrigation Grandfather Right 58-102332.0001

Authorized Points of Withdrawal:

Authorized Well Registration Numbers:	File Numbers:	Depth of Well	Casing Diameter	Casing Material
55-215421	D (05-07) 14 CAB	1,540 feet	28 inches	Steel

Effective Date of Permit:	April 17, 2007
Expiration Date of Permit:	April 16, 2008

Permit Conditions

1. Within sixty (60) days upon completion of the hydrologic testing, the permittee shall provide the results of the test data to the Arizona Department of Water Resources for evaluation. Results shall be mailed to Darlene Sumpter-King, Water Management Support, Arizona Department of Water Resources, 3550 North Central, Phoenix, Arizona 85012.

2. This approval for test wells and pump test does not constitute a commitment by the Department for the granting of a right to withdraw groundwater or converting the test well into a production well.

3. The well drilled for this project shall be drilled in compliance with the Arizona Department of Water Resources minimum well construction standards, A.A.C. R12-15-811.

COPY

PERMIT NO. 59-215420.0000

4. The permittee shall monitor withdrawals of groundwater and shall report the total amount of groundwater withdrawn on an Annual Water Withdrawal and Use Report. The first annual reporting period shall be from the date of issuance of this permit through December 31, 2007, or the expiration date of this permit, whichever comes first.

5. The issuance of the permit does not waive any federal, state, county or local government ordinances, regulations or permits for which the facility may have to comply.

WITNESS my hand and seal of office this 17th day of April, 2007.

Sandra Fabritz-Whitney, Assistant Director

ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT DIVISION
3550 North Central Avenue
Phoenix, Arizona 85012

CORRECTED

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILLING OPERATIONS

WELL REGISTRATION NO: 55-215421 **PERMIT NO: 59-215420.0000**

AUTHORIZED DRILLER: LAYNE CHRISTENSEN COMPANY **LICENSE NO: 7**

AUTHORITY TO DRILL A NON-EXEMPT WELL(s) INSIDE THE PINAL ACTIVE MANAGEMENT AREA FOR HYDROTEST HAS BEEN GRANTED TO:

WELL OWNER: WOODRUFF WATER COMPANY **2555 E. Camelback Rd., Ste 700 Phoenix, AZ 85016**

The well(s) is/are to be located in the:

NW ¼ of the NE ¼ of the SW ¼ Section 14 Township 5 South Range 7 East

No. of well(s) in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 16TH DAY OF APRIL, 2008.

Sandra Fabritz-Whitney

WATER MANAGEMENT DIVISION

THE DRILLER MUST FILE A LOG OF THE WELL
WITHIN 30 DAYS OF COMPLETION OF DRILLING

GREAT SEAL OF THE STATE OF ARIZONA
DITAT DEUS
1912

ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT DIVISION

3550 North Central Avenue
Phoenix, Arizona 85012

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILLING OPERATIONS

WELL REGISTRATION NO: 55-215421 **PERMIT NO:** 59-215420.0000

AUTHORIZED DRILLER: LAYNE CHRISTENSEN COMPANY **LICENSE NO:** 7

AUTHORITY TO DRILL A NON-EXEMPT WELL(s) INSIDE THE PINAL ACTIVE MANAGEMENT AREA FOR HYDROTEST HAS BEEN GRANTED TO:

WELL OWNER: WOODRUFF WATER COMPANY 2555 E. Camelback Rd., Ste 700 Phoenix, AZ 85016

The well(s) is/are to be located in the:

NE ¼ of the NW ¼ of the SW ¼ Section 14 Township 5 South Range 7 East

No. of well(s) in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 16TH DAY OF APRIL, 2008.

WATER MANAGEMENT DIVISION

THE DRILLER MUST FILE A LOG OF THE WELL WITHIN 30 DAYS OF COMPLETION OF DRILLING

GREAT SEAL OF THE STATE OF ARIZONA
DITAT DEUS
1912

ARIZONA DEPARTMENT OF WATER RESOURCES

WATER MANAGEMENT DIVISION
3550 North Central Avenue, Phoenix, Arizona 85012
Phone (602) 771-8585 Fax (602) 771-8688

Sandia
B.1384

WELL CONSTRUCTION SUPPLEMENT (form DWR 55-90)

Well Registration Number 55- 215421

1. Well Location:

   NE (10AC) ¼ of the NW (40AC) ¼ of the SW (160AC) ¼, Sec. 14, Township 5 S Range 7 E.

2. Position Location of the Well: ESTIMATED

   Latitude 32 ° 59 ' 20 " Longitude 111 ° 36 ' 48 "

   Datum: • NAD 83 (• NAD 27) • Other: ARCMAP 9.1

3. County Pinal.

4. Date construction to start: April 2007.

5. Time period well will remain in use: Indefinitely.

6. Is pump equipment to be installed? Yes If so, design pump capacity: 1,500 GPM.

7. Well construction plan:

   a. Drilling method (mud rotary, hollow-stem auger, etc.) Reverse Rotary.

   b. Borehole diameters 36 inches from 0 feet to 39 feet.

      28 inches from 39 feet to 1,540 feet.

   c. Casing materials Copper Bearing Steel.

   d. Method of well development (bail, air lift, surge, etc.) Swab and airlift, pump and surge

   e. Will surface or conductor casing extend above grade? Yes.

8. Include a detailed construction diagram of the proposed well design. The diagram should verify consistency with minimum construction requirements specified in the Department's well construction rules found in Arizona Administrative Code (A.A.C.) R12-15-801 *et seq.* Specifically, the diagram should include borehole diameters; casing materials and diameters; perforation intervals; the expected water level; depth and thickness of the surface seal; proposed grouting materials; and the length that the surface or conductor casing will extend above grade, or vault details, if specified. See Attached Diagram

   Pursuant to Arizona Revised Statutes (A.R.S.) § 45-594.B, all well construction, replacement, deepening and abandonment operations shall comply with the rules adopted pursuant to this section. Therefore, any existing well that is deepened or modified must be brought into compliance with minimum well construction standards specified above, if not already in compliance.

9. Proposed materials and method of abandonment if well is to be abandoned after project is completed (Minimum requirements per A.A.C. R12-15-816):

   N/A

10. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material, or petroleum storage area or tank? ____Yes __X__No

11. Is this well to monitor existing contamination? ____Yes __X__No

Potential contamination?____Yes __X__No If yes, please provide explanation:_____

12. Name of Consulting firm, if any: Southwest Ground-water Consultants, Inc.

3033 N 44th Street, Suite 120	Phoenix	AZ	85018
Address	City	State	Zip

Contact Person: Kevin Hebert Telephone Number: (602) 955-5547

13. Drilling firm Layne Christensen Company

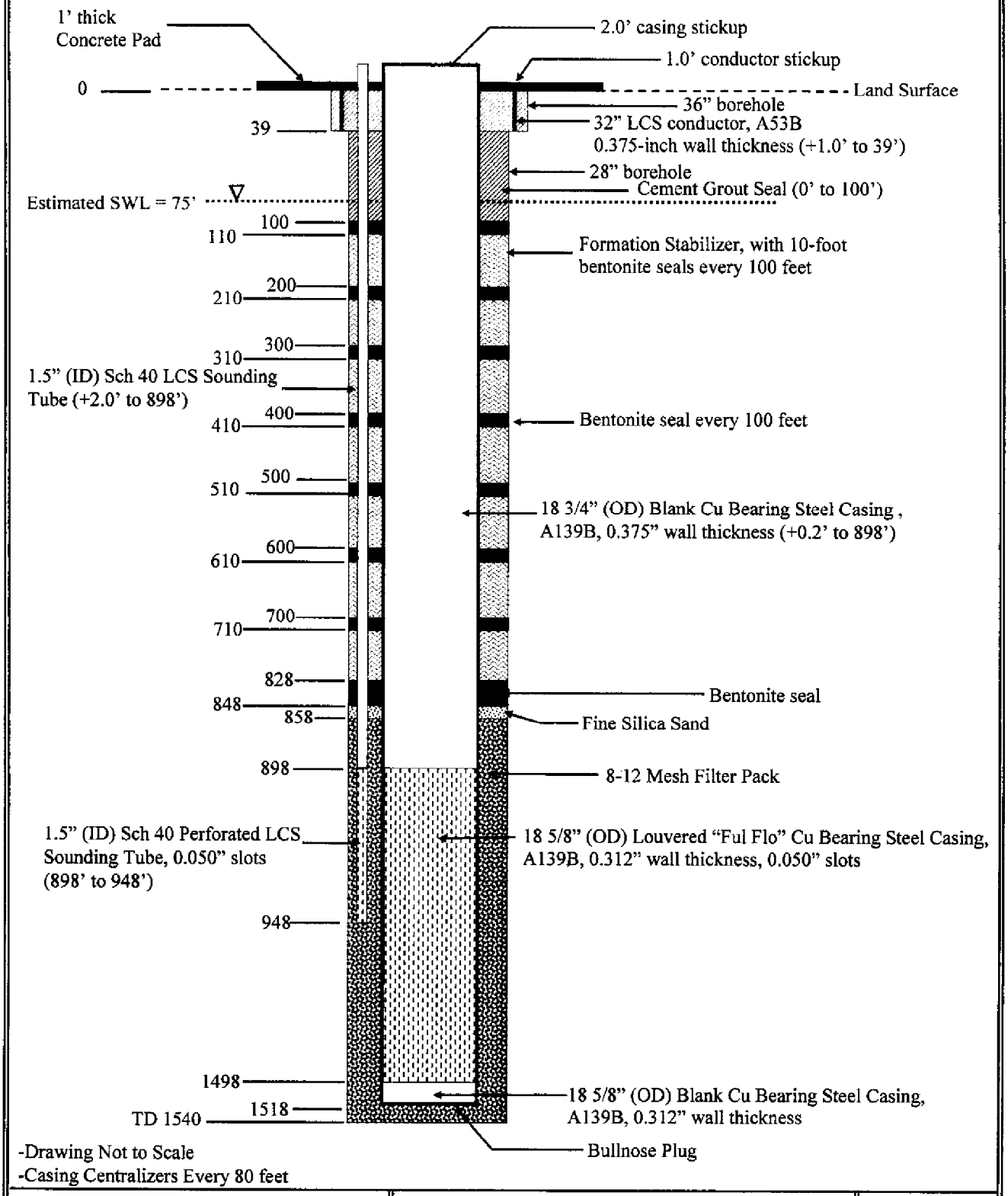
DWR License Number: 7 ROC License Category: A-04

14. Special construction standards, if any, required pursuant to A.A.C. R12-15-821: N/A

I (we), BRIAN HALL (print name) hereby affirm that all information provided in this application is true and correct to the best of my/our knowledge and belief.

Signature of Applicant Brian K. Hall Date 3/23/07

GENERAL MANAGER
WOODRUFF WATER COMPANY, INC.



Southwest Ground-water Consultants, Inc. **March 23, 2007** **Project B.1384**	**PRODUCTION WELL DESIGN** **SANDIA DEVELOPMENT** **Pinal County, Arizona**	**Figure**

RECEIVED
[illegible] 27 2007
PHOENIX AMA

ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT SUPPORT SECTION
MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458
500 NORTH 3RD STREET - PHOENIX, ARIZONA 85004-3903
Phone (602) 417-2470 Fax (602) 417-2422

Sandia
B.1384

APPLICATION FOR PERMIT TO WITHDRAW GROUNDWATER FOR HYDROLOGIC TESTING PURPOSES WITHIN AN ACTIVE MANAGEMENT AREA (A.R.S. §45-519.01)

I. INSTRUCTIONS

1. **COMPLETE ALL APPROPRIATE ITEMS ON THIS APPLICATION AND SIGN IN DESIGNATED PLACE.**

2. Mail to: P.O. Box 458, Phoenix, Arizona 85001-0458 or deliver in person to the above address.
3. Pursuant to A.R.S. § 45-113, the application fee is $50.00, and the permit fee is $50.00. You may submit both checks at the time of filing the application.

FOR DEPARTMENT USE ONLY
Application/Permit No. 59-215420
Filed 12(5-7)14CBA
AMA Pinal
S/B 11 W/S 15

II. GENERAL DATA

Please check one:
X New Application
☐ Renewal or ☐ Modification of Permit No. 59-_____.

1. NAME OF APPLICANT Woodruff Water Company

Mailing Address 2555 E. Camelback Rd., Suite 700

City	State	Zip Code	Telephone Number
Phoenix	AZ	85016	(602) 956-7200

2. NAME OF LAND OWNER where groundwater will be withdrawn First American Title Co. Trust #8583

Mailing address 4801 E. Washington Street, #140, ATTN: Charlotte Knoll, Sr. Trust Officer

City	State	Zip Code	Telephone Number
Phoenix	AZ	85034	(602) 685-7036

3. PURPOSE OF THIS TESTING PERMIT (check only one box):

☐ To obtain groundwater samples not exceeding 3 acre feet per annum for testing groundwater quality in order to comply with applicable environmental controls for a period of up to 10 years (A.R.S. § 45-519.01.A.)

☐ To test hydrologic characteristics and conditions, including groundwater quality. Groundwater withdrawn shall not exceed 10 acre feet nor shall the period of withdrawal exceed 90 days, (A.R.S. § 45-519.01.B.)

X To withdraw more than 10 acre feet of groundwater for hydrologic testing purposes, and/or for a period greater than 90 days include specifics of testing circumstances that require such withdrawal and/or period, (A.R.S. § 45-519.01.D.)

☐ To withdraw groundwater to test the hydrologic characteristics of a potential artificial groundwater recharge project site, or a potential underground storage and recovery project site. The period of withdrawal may not exceed 2 years (A.R.S. § 45-519.01.E.)

4. Groundwater will be withdrawn within the Eloy sub-basin of the Pinal Active Management Area.

5. The specific purpose for the hydrologic testing is: Test aquifer transmissivity

6. Please be specific how the groundwater withdrawn will be put to beneficial use and the groundwater right number for that use if applicable. To the extent possible, groundwater produced will be put to use on active irrigated land associated with IGFR # 58-102332.0001

7. If applicant cannot reasonably put the withdrawn groundwater to a beneficial use or provide it to a rightholder, explain why.

N/A

8. Legal description of land where groundwater will be used: NE NW SW Sec. 14, T5S, R7E

9. Name and mailing address of the owner of the land where groundwater will be used: _____

Mailing Address | City | State | Zip Code | Telephone No.

10. Total amount of groundwater for which application is being made: 12 acre feet.

11. Anticipated duration of the hydrologic testing 12 Days 0 Months.

12. Requested duration of the hydrologic testing permit 0 Days 12 Months.

13. State the testing circumstances that require withdrawals in excess of 10 acre feet or a testing period for more than 90 days: Due to the potentially high yield of the well, withdrawals during testing may exceed 10 acre-feet, but not 12 acre-feet.

14. Indicate the system by which the groundwater withdrawn for a test involving a potential recharge or storage and recovery project will be added back to the aquifer. N/A

15. Groundwater to be withdrawn by means of:

A. WELLS ALREADY IN EXISTENCE:

Registration No.	Location	Depth	Diameter of Casing	Case Type
55-				
55-				

B. WELLS TO BE NEWLY CONSTRUCTED:

Complete and attach New Well Construction Supplement, DWR form 55-90, for each new well to be drilled.

16. State your plans for the well(s) after testing is completed: The well will be converted for municipal use.

It is understood that the Permit, if granted, will be in accordance with the Groundwater Management Code (Title 45, Chapter 2). The permittee will be bound by the provisions of such law and the provisions of the Permit issued.

I (we) BRIAN HALL (print name) hereby swear that all information provided in this application is true and correct to the best of my/our knowledge and belief.

Signature of Applicant Brian K. Hall Date 3/23/07

GENERAL MANAGER
WOODRUFF WATER COMPANY, INC.

PHOENIX AMA
CHECK DEPOSIT REQUEST

Submitted By: **Sharon Ward** **Date:** **3/27/07**
Right Owner or Applicant: **Woodruff Water Company**
GFR or Permit No(s): **59-215420 (55-215421)**

CHECK INFORMATION

Check Number: **11437**
Check Amount: **$100.00**
Name on Check: **Southwest Ground-Water Consultants**
Address: **3033 N. 44TH Street, Ste 120**
City, ST, Zip: **Phoenix AZ 85018**
Telephone: **602-955-5547**

Code	Type of Fee:	Amount:	Check No.
55	Application for Well Permit **($150.00)**		
55	Well Permit Fee **($30.00)**	$ 50.00	
58	Type I Conversion Request Flex Account Transfers **($100.00)**		
58	Notification of Change of Ownership of an Irrigation Grandfathered Right **($35.00)**		
60	Application to Substitute Irrigation Acres		
59	Applications for Permit to Withdraw **($50.00 or $150.00)**	$ 50.00	
59	Withdrawal Permit Fee **($50.00)**		
59	Conveyance of Groundwater Withdrawal Application and/or Permit **($35.00)**		
Gen Fund	Legal Noticing Fees **(Various)**		
55	Notice of Intent for Non-Exempt Wells **($150.00)**		

ARIZONA DEPARTMENT OF WATER RESOURCES
3550 North Central Avenue, Phoenix, Arizona 85012
Telephone 602 771-8585
Fax 602 771-8688

Janet Napolitano
Governor

Herbert R. Guenther
Director

January 11, 2008

Woodruff Water Company
Attn: Brian R. Hall
2555 E. Camelback Rd., Ste. 700
Phoenix, AZ. 85016

RE: Non-Exempt Well Permit No. S -216240
Well Registration No. 55-215421; File No. D (5-7) 14 CAB

Dear Permittee:

Your permit for the conversion of the above-referenced well is enclosed. The authority to increase the permitted annual volume of this well is granted on the condition that all applicable provisions of the Groundwater Code are met.

Pursuant to the provisions of A.R.S. § 45-604, any person withdrawing groundwater from a well is required to use a water measuring device to record rates of withdrawal in order to provide or allow the computation of an annual volume of pumpage from the well. The total volume of pumpage from the well shall be reported on your Annual Water Withdrawal and Use Report for this calendar year.

The Department has issued the authorization to convert and operate this well pursuant to A.R.S. §§ 45-598 and 45-599 of the Groundwater Code. The legal nature of the water withdrawn from the well may be the subject of court action in the future as part of a determination of surface water rights in your area. If there are court proceedings that could affect your well, you will be notified and be given the opportunity to participate.

Under A.R.S. § 45-593, the person to whom a well is registered must notify the Department of a change in ownership, physical characteristics or any other data about the well in order to keep the well registration records current and accurate. For future changes, *Request to Change Well Information* forms are enclosed.

Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

Your permit has been issued by this Department without a hearing. As such, it is an appealable agency action. You are entitled to appeal and your rights are described in the enclosed notice of right to appeal.

If you have any questions about your permit, please call Cynthia Pogue of the Pinal AMA office at (520) 423-2946.

Sincerely,

Vanessa Reyes

Vanessa Reyes,
Water Resources Specialist

Enclosures

cc: Cynthia Pogue, Pinal AMA
File

Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

ARIZONA DEPARTMENT OF WATER RESOURCES

NON-EXEMPT WELL PERMIT

PURSUANT TO A.R.S. §§ 45-598 AND 45-599

PERMIT NO. S-216240

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

This is to certify that Application No. S-216240 meets the requirements of A.R.S. §§ 45-598 and 45-599 for the conversion (englargement) of an existing well. The Director hereby grants authority to the Permittee to operate a non-exempt well, subject to the following limitations and conditions:

Permit Limitations

Permittee:	Woodruff Water Company 2555 E. Camelback Rd., Suite 700 Phoenix, Arizona 85016
Well Registration Number:	55-215421 File No. D (5-7) 14 CAB
Active Management Area:	Pinal
Subbasin:	Eloy
Well Location:	The NW ¼ of the NE ¼ of the SW ¼ of Section 14, Township 5 South, Range 7 East of the GSRB&M
Depth:	1130 feet

PERMIT NO. S-216240

Casing Material:	Steel
Casing Diameter:	18 inches
Maximum Pumping Capacity:	1,820 gallons per minute
Maximum Annual Volume:	2,935.6 acre-feet
Authorized Place of Use for Groundwater Withdrawn:	As Authorized by Water Provider Right No. 56-001359.0000
Authorized Use of Groundwater:	As Authorized by Water Provider Right No. 56-001359.0000

Permit Conditions

1. This permit is issued pursuant to A.R.S. § 45-599 and authorizes the permittee to withdraw groundwater for the use or uses set forth in the permits. This permit does not authorize the permittee to withdraw surface water from the well. If the permittee withdraws surface water from the well in any year, the permittee shall do so only pursuant to a decreed or appropriative surface water right and shall separately report in the annual report filed pursuant to A.R.S. § 45-632 the amount of groundwater and surface water withdrawn from the well.

2. The issuance of this permit does not waive any federal, state, county or local government ordinances, regulations or permits for which the facility may have to comply.

3. The proposed well shall be constructed in accordance with the minimum well construction standards, pursuant to A.A.C. R12-15-811.

WITNESS my hand and seal of office this DAY 11th of January, 2008.

Sandra Fabritz-Whitney, Assistant Director

From: Cynthia Pogue
To: Danita Haywood; Vanessa R. Reyes
Date: 1/11/08 8:20AM
Subject: Woodruff WAter S-216420

Woodruff Water Co - S216420 for well 55-215421 D(05-07) 14 CAB
was approved at IPR 1/10/2007.

Please prepare draft permit and cover letter for my review for the conversion of this well to a non-exempt, Service area well with a pumping capacity of 1,820 gpm for 2,935.6 af/yr.

Thank you
Cindy P

CC: Ward, Sharon

Mail Envelope Properties (4787894F.843 : 7 : 36819)

Subject: Woodruff WAter S-216420
Creation Date: 1/11/08 8:20AM
From: Cynthia Pogue

Created By: capogue@azwater.gov

Recipients
azwater.gov
GWIA.ADWR
"vrreyes@azwater.gov" (Vanessa R. Reyes)

azwater.gov
PHOENIX.ADWR
dmhaywood (Danita Haywood)
ssward CC (Sharon Ward)

Post Office	Route
GWIA.ADWR	azwater.gov
PHOENIX.ADWR	azwater.gov

Files	Size	Date & Time
MESSAGE	811	01/11/08 08:20AM

Options

Expiration Date:	None
Priority:	Standard
Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

IPR SUMMARY REVIEW SHEET
Prepared by Cynthia Pogue, Pinal AMA
January 4, 2008

APPLICANT:	**Woodruff Water Company: 56-001359.0000**
APPLICATION NO.	**S-216420 Well: 55-215421 D(5-7)14CAB**
APPLICATION TYPE:	**Permit to Drill or Operate a Service Area Well in an AMA A.R.S. § 45-599**

Summary of the facts: On August 8, 2007, Fennemore Craig on behalf of Woodruff Water Company applied for this permit to convert a hydrotest well to a non-exempt, service area well. The location of this well is approximately 275' from the area initially served to establish their service area right. Withdraw of groundwater is based on Right No. 56-001359.0000 and will be used within their service area. The pump capacity is 1,820 gpm with an annual volume of 2,935.6 acre-feet. The estimated time for completion of the well is within one year.

The initial analysis prompted an I&I letter since six wells fell within the impact radius. Impact Waivers were signed by five of the six well owners. Hydrology completed its re-evaluation of this well with a reduced pumping rate (2,935.6 afa vs. 2,943.7 afa vs. 3,145 afa). Hydrology calculated the trasmissivity value from a pump test of the well and used the specific yield from the Pinal AMA model to conduct both a standard Theis analysis and THWELLS calculation. The initial rate reduction resulted in the 5-year, 10-foot drawdown radius was reduced but not quite enough to exclude one well (55-639134) from the impact area. Reducing the pumping rate 5 gpm moved the impact radius enough to exclude this well. With a pumping rate of 1,820 gpm (volume of 2,935.6 af/yr)

Water Quality Unit indicated this well is not near an area of known groundwater contamination that is being remediated pursuant to USEPA, ADEQ or DOD program. According to ADEQ Groundwater Database, sample results from wells located within one mile of the propoased well exceed secondary MCL for chloride. The water quality results were from 1960; therefore, current aquifer conditions are unknown. The well meets minimum well construction standards. Hydrology and Water Quality Units have no objections to the issuance of this permit.

Issues: The initial application requested a volume of 3,145 af/yr. with a pumping capacity of 1,950 grpm. These parameters resulted in an impact analysis affecting six wells. An I&I letter was sent on September 24, 2007. Five of the six well owners signed Well-Impact Waivers. In order to remove well 55-639134 from the area of impact, Southwest Ground-Water Consultants requested a proposed volume of 2,943.7 af/yr., pumping at 1,825 gpm. For the final analysis Southwest Ground-Water approved the reduction to 1,820 gpm for 2,935.6 af/yr.

AMA Recommendations: The Pinal AMA recommends issuance of this permit to operate well 55-215421 as a non-exempt service area well, pumping 1,820 gpm with a maximum withdrawal of 2,935.6 acre-feet per year.

AMA Approval _____ Date 1/4/08

IPR Committee Comments: _____

IPR Committee Recommendations: _____

✓ Approved
_____ Denied
_____ Other (explanation) _____

IPR Chairperson _____ Date 1/10/08

From: Cynthia Pogue
To: Danita Haywood
Date: 1/4/08 3:57PM
Subject: Woodruff & New Saddleback Vista

Danita:
FOR FILE(S)

Both Hydrology and Water Quality have no objections for the issuance of the above permits. Pinal AMA recommends issuance of permits and is submitting the above applications at IPR on Thursday.

New Saddleback Vista: S-217005 Well: #55-578504

Woodruff Water: S-216420 Well: 55-215421

Thank you
Cindy

ARIZONA DEPARTMENT OF WATER RESOURCES
Hydrology Division

MEMORANDUM

TO: Cindy Pogue, Pinal AMA

THRU: Drew Swieczkowski, Manager, Water Resources Section DMS

FROM: Alene McCracken, Hydrologist, Water Resources Section AMM

DATE: January 3, 2008

RE: Woodruff Water Co, Application for a permit to operate a non-exempt service well in the Pinal AMA. No. S-216240; **REVISED WELL IMPACT ANALYSIS** for well no. 55-215421, D-05-07 14 CAB

Hydrology has completed its re-evaluation of the above referenced application for a permit to drill or operate a non-exempt service area well with a reduced pumping rate (2,935.6 AFA vs. 2,943.7AFA vs. 3,145 AFA). A ten-foot drawdown analysis was performed by Hydrology for the well in D-05-07 14 CAB. Hydrology calculated a transmissivity value from a pump test of the well and used the specific yield from the Pinal AMA model to conduct both a standard Theis analysis and THWELLS calculation for the drawdown radius. One image well was used in the THWELLS analysis.

The initial rate reduction resulted in the 5-year, 10-foot drawdown radius was reduced but not quite enough to exclude one well (55-639134) from the impact area. Calculated drawdown at this well would have been 10.02 feet at the end of five years. Reducing the pumping rate an additional 5 gpm moved the impact radius enough to exclude this well. The predicted drawdown at the well is calculated at 9.99 feet. The results are presented below:

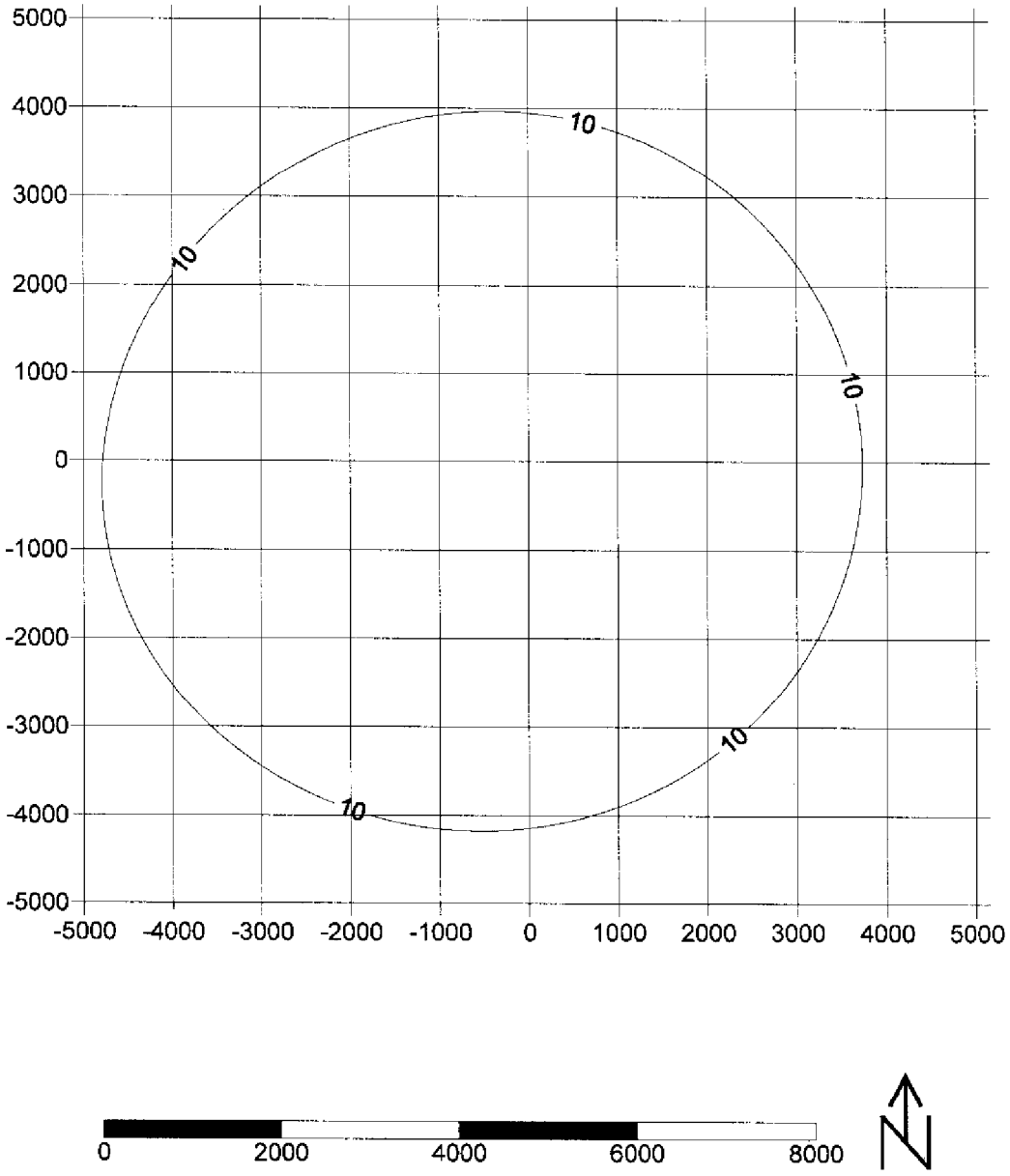
Well Location & registration number:	Analysis performed by	Transmissivity Value (gpd/ft)	Specific Yield	Pumping Volume AFA	Ten-Foot Drawdown Radius After Five Years
D-05-07 14 CAB 55-215421	Applicant	88,000	0.10	2,944 (1,825 gpm)	3,714-4,857
	ADWR	88,000	0.08	2,943.7 (1,825 gpm)	~3,750-4,875
				2,935.6 (1,820 gpm)	~3,687-4,812

According to the parameters of the application, the calculated drawdown at the well is 56.1 feet for the five-year time period at a pumping rate of 1,820 gpm. For the purpose of AMA review, please use Hydrology's calculated radius.

The location of the proposed well was also reviewed for water quality and subsidence. No additional water quality or subsidence monitoring is required.

Attachments

Woodruff Water Co.
55-215421/S-216240
D (5-7) 14 CAB
T=88,000 gpd/ft
Sy=0.08
Q=1820 gpm



Printed 1/3/2008

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION WELLS AND UNIFORM REGIONAL FLOW

Drawdown at 55-639134

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]
TRANSMISSIVITY = 88000 [gpd/ft]

STORAGE COEFFICIENT = .08

REGIONAL FLOW GRADIENT
(positive--downwards--in flow direction) = 0

REGIONAL FLOW DIRECTION
(horizontal angle in degrees
counter-clockwise from positive x-axis) = 0

REGIONAL FLOW OFFSET AT ORIGIN
(positive in downwards direction) = 0 [ft]

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1 (55-215421)

X-COORDINATE = 0 [ft]
Y-COORDINATE = 0 [ft]
PUMPING/INJECTION RATE = 2620800 [gpd] (1820 gpm)
TIME SINCE START PUMPING/INJECTION = 1825 [day]

WELL NO. 2 (Image Well)

X-COORDINATE = -22000 [ft]
Y-COORDINATE = -5000 [ft]
PUMPING/INJECTION RATE = 2620800 [gpd] (1820 gpm)
TIME SINCE START PUMPING/INJECTION = 1825 [day]

********** RESULTS @ Observation Well **********

---------- Drawdown in [ft] -- Time in [days] ----------

X-coordinate observation well = 1726 [ft]
Y-coordinate observation well = 3412 [ft]
55-639134

time	drawdown	time	drawdown	time	drawdown	time	drawdown
0.000	0.000	25.000	0.525	50.000	1.336	75.000	1.976
100.000	2.488	125.000	2.913	150.000	3.274	175.000	3.589
200.000	3.868	225.000	4.119	250.000	4.348	275.000	4.558
300.000	4.753	325.000	4.935	350.000	5.106	375.000	5.268
400.000	5.421	425.000	5.568	450.000	5.708	475.000	5.843
500.000	5.972	525.000	6.097	550.000	6.218	575.000	6.335
600.000	6.449	625.000	6.559	650.000	6.666	675.000	6.771
700.000	6.872	725.000	6.972	750.000	7.069	775.000	7.163
800.000	7.256	825.000	7.347	850.000	7.436	875.000	7.523
900.000	7.608	925.000	7.692	950.000	7.774	975.000	7.855
1000.000	7.934	1025.000	8.012	1050.000	8.088	1075.000	8.164
1100.000	8.238	1125.000	8.311	1150.000	8.382	1175.000	8.453
1200.000	8.523	1225.000	8.591	1250.000	8.659	1275.000	8.725
1300.000	8.791	1325.000	8.856	1350.000	8.919	1375.000	8.982
1400.000	9.044	1425.000	9.106	1450.000	9.166	1475.000	9.226
1500.000	9.285	1525.000	9.343	1550.000	9.401	1575.000	9.458
1600.000	9.514	1625.000	9.569	1650.000	9.624	1675.000	9.679
1700.000	9.732	1725.000	9.785	1750.000	9.838	1775.000	9.890
1800.000	9.941	1825.000	9.992				

---------- Drawdown in [ft] ----------

Y [ft]	<- X [ft] ->					
	-5000	-4900	-4800	-4700	-4600	-4500
-200.00	9.842	9.917	9.994	10.073	10.155	10.239
-100.00	9.839	9.914	9.991	10.071	10.153	10.237
0.00	9.834	9.910	9.987	10.067	10.149	10.233
100.00	9.828	9.903	9.980	10.060	10.142	10.227
200.00	9.819	9.894	9.972	10.051	10.133	10.218

Y [ft]	<- X [ft] ->					
	-200	-100	0	100	200	300
-4400.00	9.737	9.727	9.714	9.699	9.682	9.662
-4300.00	9.844	9.834	9.821	9.806	9.789	9.769
-4200.00	9.954	9.944	9.932	9.917	9.899	9.879
-4100.00	10.067	10.057	10.045	10.029	10.012	9.991
-4000.00	10.182	10.173	10.160	10.145	10.127	10.106
-3900.00	10.301	10.292	10.279	10.264	10.246	10.224
-200.00	22.842	23.968	24.496	23.942	22.790	21.601
-100.00	23.978	26.190	27.863	26.164	23.926	22.234
0.00	24.517	27.873	56.107	27.847	24.465	22.486
100.00	23.972	26.184	27.857	26.158	23.920	22.228
200.00	22.830	23.956	24.484	23.930	22.778	21.590
3700.00	10.333	10.327	10.318	10.305	10.289	10.269
3800.00	10.203	10.197	10.187	10.174	10.159	10.140
3900.00	10.076	10.070	10.060	10.047	10.032	10.013
4000.00	9.953	9.946	9.936	9.924	9.908	9.890
4100.00	9.832	9.825	9.815	9.803	9.788	9.770
4200.00	9.714	9.707	9.697	9.685	9.670	9.653

Y [ft]	<- X [ft] ->					
	3400	3500	3600	3700	3800	3900
-200.00	10.470	10.323	10.181	10.042	9.907	9.775
-100.00	10.474	10.327	10.184	10.045	9.910	9.778
0.00	10.474	10.327	10.184	10.045	9.910	9.778
100.00	10.470	10.323	10.181	10.042	9.906	9.775
200.00	10.462	10.316	10.173	10.035	9.900	9.768

Well Spacing Review Sheet

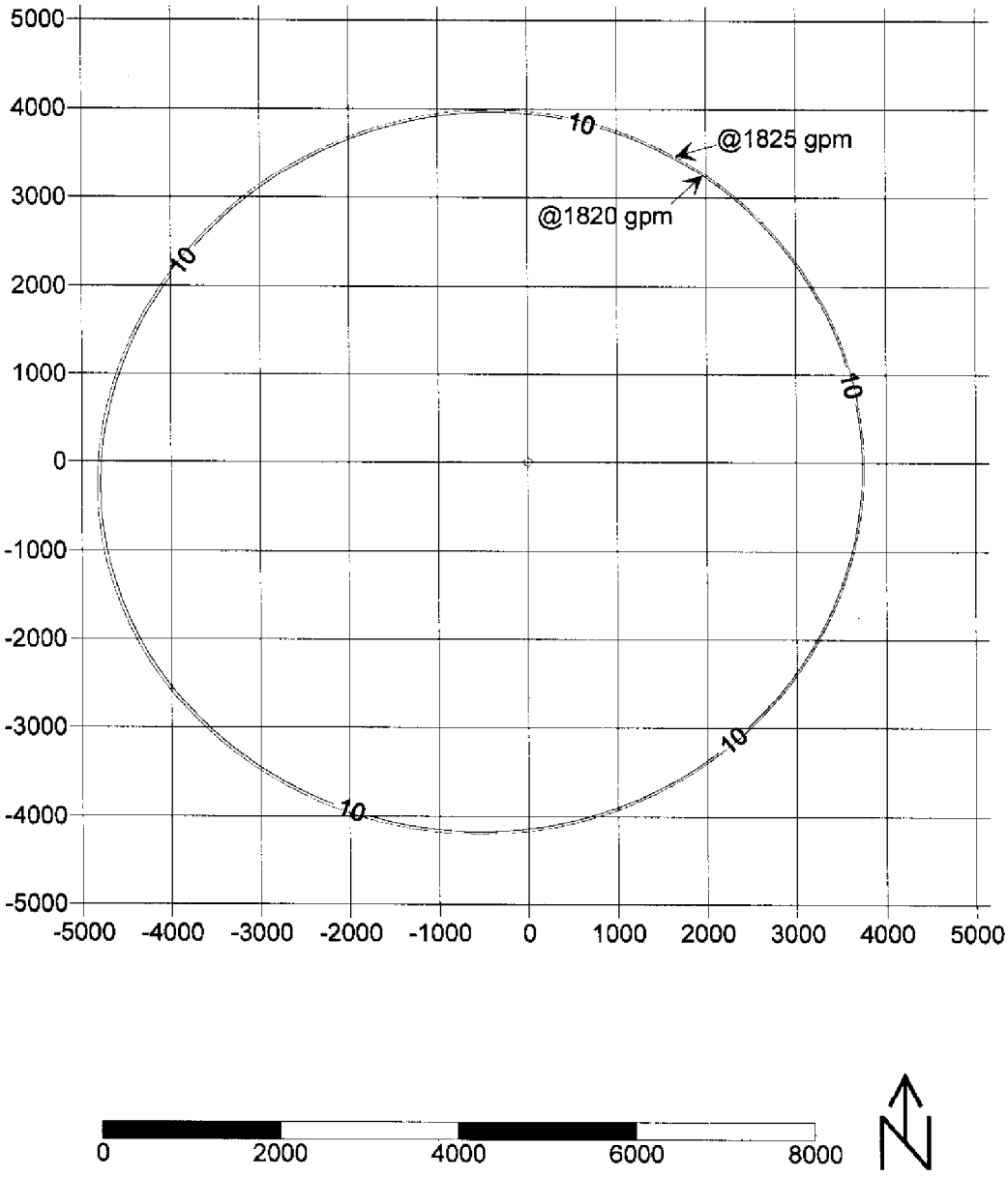
Well Reg. No.	***55-215421***		Well Location:	***D (5-7) 14 CAB***
Applicant:	***Woodruff Water Co.***			
Depth of well:	***1120***	feet		
Diameter:	***18.625***	in.		
Proposed Well:	***no***	Replacement:	***NA***	
Existing:	***yes***	Replacement no:		
Proposed volume:	***2,944***	acre-ft/yr		
Q =	***1825***	gpm		
T =	***88,000***	gpd/ft	T Source:	***Determined from Pump test of well***
Sy =	***0.08***		Sy Source:	***Pinal Model***
10 foot drawdown radius =	~3,750 -4,875	***feet (see attached map)***		
drawdown at well =	56.27	***feet***		
WQARF Concerns:		***none***		
Subsidence Concerns:		***none***		

Analyzed by: _____ Date: 12/21/07

Checked by: _____ Date: 12-21-07

Printed 12/21/2007

Woodruff Water Co.
55-215421/S-216240
D (5-7) 14 CAB
T=88,000 gpd/ft
Sy=0.08
Q=1820 gpm



Printed 1/3/2008

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION WELLS AND UNIFORM REGIONAL FLOW

Drawdown at 55-639134

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]
TRANSMISSIVITY = 88000 [gpd/ft]

STORAGE COEFFICIENT = .08

REGIONAL FLOW GRADIENT
(positive--downwards--in flow direction) = 0

REGIONAL FLOW DIRECTION
(horizontal angle in degrees
counter-clockwise from positive x-axis) = 0

REGIONAL FLOW OFFSET AT ORIGIN
(positive in downwards direction) = 0 [ft]

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1 (55-215421)

X-COORDINATE = 0 [ft]
Y-COORDINATE = 0 [ft]
PUMPING/INJECTION RATE = 2628135 [gpd]
TIME SINCE START PUMPING/INJECTION = 1825 [day]

WELL NO. 2 (Image Well)

X-COORDINATE = -22000 [ft]
Y-COORDINATE = -5000 [ft]
PUMPING/INJECTION RATE = 2628135 [gpd]
TIME SINCE START PUMPING/INJECTION = 1825 [day]

---------- Drawdown in [ft] -- Time in [days] ----------

X-coordinate observation well = 1726 [ft]
Y-coordinate observation well = 3412 [ft]

time	drawdown	time	drawdown	time	drawdown	time	drawdown
0.000	0.000	25.000	0.527	50.000	1.339	75.000	1.981
100.000	2.495	125.000	2.921	150.000	3.283	175.000	3.599
200.000	3.879	225.000	4.131	250.000	4.360	275.000	4.570
300.000	4.766	325.000	4.948	350.000	5.120	375.000	5.282
400.000	5.437	425.000	5.584	450.000	5.724	475.000	5.859
500.000	5.989	525.000	6.115	550.000	6.236	575.000	6.353
600.000	6.467	625.000	6.577	650.000	6.685	675.000	6.790
700.000	6.892	725.000	6.991	750.000	7.088	775.000	7.184
800.000	7.276	825.000	7.367	850.000	7.457	875.000	7.544
900.000	7.630	925.000	7.713	950.000	7.796	975.000	7.877
1000.000	7.956	1025.000	8.034	1050.000	8.111	1075.000	8.187
1100.000	8.261	1125.000	8.334	1150.000	8.406	1175.000	8.477
1200.000	8.547	1225.000	8.615	1250.000	8.683	1275.000	8.750
1300.000	8.816	1325.000	8.880	1350.000	8.944	1375.000	9.008
1400.000	9.070	1425.000	9.131	1450.000	9.192	1475.000	9.252
1500.000	9.311	1525.000	9.370	1550.000	9.427	1575.000	9.484
1600.000	9.541	1625.000	9.596	1650.000	9.651	1675.000	9.706
1700.000	9.760	1725.000	9.813	1750.000	9.865	1775.000	9.917
1800.000	9.969	1825.000	10.020				

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION WELLS AND UNIFORM REGIONAL FLOW

55-215421

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]
TRANSMISSIVITY = 88000 [gpd/ft]

STORAGE COEFFICIENT = .08

REGIONAL FLOW GRADIENT
(positive--downwards--in flow direction) = 0

REGIONAL FLOW DIRECTION
(horizontal angle in degrees
counter-clockwise from positive x-axis) = 0

REGIONAL FLOW OFFSET AT ORIGIN
(positive in downwards direction) = 0 [ft]

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1 (55-215421)

X-COORDINATE = 0 [ft]
Y-COORDINATE = 0 [ft]
PUMPING/INJECTION RATE = 2628135 [gpd]
TIME SINCE START PUMPING/INJECTION = 1825 [day]

WELL NO. 2 (Image Well)

X-COORDINATE = -22000 [ft]
Y-COORDINATE = -5000 [ft]
PUMPING/INJECTION RATE = 2628135 [gpd]
TIME SINCE START PUMPING/INJECTION = 1825 [day]

********** RESULTS **********

---------- Drawdown in [ft] ----------

Y [ft]	<- X [ft] ->					
	-5000	-4900	-4800	-4700	-4600	-4500
-200.00	9.869	9.945	10.022	10.102	10.184	10.268
-100.00	9.867	9.942	10.020	10.099	10.182	10.266
0.00	9.862	9.937	10.015	10.095	10.177	10.262
100.00	9.855	9.931	10.009	10.088	10.171	10.256
200.00	9.847	9.922	10.000	10.080	10.162	10.247

Y [ft]	<- X [ft] ->					
	-200	-100	0	100	200	300
-4400.00	9.764	9.754	9.741	9.726	9.709	9.689
-4300.00	9.872	9.862	9.849	9.834	9.816	9.797
-4200.00	9.982	9.972	9.960	9.945	9.927	9.907
-4100.00	10.095	10.085	10.073	10.058	10.040	10.019
-4000.00	10.211	10.201	10.189	10.174	10.156	10.135
-3900.00	10.330	10.321	10.308	10.293	10.274	10.253
-200.00	22.907	24.036	24.566	24.010	22.854	21.662
-100.00	24.046	26.264	27.942	26.238	23.994	22.296
0.00	24.586	27.952	56.269	27.926	24.534	22.549
100.00	24.040	26.258	27.936	26.232	23.988	22.291
200.00	22.894	24.024	24.554	23.998	22.843	21.651
3700.00	10.362	10.356	10.347	10.334	10.318	10.298
3800.00	10.232	10.225	10.216	10.203	10.187	10.168
3900.00	10.105	10.098	10.088	10.076	10.060	10.042
4000.00	9.980	9.974	9.964	9.952	9.936	9.918
4100.00	9.859	9.853	9.843	9.831	9.815	9.798
4200.00	9.741	9.734	9.725	9.712	9.698	9.680

Y [ft]	<- X [ft] ->					
	3400	3500	3600	3700	3800	3900
-200.00	10.499	10.352	10.209	10.070	9.935	9.803
-100.00	10.503	10.356	10.213	10.074	9.938	9.806
0.00	10.503	10.356	10.213	10.074	9.938	9.805
100.00	10.500	10.352	10.209	10.070	9.934	9.802
200.00	10.491	10.345	10.202	10.063	9.927	9.796

Theis Calculation

Well Reg. No. 55-215421 Well Location D (5-7) 14 CAB

Applicant: Woodruff Water Co.

			2943.7 acre-ft/yr
t =	1825 days	Q =	1825 gpm
s =	25 ft	T =	88000 gpd/ft
u =	1.53E-05	Sy =	0.08

W(u) = 10.5185

25 foot drawdown radius = 128.16 ft = 0.02 mi

			2943.7 acre-ft/yr
t =	1825 days	Q =	1825 gpm
s =	10 ft	T =	88000 gpd/ft
u =	8.49E-03	Sy =	0.08

W(u) = 4.2074

10 foot drawdown radius = 3018.98 ft = 0.57 mi

			2943.7 acre-ft/yr
t =	1825 days	Q =	1825 gpm
s =	1 ft	T =	88000 gpd/ft
u =	6.49E-01	Sy =	0.08

W(u) = 0.4207

1 foot drawdown radius = 26395.47 ft = 5.00 mi

r =	1 ft		
u =	9.3151E-10		drawdown at well
W(u) =	20.217	s =	48.05 ft

Equations:

$$s = \frac{114.6\,Q}{T} W(u) \qquad W(u) = \frac{sT}{114.6Q}$$

$$u = \frac{1.87\,r^2\,Sy}{Tt} \qquad r = \sqrt{\frac{Tut}{1.87\,Sy}}$$

where:
s = drawdown, ft
r = radius from well, ft
t = time, days
Q = well discharge, gpm
T = transmissivity, gpd/ft
Sy = specific yield or storage coeff., %
u, W(u) = argument, well function

1825 gpm
2628135 gpd

WOODRUFF
Water & Utility

RECEIVED
DEC 17 2007
PINAL AMA

December 14, 2007

Ms. Cindy Pogue, Water Resource Specialist
Pinal Active Management Area
Arizona Department of Water Resources
1729 N. Trekell Road, Suite 105
Casa Grande, Arizona 85222

RE: Application for Permission to Operate Non-Exempt, Service Area Well for Woodruff Water Company
Well #55-215421
Application S 216240 (referred to in previous correspondence as S 215977)

Dear Ms. Pogue:

Enclosed is a revised impact analysis from Southwest Ground-water Consultants including notarized waivers for 5 of the 6 wells identified in Mr. Randy Edmond's September 24, 2007 letter, as potentially impacted by new well # 55-215421.

We did not get the 6th waiver at this time. Therefore we are reducing our requested pumpage from well # 55-215421 to 1,825 gallons per minute or 2,943.7 acre feet per year. This would limit the impact to well # 55-639134, the well without the waiver, to less than 10 feet of additional draw down.

The enclosed document from Southwest Ground-water Consultants, Inc., details the new pumping rate and its impact. Thank you for your assistance in this process. If you have any questions, please call me at (602) 956-7200.

Sincerely,

Brian R. Hall
General Manager

cc: Kevin Hebert, Southwest Ground-water Consultants, Inc.
Phil Zeblisky, General Manager, Sandia
file

The Esplanade
2555 East Camelback Road, Suite 700
Phoenix, Arizona 85016
(602) 956-7200 * FAX (602) 956-2313

Southwest Ground-water Consultants, Inc.

December 12, 2007

Ms. Cynthia Pogue
Water Resource Specialist
Pinal Active Management Area
Arizona Department of Water Resources
1729 North Trekell Road, Suite 105
Casa Grande, Arizona 85222

SUBJECT: Application for Permission to Operate a Non-Exempt, Service Area Well for Woodruff Water Company – Application S-~~215977~~ 216240, Well No. 55-215421

Dear Ms. Pogue:

In response to the letter from Mr. Randy Edmond dated September 24, 2007, Southwest Ground-water Consultants, Inc. (SGC) has prepared the following addressing concerns regarding potentially impacted wells due to the proposed pumping at Woodruff Water Company (Woodruff) Well #3 (ADWR Well Registration No. 55-215421). Woodruff Well #3 is located in the northwest quarter of the northeast quarter of the southwest quarter of Section 14 in Township 5 South and Range 7 East of the Gila and Salt River Baseline and Meridian (Attachment I, Figure 1). The Department's concern is identified by the bulleted item below and SGC's response to that concern follows.

- The Arizona Department of Water Resources (Department) has completed an impact study of the proposed well for which you are applying in the above referenced application. The review has concluded that the proposed site for the new well will have a 10-foot drawdown radius ranging from 4,250-5,750 feet. Records of the Department indicate that the following wells could be impacted by your well: 55-639134, 55-621834, 55-621828, 55-638458, 55-621829, and 55-621827.

Waivers were obtained for wells 55-621834, 55-621828, 55-638458, 55-621829, and 55-621827. The original signed waivers for those wells are included in Attachment II.

The coordinates of Woodruff Well #3 (55-215421) and the only other potentially impacted well (55-639134) were located in the field using a hand-held global positioning system (GPS) unit. The coordinates were recorded in the WGS 1984 coordinate system and converted to UTM NAD27 (Zone 12N) using ArcMap 9.2 software. The coordinates for both wells (in each coordinate system) are shown in the chart below.

3033 N. 44th Street, Suite 120
Phoenix, Arizona 85018
(602) 955-5547 Fax (602) 955-7585

Phoenix, Arizona
Prescott, Arizona

ADWR Regstration Number	WGS 1984		UTM NAD 27	
55-215421	32° 59' 18" N	111° 36' 49" W	3649947.725 N	442738.140 E
55-639134	32° 59' 35" N	111° 36' 09" W	3650473.870 N	443778.261 E

Based on these coordinates, the calculated distance between these two wells is approximately 3,824 feet. The field-verified well locations are presented in Attachment I (Figure 1).

Using the field-verified well locations, a new Theis impact analysis and THWELLS calculation were performed. As in the previous analysis dated July 24, 2007, a transmissivity value of 88,000 gallons per day per foot (gpd/ft), and a saturated thickness of 932 feet were used in the analysis. As used in the impact analysis performed by the Department's Hydrology division dated September 17, 2007, a specific yield of 0.08 was selected.

Drawdown was calculated assuming that pumping was continuous (24 hours per day) for five years (1,825 days). In order to demonstrate that ADWR Well No. 55-639134 is not impacted by the withdrawal of the proposed annual volume of 2,943.7 ac-ft/yr from Woodruff Well #3 (55-215421), SGC calculated the impact on the well using the field-verified locations with THWELLS and the "Calculate for Individual Observation Wells" option. The results of this method indicate that approximately 9.9 feet of drawdown will occur at 55-639134 at the end of 5 years, which complies with ADWR Rule R12-15-1302. The 5-year, 10-foot drawdown contour, which was calculated based on an annual withdrawal volume of 2,943.7 acre-feet per year (ac-ft/yr) (equivalent to 1,825 gpm), is presented in Attachment I (Figure 1). The THWELLS input-output file demonstrating the drawdown at well 55-639134 and the THWELLS input-output file for the 5-year impact analysis are included in Attachment III.

Based on the calculations provided and the impact waivers presented, ADWR Registered Well No. 55-215421 can be permitted for a maximum annual withdrawal volume of 2,943.7 ac-ft/yr (1,825 gpm) while still remaining in compliance with ADWR Rule R12-15-1302.

Please call if you have any questions or require additional information.

Sincerely,

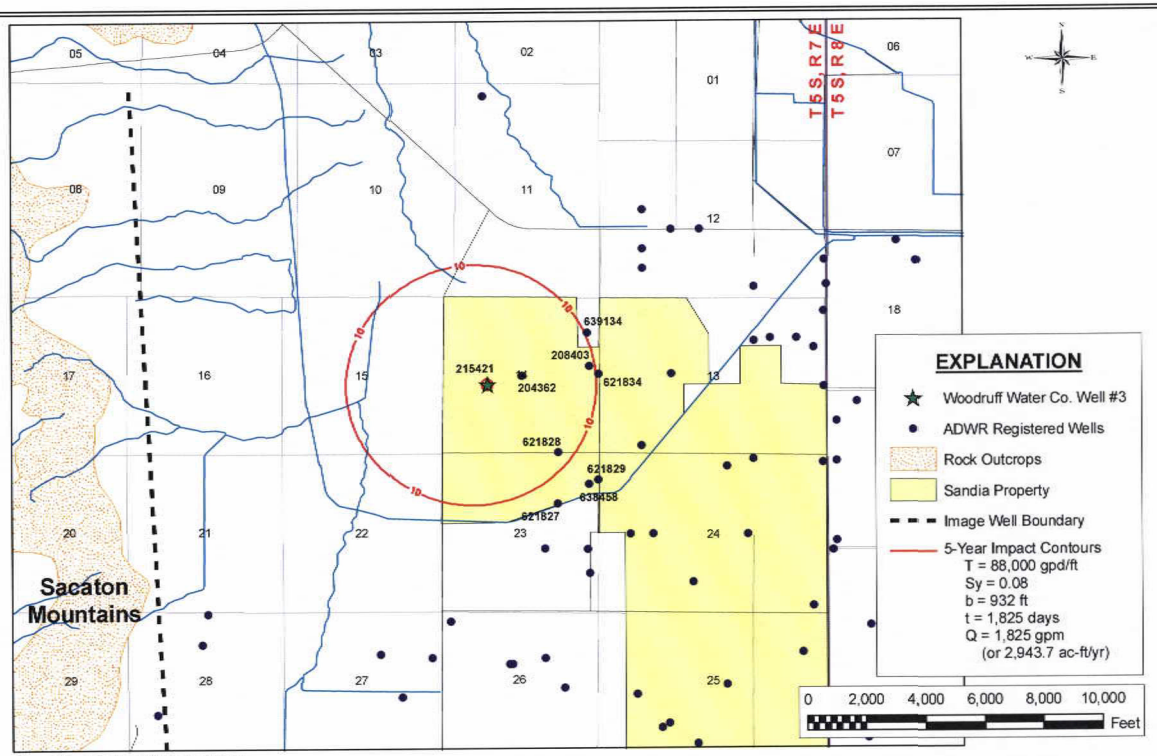
Southwest Ground-water Consultants, Inc.

Kevin Hebert, R.G.
Project Manager

Attachments:
Attachment I: Figure 1: 5-Year Well Impact Analysis
Attachment II: Well Impact Waivers
Attachment III: THWELLS Input/Output Files

ATTACHMENT I

FIGURE 1



Base Map: ADWR GIS Data (2001)
Well Data: 55 Wells Database (2007)

Southwest Ground-water Consultants, Inc.

December 11, 2007 **Project B.1505**

5-YEAR WELL IMPACT ANALYSIS
WOODRUFF PRODUCTION WELL #3 (55-215421)

Sandia, Pinal County, Arizona

Figure 1

ATTACHMENT II

SIGNED ORIGINAL WELL IMPACT WAIVERS

Arizona Department of Water Resources
Well Impact Waiver
10 Feet of Additional Drawdown

The undersigned is the registered owner (or an authorized representative of the owner) of a well that has been assigned well registration number 55-**621834** as reflected in the Arizona Department of Water Resources (ADWR) well registration records. The undersigned hereby acknowledges the following:

1. **Woodruff Water Company** ("Applicant") has filed or intends to file an Application to Drill or Operate a Non-Exempt Well Within an Active Management Area ("Application"). If the Application has not yet been filed with ADWR, a copy of the Application is attached. If the Application has been filed with ADWR, the Application number is the following: **S-~~215977~~ 216240 Well #55-215421.**

2. ADWR or the Applicant has performed a well impact analysis utilizing the proposed maximum annual withdrawal volume(s) reflected in the Application in accordance with A.R.S. § 45-599 or 45-834.01. Based on this analysis, which considers only withdrawals from the proposed well or wells identified in the Application ("Proposed Well(s)") at the withdrawal rate(s) set forth in the Application, ***the impact on the undersigned's well will likely be greater than 10 feet of additional drawdown after the first five (5) years of withdrawals from the Proposed Wells(s)***. ADWR considers this to be an unreasonable impact.

3. The undersigned also understands that additional drawdown will likely occur at the undersigned's well during the same five-year period as a result of the undersigned's own withdrawals and withdrawals from other wells, and in fact drawdown at the undersigned's well may currently exceed 10 feet over a five-year period.

Notwithstanding the preceding, the undersigned hereby consents to the withdrawal of water from the Proposed Well(s) at the location(s) identified in the Application and at withdrawal rate(s) equal to or less than the maximum annual volume(s) set forth in the Application. The undersigned waives any impacts from the Proposed Well(s) at the proposed maximum annual withdrawal volume(s) set forth in the Application.

Carl Wuertz

Signature of Well Owner (or authorized representative)

11-30-07

Date

Carol Wuertz Behrens, Member

Printed Name and Title

Official Seal
NOTARY PUBLIC
STATE OF ARIZONA
County of Pinal
YOLANDA S. GUERRERO
My Commission Expires January 21, 2008

STATE OF ARIZONA)
)SS.
County of PINAL)

SUBSCRIBED AND SWORN TO before me this 30TH day of NOVEMBER, 2007.

Yolanda S. Guerrero

Notary Public

Arizona Department of Water Resources
Well Impact Waiver
10 Feet of Additional Drawdown

The undersigned is the registered owner (or an authorized representative of the owner) of a well that has been assigned well registration number 55-**621828** as reflected in the Arizona Department of Water Resources (ADWR) well registration records. The undersigned hereby acknowledges the following:

1. **Woodruff Water Company** ("Applicant") has filed or intends to file an Application to Drill or Operate a Non-Exempt Well Within an Active Management Area ("Application"). If the Application has not yet been filed with ADWR, a copy of the Application is attached. If the Application has been filed with ADWR, the Application number is the following: **S-~~215977~~ 216240 Well #55-215421.**

2. ADWR or the Applicant has performed a well impact analysis utilizing the proposed maximum annual withdrawal volume(s) reflected in the Application in accordance with A.R.S. § 45-599 or 45-834.01. Based on this analysis, which considers only withdrawals from the proposed well or wells identified in the Application ("Proposed Well(s)") at the withdrawal rate(s) set forth in the Application, ***the impact on the undersigned's well will likely be greater than 10 feet of additional drawdown after the first five (5) years of withdrawals from the Proposed Wells(s)***. ADWR considers this to be an unreasonable impact.

3. The undersigned also understands that additional drawdown will likely occur at the undersigned's well during the same five-year period as a result of the undersigned's own withdrawals and withdrawals from other wells, and in fact drawdown at the undersigned's well may currently exceed 10 feet over a five-year period.

Notwithstanding the preceding, the undersigned hereby consents to the withdrawal of water from the Proposed Well(s) at the location(s) identified in the Application and at withdrawal rate(s) equal to or less than the maximum annual volume(s) set forth in the Application. The undersigned waives any impacts from the Proposed Well(s) at the proposed maximum annual withdrawal volume(s) set forth in the Application.

Carl Wuertz Behrens

Signature of Well Owner (or authorized representative)

11-30-07

Date

Carl Wuertz & Behrens, member

Printed Name and Title

Official Seal
NOTARY PUBLIC
STATE OF ARIZONA
County of Pinal
YOLANDA S. GUERRERO
My Commission Expires January 21, 2008

STATE OF ARIZONA)
)SS.
County of PINAL)

SUBSCRIBED AND SWORN TO before me this 30TH day of NOVEMBER, 2007.

Yolanda S. Guerrero

Notary Public

Arizona Department of Water Resources
Well Impact Waiver
10 Feet of Additional Drawdown

The undersigned is the registered owner (or an authorized representative of the owner) of a well that has been assigned well registration number 55-**638458** as reflected in the Arizona Department of Water Resources (ADWR) well registration records. The undersigned hereby acknowledges the following:

1. **Woodruff Water Company** ("Applicant") has filed or intends to file an Application to Drill or Operate a Non-Exempt Well Within an Active Management Area ("Application"). If the Application has not yet been filed with ADWR, a copy of the Application is attached. If the Application has been filed with ADWR, the Application number is the following: **S-~~215977~~ 216240 Well #55-215421.**

2. ADWR or the Applicant has performed a well impact analysis utilizing the proposed maximum annual withdrawal volume(s) reflected in the Application in accordance with A.R.S. § 45-599 or 45-834.01. Based on this analysis, which considers only withdrawals from the proposed well or wells identified in the Application ("Proposed Well(s)") at the withdrawal rate(s) set forth in the Application, ***the impact on the undersigned's well will likely be greater than 10 feet of additional drawdown after the first five (5) years of withdrawals from the Proposed Wells(s)***. ADWR considers this to be an unreasonable impact.

3. The undersigned also understands that additional drawdown will likely occur at the undersigned's well during the same five-year period as a result of the undersigned's own withdrawals and withdrawals from other wells, and in fact drawdown at the undersigned's well may currently exceed 10 feet over a five-year period.

Notwithstanding the preceding, the undersigned hereby consents to the withdrawal of water from the Proposed Well(s) at the location(s) identified in the Application and at withdrawal rate(s) equal to or less than the maximum annual volume(s) set forth in the Application. The undersigned waives any impacts from the Proposed Well(s) at the proposed maximum annual withdrawal volume(s) set forth in the Application.

Howard Wuertz
Signature of Well Owner (or authorized representative)

11-30-07
Date

HOWARD WUERTZ OWNER
Printed Name and Title

Official Seal
NOTARY PUBLIC
STATE OF ARIZONA
County of Pinal
YOLANDA S. GUERRERO
My Commission Expires January 21, 2008

STATE OF ARIZONA)
)SS.
County of PINAL)

SUBSCRIBED AND SWORN TO before me this 30TH day of NOVEMBER, 2007

Yolanda S. Guerrero
Notary Public

DIRECTION TO SIGN
ADWR Well Impact Waivers For Two Existing Wells Within Trust Property

Effective Date:	November 29, 2007
Direction from:	Wildcat Farms, LLC, an Arizona limited liability company ("Wildcat")
Direction to:	First American Title Insurance Company, a California corporation, as Trustee
Reference:	First American Title Insurance Company, a California corporation, acting not in its corporate capacity, but solely as Trustee of its trust no. 8573 ("Trust 8573") and First American Title Insurance Company , a California corporation, acting not in its corporate capacity, but solely as Trustee of its trust no. 8583 ("Trust 8583")

Direction: Woodruff Water Company ("Woodruff"), the certificated provider of water service to the land within the above referenced trusts, is in the process of permitting a water well for use in providing water service to property that is currently owned by the above referenced trusts ("the New Well").

To obtain this permit Woodruff must obtain well impact waivers for all existing wells that may experience drawdown of greater than 10 feet after the first five years of operation of the New Well. The Arizona Department of Water Resources ("ADWR") has identified two wells which are owned by the above referenced trusts and which will be impacted by the New Well (ADWR Registration Number 55-621827 and ADWR Registration Number 55-621829) ("the Impacted Wells").

Wildcat is the First Beneficiary of the trusts in which the Impacted Wells are located. Wildcat asserts that permitting and operation of the New Well is required to establish water service to the overall Sandia Master Planned Community and such establishment of water service will be beneficial to the Trusts and to Wildcat.

In view of the foregoing, you are directed to sign these waivers.

By: HOWARD WUERTZ

Seller Representative

By: CAROL ANN WUERTZ

Seller Representative

Arizona Department of Water Resources
Well Impact Waiver
10 Feet of Additional Drawdown

The undersigned is the registered owner (or an authorized representative of the owner) of a well that has been assigned well registration number 55-**621829** as reflected in the Arizona Department of Water Resources (ADWR) well registration records. The undersigned hereby acknowledges the following:

1. **Woodruff Water Company** ("Applicant") has filed or intends to file an Application to Drill or Operate a Non-Exempt Well Within an Active Management Area ("Application"). If the Application has not yet been filed with ADWR, a copy of the Application is attached. If the Application has been filed with ADWR, the Application number is the following: **S-~~215977~~ 216240 Well #55-215421.**

2. ADWR or the Applicant has performed a well impact analysis utilizing the proposed maximum annual withdrawal volume(s) reflected in the Application in accordance with A.R.S. § 45-599 or 45-834.01. Based on this analysis, which considers only withdrawals from the proposed well or wells identified in the Application ("Proposed Well(s)") at the withdrawal rate(s) set forth in the Application, ***the impact on the undersigned's well will likely be greater than 10 feet of additional drawdown after the first five (5) years of withdrawals from the Proposed Wells(s)***. ADWR considers this to be an unreasonable impact.

3. The undersigned also understands that additional drawdown will likely occur at the undersigned's well during the same five-year period as a result of the undersigned's own withdrawals and withdrawals from other wells, and in fact drawdown at the undersigned's well may currently exceed 10 feet over a five-year period.

Notwithstanding the preceding, the undersigned hereby consents to the withdrawal of water from the Proposed Well(s) at the location(s) identified in the Application and at withdrawal rate(s) equal to or less than the maximum annual volume(s) set forth in the Application. The undersigned waives any impacts from the Proposed Well(s) at the proposed maximum annual withdrawal volume(s) set forth in the Application.

First American Title Insurance Company, 8583
a California Corp as Trustee of Tr. 8513

Charlotte A. Knoll — 12-3-2007

Signature of Well Owner (or authorized representative) Date

Charlotte A. Knoll, Senior Trust Officer

Printed Name and Title

STATE OF ARIZONA)
)SS.
County of Maricopa)

SUBSCRIBED AND SWORN TO before me this 3rd day of Dec., 2007.

Margarita Garcia
Notary Public

OFFICIAL SEAL
MARGARITA GARCIA
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
My Comm. Expires November 29, 2009

First American Title 1827

Arizona Department of Water Resources
Well Impact Waiver
10 Feet of Additional Drawdown

The undersigned is the registered owner (or an authorized representative of the owner) of a well that has been assigned well registration number 55-**621827** as reflected in the Arizona Department of Water Resources (ADWR) well registration records. The undersigned hereby acknowledges the following:

1. **Woodruff Water Company** ("Applicant") has filed or intends to file an Application to Drill or Operate a Non-Exempt Well Within an Active Management Area ("Application"). If the Application has not yet been filed with ADWR, a copy of the Application is attached. If the Application has been filed with ADWR, the Application number is the following: **S-~~215977~~ 216240 Well #55-215421.**

2. ADWR or the Applicant has performed a well impact analysis utilizing the proposed maximum annual withdrawal volume(s) reflected in the Application in accordance with A.R.S. § 45-599 or 45-834.01. Based on this analysis, which considers only withdrawals from the proposed well or wells identified in the Application ("Proposed Well(s)") at the withdrawal rate(s) set forth in the Application, ***the impact on the undersigned's well will likely be greater than 10 feet of additional drawdown after the first five (5) years of withdrawals from the Proposed Wells(s)***. ADWR considers this to be an unreasonable impact.

3. The undersigned also understands that additional drawdown will likely occur at the undersigned's well during the same five-year period as a result of the undersigned's own withdrawals and withdrawals from other wells, and in fact drawdown at the undersigned's well may currently exceed 10 feet over a five-year period.

Notwithstanding the preceding, the undersigned hereby consents to the withdrawal of water from the Proposed Well(s) at the location(s) identified in the Application and at withdrawal rate(s) equal to or less than the maximum annual volume(s) set forth in the Application. The undersigned waives any impacts from the Proposed Well(s) at the proposed maximum annual withdrawal volume(s) set forth in the Application.

First American Title Insurance Company, a California Corp as Trustee of Tr. 85736858 3
Charlotte A. Knoll — 12-3-2007

Signature of Well Owner (or authorized representative) Date

Charlotte A. Knoll, Senior Trust Officer

Printed Name and Title

STATE OF ARIZONA)
)SS.
County of Maricopa)

SUBSCRIBED AND SWORN TO before me this 3rd day of Dec., 2007.

Margarita Garcia
Notary Public

OFFICIAL SEAL
MARGARITA GARCIA
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
My Comm. Expires November 29, 2009

ATTACHMENT III

THWELLS INPUT AND OUTPUT FILES

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION WELLS AND UNIFORM REGIONAL FLOW

Impact at ADWR Well No. 55-639134

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS	=	932 [ft]
TRANSMISSIVITY	=	88000 [gpd/ft]
STORAGE COEFFICIENT	=	.08
REGIONAL FLOW GRADIENT (positive--downwards--in flow direction)	=	0
REGIONAL FLOW DIRECTION (horizontal angle in degrees counter-clockwise from positive x-axis)	=	0
REGIONAL FLOW OFFSET AT ORIGIN (positive in downwards direction)	=	0 [ft]

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS	=	932 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1

X-COORDINATE	=	1452624 [ft]
Y-COORDINATE	=	1.197548E+07 [ft]
PUMPING/INJECTION RATE	=	2628000 [gpd]
TIME SINCE START PUMPING/INJECTION	=	1825 [day]

WELL NO. 2

X-COORDINATE	=	1429617 [ft]
Y-COORDINATE	=	1.197421E+07 [ft]
PUMPING/INJECTION RATE	=	2628000 [gpd]
TIME SINCE START PUMPING/INJECTION	=	1825 [day]

---------- Drawdown in [ft] -- Time in [days] ----------

X-coordinate observation well = 1456036 [ft]
Y-coordinate observation well = 1.197721E+07 [ft]

time	drawdown	time	drawdown	time	drawdown	time	drawdown
0.000	0.000	1825.000	9.885				

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY
CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION
WELLS AND UNIFORM REGIONAL FLOW

Woodruff Well #3 Impact Analysis

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS	=	932 [ft]
TRANSMISSIVITY	=	88000 [gpd/ft]
STORAGE COEFFICIENT	=	.08
REGIONAL FLOW GRADIENT (positive--downwards--in flow direction)	=	0
REGIONAL FLOW DIRECTION (horizontal angle in degrees counter-clockwise from positive x-axis)	=	0
REGIONAL FLOW OFFSET AT ORIGIN (positive in downwards direction)	=	0 [ft]

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS	=	932 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1

X-COORDINATE	=	1452624 [ft]
Y-COORDINATE	=	1.197548E+07 [ft]
PUMPING/INJECTION RATE	=	2628000 [gpd]
TIME SINCE START PUMPING/INJECTION	=	1825 [day]

WELL NO. 2

X-COORDINATE	=	1429617 [ft]
Y-COORDINATE	=	1.197421E+07 [ft]
PUMPING/INJECTION RATE	=	2628000 [gpd]
TIME SINCE START PUMPING/INJECTION	=	1825 [day]

---------- Drawdown in [ft] ----------

Y [ft]	<- X [ft] ->					
	1447368	1447475	1447582	1447689	1447796	1447903
%11970876.00	8.245	8.278	8.310	8.344	8.377	8.411
%11970983.00	8.295	8.329	8.363	8.397	8.432	8.466
%11971090.00	8.345	8.380	8.415	8.450	8.486	8.522
%11971197.00	8.395	8.430	8.466	8.503	8.540	8.577
%11971304.00	8.444	8.481	8.518	8.556	8.594	8.633
%11971411.00	8.493	8.531	8.569	8.608	8.648	8.688
%11971518.00	8.541	8.580	8.620	8.660	8.701	8.742
%11971625.00	8.589	8.629	8.670	8.712	8.754	8.797
%11971732.00	8.637	8.678	8.721	8.763	8.807	8.851
%11971839.00	8.684	8.727	8.770	8.814	8.859	8.905
%11971946.00	8.730	8.774	8.819	8.865	8.911	8.958
%11972053.00	8.776	8.822	8.868	8.915	8.962	9.011
%11972160.00	8.822	8.868	8.916	8.964	9.013	9.063
%11972267.00	8.866	8.914	8.963	9.013	9.063	9.115
%11972374.00	8.910	8.959	9.009	9.061	9.113	9.165
%11972481.00	8.953	9.004	9.055	9.108	9.161	9.216
%11972588.00	8.996	9.047	9.100	9.154	9.209	9.265
%11972695.00	9.037	9.090	9.144	9.199	9.256	9.313
%11972802.00	9.077	9.132	9.187	9.244	9.302	9.361
%11972909.00	9.117	9.173	9.229	9.287	9.347	9.407
%11973016.00	9.155	9.212	9.270	9.330	9.391	9.453
%11973123.00	9.193	9.251	9.310	9.371	9.433	9.497
%11973230.00	9.229	9.288	9.349	9.411	9.475	9.540
%11973337.00	9.263	9.324	9.386	9.450	9.515	9.582
%11973444.00	9.297	9.359	9.422	9.487	9.554	9.622
%11973551.00	9.329	9.392	9.457	9.523	9.591	9.660
%11973658.00	9.360	9.424	9.490	9.557	9.627	9.698
%11973765.00	9.389	9.455	9.521	9.590	9.661	9.733
%11973872.00	9.417	9.483	9.551	9.621	9.693	9.767
%11973979.00	9.443	9.511	9.580	9.651	9.724	9.799
%11974086.00	9.468	9.536	9.606	9.678	9.753	9.829
%11974193.00	9.491	9.560	9.631	9.704	9.779	9.857
%11974300.00	9.512	9.582	9.654	9.728	9.804	9.883
%11974407.00	9.531	9.602	9.675	9.750	9.827	9.907
%11974514.00	9.549	9.620	9.694	9.770	9.848	9.928
%11974621.00	9.564	9.637	9.711	9.788	9.867	9.948
%11974728.00	9.578	9.651	9.726	9.803	9.883	9.965
%11974835.00	9.590	9.663	9.739	9.817	9.897	9.980
%11974942.00	9.599	9.673	9.749	9.828	9.909	9.992

Y [ft]	<- X [ft] ->					
	1447368	1447475	1447582	1447689	1447796	1447903
%11975049.00	9.607	9.681	9.758	9.837	9.918	10.002
%11975156.00	9.613	9.688	9.764	9.844	9.925	10.010
%11975263.00	9.617	9.691	9.769	9.848	9.930	10.015
%11975370.00	9.618	9.693	9.770	9.850	9.932	10.017
%11975477.00	9.618	9.693	9.770	9.850	9.932	10.017
%11975584.00	9.615	9.690	9.768	9.847	9.930	10.014
%11975691.00	9.611	9.686	9.763	9.842	9.925	10.009
%11975798.00	9.604	9.679	9.756	9.835	9.917	10.001
%11975905.00	9.595	9.670	9.747	9.826	9.907	9.991
%11976012.00	9.585	9.659	9.735	9.814	9.895	9.979
%11976119.00	9.572	9.646	9.722	9.800	9.881	9.964
%11976226.00	9.557	9.631	9.706	9.784	9.864	9.946
%11976333.00	9.541	9.613	9.688	9.765	9.845	9.926
%11976440.00	9.522	9.594	9.668	9.745	9.823	9.904
%11976547.00	9.502	9.573	9.646	9.722	9.800	9.880
%11976654.00	9.480	9.550	9.623	9.697	9.774	9.853
%11976761.00	9.455	9.525	9.597	9.671	9.747	9.825
%11976868.00	9.430	9.499	9.569	9.642	9.717	9.794
%11976975.00	9.402	9.470	9.540	9.612	9.685	9.761
%11977082.00	9.373	9.440	9.509	9.580	9.652	9.727
%11977189.00	9.343	9.408	9.476	9.546	9.617	9.690
%11977296.00	9.310	9.375	9.442	9.510	9.580	9.652
%11977403.00	9.277	9.341	9.406	9.473	9.542	9.612
%11977510.00	9.242	9.304	9.369	9.434	9.502	9.571
%11977617.00	9.205	9.267	9.330	9.394	9.460	9.528
%11977724.00	9.168	9.228	9.290	9.353	9.418	9.484
%11977831.00	9.129	9.188	9.248	9.310	9.374	9.438
%11977938.00	9.089	9.147	9.206	9.266	9.328	9.392
%11978045.00	9.048	9.104	9.162	9.221	9.282	9.344
%11978152.00	9.005	9.061	9.117	9.175	9.234	9.295
%11978259.00	8.962	9.016	9.072	9.128	9.186	9.244
%11978366.00	8.918	8.971	9.025	9.080	9.136	9.194
%11978473.00	8.873	8.925	8.977	9.031	9.086	9.142
%11978580.00	8.827	8.878	8.929	8.982	9.035	9.089
%11978687.00	8.781	8.830	8.880	8.931	8.983	9.036
%11978794.00	8.733	8.781	8.830	8.880	8.930	8.982
%11978901.00	8.685	8.732	8.780	8.828	8.877	8.927
%11979008.00	8.637	8.682	8.729	8.776	8.823	8.872
%11979115.00	8.588	8.632	8.677	8.723	8.769	8.816
%11979222.00	8.538	8.581	8.625	8.669	8.714	8.760

Y [ft]	<- X [ft] ->					
	1447368	1447475	1447582	1447689	1447796	1447903
%11979329.00	8.488	8.530	8.572	8.616	8.659	8.704
%11979436.00	8.437	8.478	8.519	8.561	8.604	8.647
%11979543.00	8.386	8.426	8.466	8.507	8.548	8.590
%11979650.00	8.335	8.374	8.413	8.452	8.492	8.532
%11979757.00	8.284	8.321	8.359	8.397	8.436	8.475
%11979864.00	8.232	8.268	8.305	8.342	8.379	8.417
%11979971.00	8.179	8.215	8.250	8.286	8.323	8.359
%11980078.00	8.127	8.161	8.196	8.231	8.266	8.301
%11980185.00	8.075	8.108	8.141	8.175	8.209	8.243
%11980292.00	8.022	8.054	8.087	8.119	8.152	8.185
%11980399.00	7.969	8.000	8.032	8.063	8.095	8.127
%11980506.00	7.916	7.946	7.977	8.007	8.038	8.069
%11980613.00	7.863	7.892	7.922	7.952	7.981	8.011

Y [ft]	<- X [ft] ->					
	1448010	1448117	1448224	1448331	1448438	1448545
%11970876.00	8.445	8.479	8.513	8.548	8.582	8.617
%11970983.00	8.502	8.537	8.573	8.609	8.645	8.681
%11971090.00	8.558	8.595	8.632	8.669	8.707	8.744
%11971197.00	8.615	8.653	8.692	8.730	8.769	8.808
%11971304.00	8.672	8.711	8.751	8.791	8.832	8.872
%11971411.00	8.728	8.769	8.810	8.852	8.894	8.936
%11971518.00	8.784	8.827	8.869	8.912	8.956	9.000
%11971625.00	8.840	8.884	8.928	8.973	9.018	9.063
%11971732.00	8.896	8.941	8.987	9.033	9.080	9.127
%11971839.00	8.951	8.998	9.045	9.093	9.141	9.190
%11971946.00	9.006	9.054	9.103	9.153	9.203	9.253
%11972053.00	9.060	9.110	9.160	9.212	9.264	9.316
%11972160.00	9.114	9.165	9.217	9.270	9.324	9.379
%11972267.00	9.167	9.220	9.274	9.329	9.384	9.440
%11972374.00	9.219	9.274	9.330	9.386	9.444	9.502
%11972481.00	9.271	9.327	9.385	9.443	9.502	9.563
%11972588.00	9.322	9.380	9.439	9.499	9.561	9.623
%11972695.00	9.372	9.432	9.493	9.555	9.618	9.682
%11972802.00	9.421	9.483	9.545	9.609	9.674	9.741
%11972909.00	9.469	9.532	9.597	9.663	9.730	9.798
%11973016.00	9.516	9.581	9.647	9.715	9.784	9.854
%11973123.00	9.562	9.629	9.697	9.766	9.837	9.910
%11973230.00	9.607	9.675	9.745	9.816	9.889	9.964
%11973337.00	9.650	9.720	9.791	9.865	9.939	10.016
%11973444.00	9.692	9.763	9.836	9.912	9.988	10.067
%11973551.00	9.732	9.805	9.880	9.957	10.036	10.116
%11973658.00	9.771	9.845	9.922	10.001	10.081	10.164

Y [ft]	<- X [ft] ->					
	1448010	1448117	1448224	1448331	1448438	1448545
%11973765.00	9.807	9.884	9.962	10.042	10.125	10.210
%11973872.00	9.843	9.920	10.000	10.082	10.167	10.253
%11973979.00	9.876	9.955	10.037	10.120	10.206	10.295
%11974086.00	9.907	9.988	10.071	10.156	10.244	10.334
%11974193.00	9.937	10.018	10.103	10.190	10.279	10.371
%11974300.00	9.964	10.047	10.132	10.221	10.312	10.405
%11974407.00	9.989	10.073	10.160	10.249	10.342	10.437
%11974514.00	10.011	10.097	10.185	10.276	10.369	10.466
%11974621.00	10.032	10.118	10.207	10.299	10.394	10.492
%11974728.00	10.050	10.137	10.227	10.320	10.416	10.515
%11974835.00	10.065	10.153	10.244	10.338	10.435	10.535
%11974942.00	10.078	10.167	10.259	10.353	10.451	10.552
%11975049.00	10.089	10.178	10.270	10.366	10.464	10.566
%11975156.00	10.097	10.186	10.279	10.375	10.474	10.576
%11975263.00	10.102	10.192	10.285	10.381	10.481	10.583
%11975370.00	10.105	10.195	10.288	10.384	10.484	10.587
%11975477.00	10.105	10.195	10.288	10.385	10.484	10.588
%11975584.00	10.102	10.192	10.286	10.382	10.482	10.585
%11975691.00	10.097	10.187	10.280	10.376	10.476	10.578
%11975798.00	10.089	10.179	10.271	10.367	10.466	10.569
%11975905.00	10.078	10.168	10.260	10.355	10.454	10.556
%11976012.00	10.065	10.154	10.246	10.341	10.439	10.540
%11976119.00	10.049	10.138	10.229	10.323	10.420	10.520
%11976226.00	10.031	10.119	10.209	10.302	10.399	10.498
%11976333.00	10.011	10.097	10.187	10.279	10.374	10.472
%11976440.00	9.987	10.073	10.162	10.253	10.347	10.444
%11976547.00	9.962	10.047	10.134	10.224	10.317	10.413
%11976654.00	9.935	10.018	10.104	10.193	10.285	10.379
%11976761.00	9.905	9.987	10.072	10.160	10.249	10.342
%11976868.00	9.873	9.954	10.038	10.124	10.212	10.303
%11976975.00	9.839	9.919	10.001	10.085	10.172	10.261
%11977082.00	9.803	9.882	9.962	10.045	10.130	10.217
%11977189.00	9.765	9.842	9.921	10.002	10.086	10.171
%11977296.00	9.726	9.801	9.879	9.958	10.040	10.123
%11977403.00	9.685	9.759	9.834	9.912	9.992	10.073
%11977510.00	9.642	9.714	9.788	9.864	9.942	10.021
%11977617.00	9.597	9.668	9.741	9.815	9.891	9.968
%11977724.00	9.552	9.621	9.692	9.764	9.838	9.913
%11977831.00	9.504	9.572	9.641	9.711	9.783	9.857
%11977938.00	9.456	9.522	9.589	9.658	9.728	9.799

Y [ft]	<- X [ft] ->					
	1448010	1448117	1448224	1448331	1448438	1448545
%11978045.00	9.407	9.471	9.536	9.603	9.671	9.740
%11978152.00	9.356	9.419	9.482	9.547	9.613	9.681
%11978259.00	9.304	9.365	9.427	9.490	9.555	9.620
%11978366.00	9.252	9.311	9.371	9.433	9.495	9.558
%11978473.00	9.198	9.256	9.315	9.374	9.435	9.496
%11978580.00	9.144	9.200	9.257	9.315	9.373	9.433
%11978687.00	9.089	9.144	9.199	9.255	9.312	9.369
%11978794.00	9.034	9.086	9.140	9.194	9.249	9.305
%11978901.00	8.978	9.029	9.081	9.133	9.186	9.240
%11979008.00	8.921	8.971	9.021	9.072	9.123	9.175
%11979115.00	8.864	8.912	8.961	9.010	9.060	9.110
%11979222.00	8.806	8.853	8.900	8.948	8.996	9.044
%11979329.00	8.748	8.794	8.839	8.885	8.932	8.979
%11979436.00	8.690	8.734	8.778	8.823	8.868	8.913
%11979543.00	8.632	8.674	8.717	8.760	8.803	8.847
%11979650.00	8.573	8.614	8.655	8.697	8.739	8.781
%11979757.00	8.514	8.554	8.594	8.634	8.674	8.715
%11979864.00	8.455	8.493	8.532	8.571	8.610	8.649
%11979971.00	8.396	8.433	8.470	8.508	8.545	8.583
%11980078.00	8.337	8.373	8.409	8.445	8.481	8.517
%11980185.00	8.278	8.312	8.347	8.382	8.417	8.452
%11980292.00	8.219	8.252	8.286	8.319	8.353	8.387
%11980399.00	8.159	8.192	8.224	8.257	8.289	8.321
%11980506.00	8.100	8.132	8.163	8.194	8.225	8.257
%11980613.00	8.041	8.071	8.102	8.132	8.162	8.192

Y [ft]	<- X [ft] ->					
	1448652	1448759	1448866	1448973	1449080	1449187
%11970876.00	8.652	8.687	8.721	8.756	8.791	8.825
%11970983.00	8.717	8.753	8.789	8.826	8.862	8.898
%11971090.00	8.782	8.820	8.858	8.895	8.933	8.971
%11971197.00	8.847	8.887	8.926	8.966	9.005	9.044
%11971304.00	8.913	8.954	8.995	9.036	9.077	9.118
%11971411.00	8.978	9.021	9.064	9.106	9.149	9.192
%11971518.00	9.044	9.088	9.133	9.177	9.222	9.266
%11971625.00	9.109	9.155	9.202	9.248	9.295	9.341
%11971732.00	9.175	9.222	9.270	9.319	9.367	9.416
%11971839.00	9.240	9.289	9.339	9.390	9.440	9.491
%11971946.00	9.305	9.356	9.408	9.461	9.513	9.566
%11972053.00	9.369	9.423	9.477	9.531	9.586	9.641
%11972160.00	9.434	9.489	9.545	9.602	9.659	9.716
%11972267.00	9.497	9.555	9.613	9.672	9.732	9.791
%11972374.00	9.561	9.621	9.681	9.742	9.804	9.866

Y [ft]	<- X [ft] ->					
	1448652	1448759	1448866	1448973	1449080	1449187
%11972481.00	9.624	9.686	9.748	9.812	9.876	9.941
%11972588.00	9.686	9.750	9.815	9.881	9.947	10.015
%11972695.00	9.747	9.814	9.881	9.949	10.018	10.088
%11972802.00	9.808	9.876	9.946	10.017	10.088	10.161
%11972909.00	9.868	9.938	10.010	10.083	10.158	10.233
%11973016.00	9.926	9.999	10.074	10.149	10.226	10.305
%11973123.00	9.983	10.059	10.136	10.214	10.294	10.375
%11973230.00	10.040	10.117	10.197	10.277	10.360	10.444
%11973337.00	10.094	10.174	10.256	10.340	10.425	10.512
%11973444.00	10.147	10.230	10.314	10.400	10.488	10.578
%11973551.00	10.199	10.284	10.370	10.459	10.550	10.642
%11973658.00	10.249	10.336	10.425	10.516	10.609	10.705
%11973765.00	10.296	10.386	10.477	10.571	10.667	10.765
%11973872.00	10.342	10.433	10.527	10.623	10.722	10.824
%11973979.00	10.386	10.479	10.575	10.674	10.775	10.879
%11974086.00	10.427	10.522	10.620	10.722	10.825	10.932
%11974193.00	10.465	10.563	10.663	10.766	10.873	10.983
%11974300.00	10.501	10.601	10.703	10.809	10.917	11.030
%11974407.00	10.535	10.636	10.740	10.848	10.959	11.073
%11974514.00	10.565	10.668	10.774	10.883	10.996	11.113
%11974621.00	10.593	10.697	10.805	10.916	11.031	11.150
%11974728.00	10.617	10.723	10.832	10.945	11.061	11.182
%11974835.00	10.638	10.745	10.855	10.970	11.088	11.210
%11974942.00	10.656	10.764	10.876	10.991	11.111	11.235
%11975049.00	10.671	10.779	10.892	11.008	11.129	11.254
%11975156.00	10.682	10.791	10.904	11.022	11.143	11.270
%11975263.00	10.689	10.799	10.913	11.031	11.153	11.280
%11975370.00	10.694	10.804	10.918	11.036	11.159	11.286
%11975477.00	10.694	10.804	10.919	11.037	11.160	11.287
%11975584.00	10.691	10.801	10.916	11.034	11.157	11.284
%11975691.00	10.685	10.795	10.909	11.027	11.149	11.276
%11975798.00	10.675	10.784	10.898	11.015	11.137	11.263
%11975905.00	10.661	10.770	10.883	11.000	11.120	11.246
%11976012.00	10.644	10.752	10.864	10.980	11.100	11.224
%11976119.00	10.624	10.731	10.842	10.956	11.075	11.198
%11976226.00	10.601	10.706	10.816	10.929	11.046	11.167
%11976333.00	10.574	10.678	10.786	10.898	11.013	11.133
%11976440.00	10.544	10.647	10.754	10.863	10.977	11.094
%11976547.00	10.511	10.613	10.717	10.825	10.937	11.052
%11976654.00	10.476	10.575	10.678	10.784	10.893	11.006

Y [ft]	<- X [ft] ->					
	1448652	1448759	1448866	1448973	1449080	1449187
%11976761.00	10.437	10.535	10.636	10.740	10.847	10.957
%11976868.00	10.396	10.492	10.591	10.693	10.797	10.905
%11976975.00	10.353	10.447	10.543	10.643	10.745	10.850
%11977082.00	10.307	10.399	10.493	10.590	10.690	10.792
%11977189.00	10.259	10.348	10.441	10.535	10.632	10.731
%11977296.00	10.209	10.296	10.386	10.478	10.572	10.669
%11977403.00	10.156	10.242	10.329	10.419	10.510	10.604
%11977510.00	10.103	10.186	10.271	10.358	10.446	10.537
%11977617.00	10.047	10.128	10.211	10.295	10.381	10.469
%11977724.00	9.990	10.069	10.149	10.231	10.314	10.399
%11977831.00	9.932	10.008	10.086	10.165	10.246	10.328
%11977938.00	9.872	9.946	10.021	10.098	10.176	10.255
%11978045.00	9.811	9.883	9.956	10.030	10.105	10.182
%11978152.00	9.749	9.819	9.889	9.961	10.034	10.107
%11978259.00	9.686	9.754	9.822	9.891	9.961	10.032
%11978366.00	9.622	9.688	9.754	9.821	9.888	9.957
%11978473.00	9.558	9.621	9.685	9.749	9.815	9.880
%11978580.00	9.493	9.554	9.615	9.678	9.741	9.804
%11978687.00	9.427	9.486	9.546	9.606	9.666	9.727
%11978794.00	9.361	9.418	9.475	9.533	9.591	9.650
%11978901.00	9.295	9.349	9.405	9.460	9.516	9.573
%11979008.00	9.228	9.281	9.334	9.388	9.441	9.496
%11979115.00	9.161	9.212	9.263	9.315	9.366	9.418
%11979222.00	9.093	9.142	9.192	9.242	9.291	9.341
%11979329.00	9.026	9.073	9.121	9.169	9.216	9.264
%11979436.00	8.958	9.004	9.050	9.096	9.142	9.188
%11979543.00	8.891	8.935	8.979	9.023	9.067	9.111
%11979650.00	8.823	8.865	8.908	8.950	8.993	9.035
%11979757.00	8.756	8.796	8.837	8.878	8.919	8.959
%11979864.00	8.688	8.727	8.767	8.806	8.845	8.884
%11979971.00	8.621	8.659	8.696	8.734	8.772	8.809
%11980078.00	8.554	8.590	8.626	8.663	8.699	8.734
%11980185.00	8.487	8.522	8.557	8.591	8.626	8.660
%11980292.00	8.420	8.454	8.487	8.521	8.554	8.586
%11980399.00	8.354	8.386	8.418	8.450	8.482	8.513
%11980506.00	8.288	8.319	8.350	8.380	8.411	8.441
%11980613.00	8.222	8.252	8.281	8.311	8.340	8.369

Y [ft]	<- X [ft] ->					
	1449294	1449401	1449508	1449615	1449722	1449829
%11970876.00	8.859	8.893	8.926	8.959	8.991	9.023
%11970983.00	8.933	8.969	9.003	9.038	9.072	9.105
%11971090.00	9.008	9.045	9.082	9.118	9.154	9.189

Y [ft]	<- X [ft] ->					
	1449294	1449401	1449508	1449615	1449722	1449829
%11971197.00	9.083	9.122	9.160	9.198	9.236	9.273
%11971304.00	9.159	9.199	9.240	9.280	9.319	9.358
%11971411.00	9.235	9.277	9.319	9.361	9.403	9.444
%11971518.00	9.311	9.356	9.400	9.444	9.487	9.530
%11971625.00	9.388	9.434	9.481	9.527	9.572	9.618
%11971732.00	9.465	9.513	9.562	9.610	9.658	9.706
%11971839.00	9.542	9.593	9.644	9.694	9.745	9.795
%11971946.00	9.619	9.672	9.726	9.779	9.831	9.884
%11972053.00	9.697	9.752	9.808	9.863	9.919	9.974
%11972160.00	9.774	9.832	9.890	9.948	10.007	10.065
%11972267.00	9.852	9.912	9.973	10.034	10.095	10.156
%11972374.00	9.929	9.992	10.056	10.119	10.183	10.247
%11972481.00	10.006	10.072	10.138	10.205	10.272	10.339
%11972588.00	10.083	10.151	10.221	10.290	10.360	10.431
%11972695.00	10.159	10.231	10.303	10.376	10.449	10.523
%11972802.00	10.235	10.309	10.385	10.461	10.537	10.614
%11972909.00	10.310	10.387	10.466	10.545	10.625	10.706
%11973016.00	10.384	10.465	10.547	10.629	10.713	10.798
%11973123.00	10.457	10.541	10.626	10.713	10.800	10.888
%11973230.00	10.530	10.617	10.705	10.795	10.886	10.979
%11973337.00	10.600	10.691	10.783	10.876	10.971	11.068
%11973444.00	10.670	10.763	10.859	10.956	11.055	11.156
%11973551.00	10.737	10.834	10.933	11.034	11.137	11.242
%11973658.00	10.803	10.903	11.006	11.111	11.218	11.327
%11973765.00	10.867	10.970	11.076	11.185	11.296	11.410
%11973872.00	10.928	11.035	11.144	11.257	11.372	11.491
%11973979.00	10.987	11.097	11.210	11.326	11.446	11.568
%11974086.00	11.043	11.156	11.272	11.392	11.516	11.643
%11974193.00	11.096	11.212	11.332	11.455	11.583	11.714
%11974300.00	11.145	11.265	11.388	11.515	11.646	11.782
%11974407.00	11.192	11.314	11.440	11.570	11.705	11.845
%11974514.00	11.234	11.359	11.488	11.622	11.760	11.903
%11974621.00	11.273	11.400	11.532	11.668	11.810	11.957
%11974728.00	11.307	11.437	11.571	11.710	11.855	12.005
%11974835.00	11.337	11.469	11.605	11.747	11.895	12.048
%11974942.00	11.363	11.496	11.635	11.779	11.928	12.084
%11975049.00	11.384	11.519	11.659	11.805	11.956	12.114
%11975156.00	11.400	11.536	11.678	11.825	11.978	12.138
%11975263.00	11.412	11.549	11.691	11.839	11.994	12.155
%11975370.00	11.418	11.556	11.699	11.847	12.002	12.164

Y [ft]	<- X [ft] ->					
	1449294	1449401	1449508	1449615	1449722	1449829
%11975477.00	11.420	11.557	11.700	11.849	12.005	12.167
%11975584.00	11.416	11.554	11.697	11.845	12.001	12.163
%11975691.00	11.408	11.545	11.687	11.835	11.990	12.151
%11975798.00	11.394	11.530	11.672	11.819	11.973	12.133
%11975905.00	11.376	11.511	11.651	11.797	11.949	12.107
%11976012.00	11.353	11.486	11.625	11.769	11.919	12.075
%11976119.00	11.325	11.457	11.594	11.736	11.883	12.037
%11976226.00	11.293	11.423	11.557	11.697	11.842	11.993
%11976333.00	11.256	11.384	11.516	11.653	11.795	11.943
%11976440.00	11.215	11.341	11.470	11.604	11.743	11.887
%11976547.00	11.171	11.293	11.420	11.551	11.687	11.827
%11976654.00	11.122	11.242	11.366	11.494	11.625	11.761
%11976761.00	11.071	11.188	11.308	11.432	11.560	11.692
%11976868.00	11.015	11.129	11.247	11.367	11.491	11.619
%11976975.00	10.957	11.068	11.182	11.299	11.419	11.542
%11977082.00	10.896	11.004	11.114	11.228	11.344	11.463
%11977189.00	10.833	10.937	11.044	11.154	11.266	11.380
%11977296.00	10.767	10.868	10.972	11.077	11.185	11.295
%11977403.00	10.699	10.797	10.897	10.999	11.103	11.209
%11977510.00	10.630	10.724	10.820	10.919	11.018	11.120
%11977617.00	10.558	10.649	10.742	10.837	10.933	11.030
%11977724.00	10.485	10.573	10.663	10.753	10.845	10.939
%11977831.00	10.411	10.496	10.582	10.669	10.757	10.847
%11977938.00	10.336	10.417	10.500	10.584	10.668	10.754
%11978045.00	10.259	10.338	10.417	10.498	10.579	10.660
%11978152.00	10.182	10.258	10.334	10.411	10.488	10.567
%11978259.00	10.104	10.177	10.250	10.324	10.398	10.473
%11978366.00	10.026	10.095	10.166	10.236	10.307	10.379
%11978473.00	9.947	10.014	10.081	10.149	10.217	10.285
%11978580.00	9.868	9.932	9.997	10.061	10.126	10.191
%11978687.00	9.788	9.850	9.912	9.974	10.036	10.098
%11978794.00	9.709	9.768	9.827	9.886	9.946	10.005
%11978901.00	9.629	9.686	9.743	9.799	9.856	9.912
%11979008.00	9.550	9.604	9.658	9.713	9.767	9.820
%11979115.00	9.470	9.522	9.574	9.626	9.678	9.729
%11979222.00	9.391	9.441	9.491	9.540	9.589	9.638
%11979329.00	9.312	9.360	9.408	9.455	9.502	9.548
%11979436.00	9.234	9.279	9.325	9.370	9.415	9.459
%11979543.00	9.155	9.199	9.242	9.286	9.328	9.371
%11979650.00	9.077	9.119	9.161	9.202	9.243	9.283

Y [ft]	<- X [ft] ->					
	1449294	1449401	1449508	1449615	1449722	1449829
%11979757.00	9.000	9.040	9.080	9.119	9.158	9.196
%11979864.00	8.923	8.961	8.999	9.037	9.074	9.110
%11979971.00	8.846	8.883	8.919	8.955	8.990	9.025
%11980078.00	8.770	8.805	8.840	8.874	8.907	8.941
%11980185.00	8.694	8.728	8.761	8.793	8.826	8.857
%11980292.00	8.619	8.651	8.683	8.714	8.745	8.775
%11980399.00	8.544	8.575	8.605	8.635	8.664	8.693
%11980506.00	8.470	8.500	8.529	8.557	8.585	8.612
%11980613.00	8.397	8.425	8.453	8.480	8.506	8.532

Y [ft]	<- X [ft] ->					
	1449936	1450043	1450150	1450257	1450364	1450471
%11970876.00	9.054	9.084	9.114	9.142	9.170	9.196
%11970983.00	9.138	9.170	9.201	9.232	9.261	9.289
%11971090.00	9.223	9.257	9.290	9.322	9.353	9.383
%11971197.00	9.309	9.345	9.380	9.414	9.447	9.478
%11971304.00	9.396	9.434	9.471	9.507	9.541	9.575
%11971411.00	9.484	9.524	9.563	9.601	9.638	9.673
%11971518.00	9.573	9.615	9.656	9.696	9.735	9.773
%11971625.00	9.662	9.707	9.750	9.792	9.834	9.874
%11971732.00	9.753	9.799	9.845	9.890	9.934	9.977
%11971839.00	9.844	9.893	9.941	9.989	10.035	10.080
%11971946.00	9.936	9.988	10.039	10.089	10.138	10.186
%11972053.00	10.029	10.083	10.137	10.190	10.242	10.293
%11972160.00	10.122	10.179	10.236	10.292	10.347	10.401
%11972267.00	10.216	10.276	10.336	10.395	10.454	10.511
%11972374.00	10.311	10.374	10.437	10.500	10.561	10.622
%11972481.00	10.406	10.472	10.539	10.605	10.670	10.735
%11972588.00	10.501	10.571	10.641	10.711	10.780	10.848
%11972695.00	10.596	10.670	10.744	10.818	10.891	10.963
%11972802.00	10.692	10.770	10.847	10.925	11.003	11.079
%11972909.00	10.788	10.869	10.951	11.033	11.115	11.196
%11973016.00	10.883	10.969	11.055	11.141	11.228	11.314
%11973123.00	10.978	11.068	11.159	11.250	11.341	11.433
%11973230.00	11.072	11.167	11.262	11.358	11.455	11.552
%11973337.00	11.166	11.265	11.365	11.467	11.569	11.671
%11973444.00	11.258	11.362	11.468	11.574	11.682	11.790
%11973551.00	11.349	11.458	11.569	11.681	11.794	11.909
%11973658.00	11.439	11.553	11.669	11.786	11.906	12.027
%11973765.00	11.526	11.645	11.767	11.890	12.016	12.144
%11973872.00	11.612	11.736	11.862	11.992	12.124	12.259
%11973979.00	11.694	11.823	11.956	12.091	12.230	12.372
%11974086.00	11.774	11.908	12.046	12.188	12.333	12.483

Y [ft]	<- X [ft] ->					
	1449936	1450043	1450150	1450257	1450364	1450471
%11974193.00	11.849	11.989	12.133	12.280	12.433	12.590
%11974300.00	11.921	12.066	12.215	12.369	12.528	12.692
%11974407.00	11.989	12.138	12.293	12.453	12.618	12.790
%11974514.00	12.052	12.206	12.366	12.531	12.703	12.882
%11974621.00	12.110	12.268	12.432	12.604	12.782	12.967
%11974728.00	12.161	12.324	12.493	12.669	12.853	13.045
%11974835.00	12.207	12.373	12.547	12.728	12.917	13.114
%11974942.00	12.247	12.416	12.593	12.778	12.972	13.175
%11975049.00	12.279	12.451	12.631	12.820	13.018	13.225
%11975156.00	12.305	12.479	12.662	12.853	13.054	13.265
%11975263.00	12.323	12.499	12.683	12.876	13.080	13.294
%11975370.00	12.333	12.510	12.696	12.890	13.095	13.311
%11975477.00	12.336	12.514	12.700	12.895	13.100	13.316
%11975584.00	12.332	12.509	12.694	12.889	13.094	13.310
%11975691.00	12.319	12.495	12.680	12.873	13.077	13.291
%11975798.00	12.299	12.474	12.657	12.848	13.049	13.261
%11975905.00	12.272	12.445	12.625	12.814	13.012	13.220
%11976012.00	12.238	12.408	12.585	12.770	12.964	13.168
%11976119.00	12.197	12.363	12.537	12.718	12.908	13.106
%11976226.00	12.149	12.312	12.482	12.658	12.843	13.035
%11976333.00	12.096	12.254	12.419	12.591	12.770	12.956
%11976440.00	12.036	12.191	12.351	12.517	12.690	12.869
%11976547.00	11.971	12.121	12.276	12.437	12.603	12.775
%11976654.00	11.902	12.047	12.197	12.351	12.511	12.676
%11976761.00	11.828	11.968	12.112	12.261	12.414	12.572
%11976868.00	11.750	11.885	12.024	12.167	12.313	12.463
%11976975.00	11.669	11.799	11.932	12.068	12.208	12.351
%11977082.00	11.584	11.709	11.837	11.967	12.100	12.236
%11977189.00	11.497	11.617	11.739	11.864	11.990	12.119
%11977296.00	11.408	11.522	11.639	11.758	11.878	12.000
%11977403.00	11.316	11.426	11.537	11.650	11.765	11.880
%11977510.00	11.223	11.328	11.434	11.542	11.650	11.760
%11977617.00	11.129	11.229	11.330	11.432	11.535	11.639
%11977724.00	11.033	11.129	11.225	11.322	11.420	11.517
%11977831.00	10.937	11.028	11.120	11.212	11.304	11.396
%11977938.00	10.840	10.927	11.014	11.101	11.189	11.276
%11978045.00	10.743	10.825	10.908	10.991	11.074	11.156
%11978152.00	10.645	10.724	10.802	10.881	10.959	11.037
%11978259.00	10.547	10.622	10.697	10.772	10.846	10.919
%11978366.00	10.450	10.521	10.592	10.663	10.733	10.802

Y [ft]	<- X [ft] ->					
	1449936	1450043	1450150	1450257	1450364	1450471
%11978473.00	10.353	10.421	10.488	10.555	10.621	10.687
%11978580.00	10.256	10.320	10.384	10.448	10.511	10.572
%11978687.00	10.159	10.221	10.282	10.342	10.401	10.459
%11978794.00	10.063	10.122	10.180	10.237	10.293	10.348
%11978901.00	9.968	10.024	10.078	10.132	10.186	10.238
%11979008.00	9.874	9.926	9.978	10.029	10.080	10.129
%11979115.00	9.780	9.830	9.879	9.928	9.975	10.021
%11979222.00	9.687	9.734	9.781	9.827	9.872	9.916
%11979329.00	9.594	9.639	9.684	9.727	9.770	9.811
%11979436.00	9.503	9.546	9.588	9.629	9.669	9.708
%11979543.00	9.412	9.453	9.493	9.532	9.570	9.607
%11979650.00	9.322	9.361	9.399	9.436	9.472	9.507
%11979757.00	9.234	9.271	9.307	9.342	9.376	9.409
%11979864.00	9.146	9.181	9.215	9.248	9.280	9.312
%11979971.00	9.059	9.092	9.125	9.156	9.187	9.216
%11980078.00	8.973	9.005	9.035	9.065	9.094	9.122
%11980185.00	8.888	8.918	8.947	8.975	9.003	9.029
%11980292.00	8.804	8.832	8.860	8.887	8.913	8.937
%11980399.00	8.721	8.748	8.774	8.799	8.824	8.847
%11980506.00	8.638	8.664	8.689	8.713	8.736	8.758
%11980613.00	8.557	8.582	8.605	8.628	8.650	8.670

Y [ft]	<- X [ft] ->					
	1450578	1450685	1450792	1450899	1451006	1451113
%11970876.00	9.222	9.246	9.269	9.290	9.310	9.328
%11970983.00	9.316	9.342	9.366	9.389	9.410	9.430
%11971090.00	9.412	9.439	9.465	9.490	9.512	9.534
%11971197.00	9.509	9.538	9.566	9.592	9.617	9.639
%11971304.00	9.608	9.639	9.668	9.696	9.723	9.747
%11971411.00	9.708	9.741	9.773	9.803	9.831	9.857
%11971518.00	9.810	9.845	9.879	9.911	9.941	9.969
%11971625.00	9.913	9.951	9.987	10.021	10.053	10.084
%11971732.00	10.018	10.058	10.096	10.133	10.168	10.200
%11971839.00	10.125	10.167	10.208	10.247	10.285	10.320
%11971946.00	10.233	10.278	10.322	10.364	10.404	10.441
%11972053.00	10.343	10.391	10.438	10.482	10.525	10.566
%11972160.00	10.454	10.505	10.555	10.603	10.649	10.693
%11972267.00	10.567	10.622	10.675	10.726	10.775	10.822
%11972374.00	10.682	10.740	10.797	10.852	10.904	10.955
%11972481.00	10.798	10.860	10.921	10.979	11.036	11.090
%11972588.00	10.916	10.982	11.046	11.109	11.170	11.228
%11972695.00	11.035	11.105	11.174	11.241	11.306	11.369
%11972802.00	11.155	11.230	11.304	11.376	11.446	11.513

Y [ft]	<- X [ft] ->					
	1450578	1450685	1450792	1450899	1451006	1451113
%11972909.00	11.277	11.357	11.436	11.513	11.588	11.660
%11973016.00	11.400	11.485	11.569	11.652	11.732	11.810
%11973123.00	11.524	11.615	11.704	11.793	11.879	11.963
%11973230.00	11.649	11.745	11.841	11.935	12.029	12.119
%11973337.00	11.774	11.877	11.979	12.080	12.180	12.278
%11973444.00	11.899	12.009	12.118	12.226	12.334	12.440
%11973551.00	12.025	12.141	12.258	12.374	12.490	12.604
%11973658.00	12.150	12.273	12.398	12.522	12.647	12.770
%11973765.00	12.274	12.405	12.538	12.671	12.805	12.938
%11973872.00	12.397	12.536	12.677	12.820	12.964	13.108
%11973979.00	12.517	12.665	12.816	12.968	13.122	13.278
%11974086.00	12.636	12.792	12.952	13.115	13.280	13.448
%11974193.00	12.751	12.916	13.086	13.259	13.436	13.617
%11974300.00	12.861	13.036	13.215	13.400	13.589	13.783
%11974407.00	12.967	13.151	13.340	13.536	13.738	13.946
%11974514.00	13.067	13.259	13.459	13.667	13.881	14.104
%11974621.00	13.160	13.361	13.571	13.789	14.017	14.254
%11974728.00	13.245	13.455	13.674	13.903	14.144	14.395
%11974835.00	13.322	13.539	13.767	14.007	14.259	14.525
%11974942.00	13.388	13.612	13.848	14.098	14.361	14.640
%11975049.00	13.444	13.674	13.917	14.175	14.448	14.738
%11975156.00	13.488	13.723	13.972	14.236	14.518	14.818
%11975263.00	13.520	13.758	14.012	14.281	14.569	14.876
%11975370.00	13.539	13.780	14.036	14.308	14.600	14.912
%11975477.00	13.545	13.787	14.044	14.317	14.610	14.924
%11975584.00	13.537	13.779	14.035	14.308	14.599	14.912
%11975691.00	13.517	13.756	14.010	14.279	14.567	14.875
%11975798.00	13.484	13.720	13.969	14.234	14.515	14.816
%11975905.00	13.439	13.669	13.913	14.171	14.445	14.736
%11976012.00	13.382	13.606	13.843	14.093	14.357	14.637
%11976119.00	13.314	13.532	13.760	14.001	14.254	14.521
%11976226.00	13.236	13.446	13.666	13.896	14.137	14.390
%11976333.00	13.149	13.351	13.562	13.781	14.010	14.248
%11976440.00	13.055	13.248	13.449	13.657	13.873	14.096
%11976547.00	12.953	13.138	13.328	13.525	13.728	13.937
%11976654.00	12.846	13.021	13.202	13.387	13.577	13.772
%11976761.00	12.733	12.900	13.070	13.245	13.423	13.604
%11976868.00	12.617	12.774	12.935	13.099	13.265	13.433
%11976975.00	12.497	12.646	12.797	12.950	13.105	13.262
%11977082.00	12.374	12.515	12.657	12.800	12.945	13.090

Y [ft]	<- X [ft] ->					
	1450578	1450685	1450792	1450899	1451006	1451113
%11977189.00	12.250	12.382	12.515	12.650	12.784	12.919
%11977296.00	12.124	12.248	12.373	12.499	12.624	12.749
%11977403.00	11.997	12.114	12.232	12.349	12.465	12.581
%11977510.00	11.870	11.980	12.090	12.199	12.308	12.415
%11977617.00	11.742	11.846	11.949	12.051	12.152	12.251
%11977724.00	11.615	11.712	11.809	11.905	11.999	12.090
%11977831.00	11.489	11.580	11.671	11.760	11.847	11.933
%11977938.00	11.363	11.449	11.534	11.617	11.698	11.778
%11978045.00	11.238	11.319	11.398	11.476	11.552	11.626
%11978152.00	11.114	11.190	11.265	11.337	11.408	11.477
%11978259.00	10.992	11.063	11.133	11.201	11.267	11.331
%11978366.00	10.871	10.938	11.003	11.067	11.129	11.188
%11978473.00	10.751	10.814	10.876	10.935	10.993	11.048
%11978580.00	10.633	10.692	10.750	10.806	10.859	10.911
%11978687.00	10.517	10.572	10.626	10.679	10.729	10.776
%11978794.00	10.402	10.454	10.505	10.554	10.600	10.645
%11978901.00	10.288	10.338	10.385	10.431	10.475	10.516
%11979008.00	10.177	10.223	10.268	10.311	10.352	10.390
%11979115.00	10.067	10.110	10.152	10.192	10.231	10.267
%11979222.00	9.958	9.999	10.039	10.076	10.112	10.146
%11979329.00	9.851	9.890	9.927	9.962	9.996	10.027
%11979436.00	9.746	9.783	9.817	9.851	9.882	9.911
%11979543.00	9.643	9.677	9.710	9.741	9.770	9.797
%11979650.00	9.541	9.573	9.604	9.633	9.660	9.686
%11979757.00	9.440	9.471	9.499	9.527	9.552	9.576
%11979864.00	9.341	9.370	9.397	9.423	9.447	9.469
%11979971.00	9.244	9.271	9.296	9.320	9.343	9.363
%11980078.00	9.148	9.173	9.197	9.220	9.241	9.260
%11980185.00	9.054	9.078	9.100	9.121	9.140	9.158
%11980292.00	8.961	8.983	9.004	9.024	9.042	9.059
%11980399.00	8.869	8.890	8.910	8.928	8.945	8.961
%11980506.00	8.779	8.799	8.817	8.834	8.850	8.865
%11980613.00	8.690	8.709	8.726	8.742	8.757	8.770

Y [ft]	<- X [ft] ->					
	1451220	1451327	1451434	1451541	1451648	1451755
%11970876.00	9.344	9.359	9.372	9.383	9.392	9.398
%11970983.00	9.448	9.464	9.478	9.490	9.500	9.507
%11971090.00	9.553	9.570	9.586	9.599	9.610	9.619
%11971197.00	9.660	9.679	9.696	9.710	9.723	9.732
%11971304.00	9.770	9.790	9.808	9.824	9.838	9.849
%11971411.00	9.881	9.904	9.923	9.941	9.956	9.968
%11971518.00	9.995	10.019	10.041	10.060	10.077	10.090

Y [ft]	<- X [ft] ->					
	1451220	1451327	1451434	1451541	1451648	1451755
%11971625.00	10.112	10.138	10.161	10.182	10.200	10.216
%11971732.00	10.231	10.259	10.284	10.307	10.327	10.344
%11971839.00	10.353	10.383	10.411	10.435	10.457	10.476
%11971946.00	10.477	10.510	10.540	10.567	10.590	10.611
%11972053.00	10.604	10.639	10.672	10.701	10.727	10.750
%11972160.00	10.734	10.772	10.807	10.839	10.868	10.893
%11972267.00	10.866	10.908	10.946	10.981	11.012	11.040
%11972374.00	11.002	11.047	11.089	11.127	11.161	11.191
%11972481.00	11.141	11.190	11.235	11.276	11.314	11.347
%11972588.00	11.283	11.336	11.385	11.430	11.471	11.507
%11972695.00	11.429	11.486	11.539	11.588	11.633	11.673
%11972802.00	11.578	11.639	11.697	11.750	11.800	11.844
%11972909.00	11.730	11.797	11.859	11.918	11.972	12.020
%11973016.00	11.886	11.958	12.026	12.090	12.149	12.203
%11973123.00	12.045	12.123	12.198	12.268	12.332	12.391
%11973230.00	12.208	12.293	12.374	12.451	12.522	12.587
%11973337.00	12.374	12.466	12.555	12.639	12.717	12.790
%11973444.00	12.543	12.644	12.741	12.833	12.920	13.000
%11973551.00	12.716	12.826	12.932	13.033	13.128	13.217
%11973658.00	12.892	13.011	13.127	13.239	13.344	13.443
%11973765.00	13.070	13.200	13.328	13.450	13.568	13.678
%11973872.00	13.251	13.393	13.532	13.668	13.798	13.921
%11973979.00	13.433	13.588	13.741	13.891	14.036	14.174
%11974086.00	13.616	13.785	13.953	14.119	14.280	14.435
%11974193.00	13.799	13.983	14.168	14.351	14.532	14.706
%11974300.00	13.981	14.182	14.384	14.587	14.788	14.986
%11974407.00	14.160	14.378	14.600	14.825	15.050	15.273
%11974514.00	14.334	14.571	14.814	15.062	15.314	15.566
%11974621.00	14.501	14.757	15.023	15.297	15.577	15.862
%11974728.00	14.659	14.935	15.224	15.524	15.836	16.158
%11974835.00	14.805	15.101	15.412	15.741	16.086	16.448
%11974942.00	14.936	15.250	15.585	15.941	16.320	16.724
%11975049.00	15.048	15.380	15.735	16.118	16.530	16.976
%11975156.00	15.140	15.486	15.860	16.265	16.708	17.193
%11975263.00	15.207	15.565	15.953	16.377	16.843	17.360
%11975370.00	15.249	15.613	16.010	16.446	16.929	17.468
%11975477.00	15.263	15.630	16.030	16.470	16.958	17.505
%11975584.00	15.248	15.613	16.011	16.447	16.930	17.470
%11975691.00	15.207	15.565	15.953	16.378	16.846	17.365
%11975798.00	15.139	15.486	15.861	16.267	16.711	17.198

Y [ft]	<- X [ft] ->					
	1451220	1451327	1451434	1451541	1451648	1451755
%11975905.00	15.047	15.379	15.736	16.120	16.535	16.983
%11976012.00	14.934	15.249	15.585	15.943	16.324	16.730
%11976119.00	14.802	15.099	15.412	15.742	16.090	16.454
%11976226.00	14.655	14.932	15.222	15.525	15.839	16.163
%11976333.00	14.496	14.753	15.020	15.296	15.578	15.865
%11976440.00	14.327	14.565	14.810	15.060	15.313	15.567
%11976547.00	14.152	14.371	14.595	14.821	15.048	15.272
%11976654.00	13.971	14.173	14.377	14.581	14.784	14.983
%11976761.00	13.788	13.973	14.159	14.344	14.525	14.702
%11976868.00	13.603	13.773	13.942	14.109	14.272	14.429
%11976975.00	13.418	13.574	13.728	13.879	14.025	14.165
%11977082.00	13.234	13.377	13.518	13.654	13.786	13.910
%11977189.00	13.052	13.183	13.311	13.435	13.553	13.665
%11977296.00	12.872	12.992	13.109	13.221	13.328	13.428
%11977403.00	12.694	12.804	12.911	13.014	13.110	13.200
%11977510.00	12.519	12.621	12.719	12.812	12.899	12.980
%11977617.00	12.348	12.441	12.531	12.616	12.695	12.768
%11977724.00	12.180	12.266	12.348	12.425	12.497	12.563
%11977831.00	12.015	12.094	12.170	12.240	12.306	12.366
%11977938.00	11.854	11.927	11.996	12.061	12.121	12.175
%11978045.00	11.696	11.764	11.827	11.887	11.941	11.991
%11978152.00	11.542	11.604	11.663	11.717	11.767	11.812
%11978259.00	11.391	11.449	11.503	11.553	11.599	11.639
%11978366.00	11.244	11.297	11.347	11.393	11.435	11.472
%11978473.00	11.100	11.149	11.195	11.237	11.276	11.310
%11978580.00	10.959	11.005	11.047	11.086	11.121	11.152
%11978687.00	10.822	10.864	10.903	10.939	10.971	10.999
%11978794.00	10.687	10.726	10.762	10.795	10.825	10.850
%11978901.00	10.555	10.592	10.625	10.655	10.682	10.706
%11979008.00	10.427	10.460	10.491	10.519	10.544	10.565
%11979115.00	10.301	10.332	10.360	10.386	10.409	10.428
%11979222.00	10.177	10.206	10.233	10.256	10.277	10.295
%11979329.00	10.057	10.083	10.108	10.130	10.149	10.165
%11979436.00	9.938	9.963	9.986	10.006	10.023	10.038
%11979543.00	9.823	9.846	9.867	9.885	9.901	9.914
%11979650.00	9.709	9.731	9.750	9.767	9.781	9.793
%11979757.00	9.598	9.618	9.636	9.651	9.664	9.675
%11979864.00	9.489	9.507	9.524	9.538	9.550	9.560
%11979971.00	9.382	9.399	9.414	9.427	9.438	9.447
%11980078.00	9.277	9.293	9.307	9.319	9.329	9.337

Y [ft]	<- X [ft] ->					
	1451220	1451327	1451434	1451541	1451648	1451755
%11980185.00	9.175	9.189	9.202	9.213	9.222	9.228
%11980292.00	9.074	9.087	9.099	9.109	9.117	9.123
%11980399.00	8.975	8.987	8.998	9.007	9.014	9.019
%11980506.00	8.878	8.889	8.899	8.907	8.913	8.918
%11980613.00	8.782	8.792	8.801	8.808	8.814	8.818

Y [ft]	<- X [ft] ->					
	1451862	1451969	1452076	1452183	1452290	1452397
%11970876.00	9.403	9.405	9.406	9.403	9.399	9.392
%11970983.00	9.513	9.516	9.517	9.515	9.511	9.504
%11971090.00	9.625	9.629	9.630	9.629	9.626	9.619
%11971197.00	9.740	9.745	9.747	9.747	9.743	9.737
%11971304.00	9.857	9.863	9.866	9.867	9.864	9.858
%11971411.00	9.978	9.985	9.989	9.990	9.988	9.982
%11971518.00	10.101	10.109	10.114	10.116	10.114	10.110
%11971625.00	10.228	10.237	10.243	10.246	10.245	10.241
%11971732.00	10.358	10.368	10.375	10.379	10.379	10.375
%11971839.00	10.491	10.503	10.511	10.516	10.517	10.514
%11971946.00	10.628	10.642	10.651	10.657	10.659	10.656
%11972053.00	10.769	10.784	10.795	10.802	10.805	10.803
%11972160.00	10.914	10.931	10.943	10.952	10.955	10.954
%11972267.00	11.063	11.082	11.096	11.106	11.111	11.111
%11972374.00	11.217	11.238	11.254	11.266	11.272	11.273
%11972481.00	11.375	11.399	11.417	11.431	11.438	11.440
%11972588.00	11.539	11.565	11.586	11.601	11.610	11.613
%11972695.00	11.708	11.737	11.761	11.778	11.789	11.793
%11972802.00	11.882	11.915	11.941	11.961	11.974	11.980
%11972909.00	12.063	12.099	12.129	12.152	12.167	12.175
%11973016.00	12.250	12.291	12.324	12.350	12.368	12.377
%11973123.00	12.444	12.489	12.527	12.557	12.577	12.589
%11973230.00	12.645	12.696	12.739	12.772	12.796	12.810
%11973337.00	12.854	12.911	12.959	12.997	13.025	13.042
%11973444.00	13.072	13.136	13.190	13.233	13.265	13.286
%11973551.00	13.298	13.370	13.431	13.481	13.518	13.542
%11973658.00	13.534	13.615	13.684	13.741	13.784	13.813
%11973765.00	13.779	13.871	13.950	14.015	14.066	14.099
%11973872.00	14.036	14.139	14.230	14.305	14.364	14.404
%11973979.00	14.303	14.421	14.525	14.612	14.681	14.729
%11974086.00	14.582	14.716	14.836	14.939	15.020	15.077
%11974193.00	14.873	15.027	15.166	15.286	15.382	15.452
%11974300.00	15.175	15.353	15.516	15.657	15.773	15.857
%11974407.00	15.489	15.696	15.887	16.055	16.194	16.298
%11974514.00	15.814	16.054	16.280	16.482	16.653	16.782

Y [ft]	<- X [ft] ->					
	1451862	1451969	1452076	1452183	1452290	1452397
%11974621.00	16.147	16.428	16.696	16.942	17.153	17.316
%11974728.00	16.486	16.814	17.135	17.436	17.701	17.912
%11974835.00	16.823	17.208	17.593	17.966	18.305	18.584
%11974942.00	17.151	17.600	18.063	18.528	18.970	19.349
%11975049.00	17.458	17.977	18.531	19.112	19.695	20.228
%11975156.00	17.727	18.317	18.971	19.691	20.464	21.239
%11975263.00	17.940	18.595	19.345	20.212	21.220	22.362
%11975370.00	18.078	18.779	19.602	20.592	21.825	23.429
%11975477.00	18.127	18.846	19.697	20.737	22.075	23.942
%11975584.00	18.081	18.785	19.610	20.605	21.849	23.477
%11975691.00	17.946	18.605	19.359	20.235	21.256	22.423
%11975798.00	17.735	18.330	18.990	19.718	20.503	21.295
%11975905.00	17.467	17.990	18.551	19.139	19.731	20.275
%11976012.00	17.161	17.613	18.082	18.553	19.001	19.387
%11976119.00	16.832	17.220	17.610	17.987	18.331	18.615
%11976226.00	16.493	16.825	17.149	17.454	17.723	17.937
%11976333.00	16.153	16.436	16.707	16.956	17.170	17.335
%11976440.00	15.818	16.060	16.288	16.493	16.665	16.796
%11976547.00	15.491	15.699	15.892	16.062	16.203	16.308
%11976654.00	15.174	15.354	15.518	15.661	15.778	15.864
%11976761.00	14.869	15.025	15.166	15.287	15.385	15.455
%11976868.00	14.576	14.712	14.834	14.937	15.019	15.077
%11976975.00	14.295	14.414	14.519	14.608	14.678	14.726
%11977082.00	14.026	14.130	14.222	14.298	14.358	14.399
%11977189.00	13.767	13.859	13.940	14.006	14.057	14.092
%11977296.00	13.519	13.601	13.671	13.729	13.773	13.802
%11977403.00	13.282	13.354	13.416	13.467	13.505	13.529
%11977510.00	13.053	13.118	13.173	13.217	13.250	13.270
%11977617.00	12.834	12.891	12.940	12.979	13.007	13.025
%11977724.00	12.623	12.674	12.717	12.752	12.776	12.791
%11977831.00	12.419	12.465	12.504	12.534	12.555	12.568
%11977938.00	12.223	12.265	12.299	12.326	12.344	12.354
%11978045.00	12.034	12.071	12.102	12.125	12.141	12.149
%11978152.00	11.852	11.885	11.912	11.933	11.947	11.953
%11978259.00	11.675	11.705	11.730	11.748	11.759	11.764
%11978366.00	11.504	11.531	11.553	11.569	11.579	11.583
%11978473.00	11.339	11.363	11.383	11.397	11.405	11.407
%11978580.00	11.179	11.201	11.218	11.230	11.237	11.238
%11978687.00	11.023	11.043	11.058	11.069	11.074	11.075
%11978794.00	10.872	10.890	10.904	10.913	10.917	10.917

Y [ft]	<- X [ft] ->					
	1451862	1451969	1452076	1452183	1452290	1452397
%11978901.00	10.726	10.742	10.753	10.761	10.764	10.763
%11979008.00	10.583	10.597	10.608	10.614	10.617	10.615
%11979115.00	10.445	10.457	10.466	10.472	10.473	10.471
%11979222.00	10.309	10.321	10.329	10.333	10.334	10.331
%11979329.00	10.178	10.188	10.195	10.198	10.198	10.195
%11979436.00	10.050	10.059	10.064	10.067	10.066	10.062
%11979543.00	9.925	9.932	9.937	9.939	9.938	9.933
%11979650.00	9.803	9.809	9.813	9.814	9.813	9.808
%11979757.00	9.684	9.689	9.692	9.693	9.691	9.685
%11979864.00	9.567	9.572	9.574	9.574	9.572	9.566
%11979971.00	9.453	9.458	9.459	9.458	9.455	9.449
%11980078.00	9.342	9.345	9.347	9.345	9.342	9.336
%11980185.00	9.233	9.236	9.236	9.235	9.231	9.224
%11980292.00	9.127	9.129	9.129	9.127	9.122	9.116
%11980399.00	9.022	9.024	9.023	9.021	9.016	9.009
%11980506.00	8.920	8.921	8.920	8.917	8.912	8.905
%11980613.00	8.820	8.820	8.819	8.816	8.810	8.803

Y [ft]	<- X [ft] ->					
	1452504	1452611	1452718	1452825	1452932	1453039
%11970876.00	9.383	9.371	9.357	9.340	9.321	9.300
%11970983.00	9.495	9.484	9.469	9.453	9.433	9.411
%11971090.00	9.611	9.599	9.585	9.568	9.548	9.526
%11971197.00	9.729	9.717	9.703	9.686	9.666	9.643
%11971304.00	9.850	9.838	9.824	9.807	9.786	9.763
%11971411.00	9.974	9.963	9.948	9.931	9.910	9.886
%11971518.00	10.102	10.090	10.076	10.058	10.037	10.012
%11971625.00	10.233	10.222	10.207	10.189	10.167	10.142
%11971732.00	10.368	10.357	10.342	10.323	10.301	10.275
%11971839.00	10.507	10.496	10.481	10.462	10.439	10.412
%11971946.00	10.649	10.639	10.624	10.604	10.581	10.553
%11972053.00	10.797	10.786	10.771	10.751	10.727	10.699
%11972160.00	10.949	10.938	10.923	10.903	10.878	10.848
%11972267.00	11.106	11.095	11.080	11.059	11.034	11.003
%11972374.00	11.268	11.258	11.242	11.221	11.195	11.163
%11972481.00	11.436	11.426	11.410	11.389	11.361	11.328
%11972588.00	11.610	11.601	11.585	11.562	11.534	11.499
%11972695.00	11.791	11.782	11.765	11.742	11.712	11.676
%11972802.00	11.979	11.970	11.953	11.929	11.898	11.860
%11972909.00	12.174	12.166	12.149	12.124	12.091	12.051
%11973016.00	12.378	12.370	12.353	12.327	12.293	12.250
%11973123.00	12.591	12.583	12.566	12.539	12.502	12.457
%11973230.00	12.814	12.807	12.789	12.761	12.722	12.673

Y [ft]	<- X [ft] ->					
	1452504	1452611	1452718	1452825	1452932	1453039
%11973337.00	13.047	13.041	13.023	12.993	12.952	12.899
%11973444.00	13.293	13.287	13.269	13.237	13.193	13.136
%11973551.00	13.552	13.547	13.528	13.494	13.446	13.385
%11973658.00	13.825	13.822	13.802	13.766	13.714	13.647
%11973765.00	14.116	14.113	14.093	14.054	13.997	13.923
%11973872.00	14.424	14.424	14.402	14.359	14.297	14.215
%11973979.00	14.754	14.756	14.733	14.686	14.616	14.525
%11974086.00	15.109	15.112	15.088	15.036	14.957	14.854
%11974193.00	15.491	15.498	15.471	15.412	15.323	15.205
%11974300.00	15.906	15.917	15.888	15.821	15.717	15.581
%11974407.00	16.360	16.376	16.344	16.265	16.144	15.985
%11974514.00	16.861	16.883	16.847	16.754	16.609	16.420
%11974621.00	17.419	17.451	17.409	17.295	17.118	16.890
%11974728.00	18.048	18.095	18.044	17.901	17.679	17.398
%11974835.00	18.770	18.838	18.774	18.587	18.300	17.946
%11974942.00	19.615	19.717	19.632	19.374	18.990	18.532
%11975049.00	20.628	20.793	20.669	20.290	19.753	19.148
%11975156.00	21.884	22.179	21.973	21.363	20.577	19.769
%11975263.00	23.499	24.127	23.703	22.599	21.407	20.337
%11975370.00	25.553	27.422	26.101	23.843	22.095	20.758
%11975477.00	27.042	37.846	28.209	24.480	22.387	20.923
%11975584.00	25.673	27.692	26.254	23.901	22.123	20.774
%11975691.00	23.600	24.261	23.814	22.668	21.449	20.362
%11975798.00	21.959	22.265	22.052	21.424	20.619	19.798
%11975905.00	20.685	20.855	20.728	20.340	19.792	19.178
%11976012.00	19.659	19.764	19.677	19.415	19.024	18.559
%11976119.00	18.805	18.874	18.810	18.619	18.329	17.969
%11976226.00	18.075	18.123	18.072	17.927	17.702	17.417
%11976333.00	17.440	17.473	17.431	17.316	17.137	16.906
%11976440.00	16.876	16.900	16.864	16.770	16.623	16.433
%11976547.00	16.371	16.388	16.356	16.277	16.155	15.995
%11976654.00	15.913	15.925	15.896	15.828	15.724	15.588
%11976761.00	15.495	15.502	15.476	15.417	15.327	15.209
%11976868.00	15.109	15.114	15.089	15.037	14.958	14.855
%11976975.00	14.752	14.754	14.731	14.684	14.614	14.523
%11977082.00	14.420	14.419	14.398	14.355	14.292	14.211
%11977189.00	14.108	14.106	14.086	14.047	13.990	13.916
%11977296.00	13.816	13.812	13.793	13.757	13.705	13.638
%11977403.00	13.540	13.535	13.517	13.483	13.435	13.374
%11977510.00	13.278	13.273	13.255	13.224	13.179	13.123

Y [ft]	<- X [ft] ->					
	1452504	1452611	1452718	1452825	1452932	1453039
%11977617.00	13.031	13.025	13.007	12.978	12.936	12.884
%11977724.00	12.795	12.788	12.771	12.743	12.705	12.656
%11977831.00	12.570	12.563	12.546	12.519	12.483	12.438
%11977938.00	12.355	12.348	12.331	12.306	12.271	12.229
%11978045.00	12.150	12.142	12.125	12.101	12.068	12.028
%11978152.00	11.952	11.944	11.928	11.904	11.873	11.835
%11978259.00	11.762	11.754	11.738	11.715	11.686	11.650
%11978366.00	11.580	11.571	11.555	11.534	11.505	11.471
%11978473.00	11.404	11.395	11.380	11.358	11.331	11.298
%11978580.00	11.234	11.225	11.210	11.189	11.163	11.132
%11978687.00	11.070	11.061	11.046	11.026	11.000	10.970
%11978794.00	10.912	10.902	10.887	10.867	10.843	10.814
%11978901.00	10.758	10.748	10.733	10.714	10.691	10.663
%11979008.00	10.609	10.599	10.584	10.566	10.543	10.516
%11979115.00	10.465	10.454	10.440	10.422	10.399	10.373
%11979222.00	10.324	10.314	10.300	10.282	10.260	10.235
%11979329.00	10.188	10.177	10.163	10.146	10.125	10.100
%11979436.00	10.055	10.045	10.031	10.013	9.993	9.969
%11979543.00	9.926	9.915	9.902	9.885	9.864	9.841
%11979650.00	9.800	9.790	9.776	9.759	9.739	9.717
%11979757.00	9.678	9.667	9.653	9.637	9.617	9.595
%11979864.00	9.558	9.547	9.534	9.517	9.499	9.477
%11979971.00	9.441	9.430	9.417	9.401	9.382	9.361
%11980078.00	9.327	9.316	9.303	9.287	9.269	9.248
%11980185.00	9.216	9.205	9.192	9.176	9.158	9.138
%11980292.00	9.107	9.096	9.083	9.068	9.050	9.030
%11980399.00	9.000	8.989	8.976	8.961	8.944	8.925
%11980506.00	8.896	8.885	8.872	8.857	8.840	8.821
%11980613.00	8.794	8.783	8.770	8.755	8.739	8.720

Y [ft]	<- X [ft] ->					
	1453146	1453253	1453360	1453467	1453574	1453681
%11970876.00	9.276	9.250	9.222	9.191	9.159	9.124
%11970983.00	9.387	9.360	9.331	9.300	9.266	9.230
%11971090.00	9.501	9.473	9.443	9.411	9.376	9.339
%11971197.00	9.617	9.589	9.558	9.525	9.489	9.450
%11971304.00	9.737	9.708	9.676	9.641	9.604	9.564
%11971411.00	9.859	9.829	9.796	9.760	9.722	9.681
%11971518.00	9.984	9.953	9.919	9.882	9.843	9.800
%11971625.00	10.113	10.081	10.046	10.008	9.966	9.922
%11971732.00	10.245	10.212	10.176	10.136	10.093	10.047
%11971839.00	10.382	10.347	10.309	10.268	10.223	10.175
%11971946.00	10.522	10.486	10.446	10.403	10.357	10.306

Y [ft]	<- X [ft] ->					
	1453146	1453253	1453360	1453467	1453574	1453681
%11972053.00	10.666	10.629	10.587	10.542	10.494	10.441
%11972160.00	10.814	10.775	10.733	10.685	10.634	10.580
%11972267.00	10.967	10.927	10.882	10.833	10.779	10.722
%11972374.00	11.125	11.083	11.036	10.984	10.928	10.867
%11972481.00	11.289	11.244	11.195	11.140	11.081	11.017
%11972588.00	11.458	11.411	11.359	11.301	11.239	11.172
%11972695.00	11.633	11.583	11.528	11.467	11.401	11.331
%11972802.00	11.814	11.762	11.704	11.639	11.569	11.494
%11972909.00	12.003	11.947	11.885	11.816	11.742	11.662
%11973016.00	12.198	12.139	12.073	12.000	11.921	11.836
%11973123.00	12.402	12.339	12.268	12.190	12.105	12.014
%11973230.00	12.614	12.547	12.470	12.387	12.296	12.199
%11973337.00	12.836	12.763	12.681	12.591	12.493	12.388
%11973444.00	13.068	12.989	12.900	12.802	12.697	12.584
%11973551.00	13.311	13.225	13.128	13.022	12.908	12.786
%11973658.00	13.566	13.471	13.366	13.250	13.126	12.994
%11973765.00	13.833	13.730	13.614	13.487	13.352	13.209
%11973872.00	14.116	14.001	13.873	13.734	13.585	13.429
%11973979.00	14.414	14.286	14.144	13.990	13.826	13.655
%11974086.00	14.729	14.586	14.427	14.256	14.075	13.887
%11974193.00	15.063	14.901	14.722	14.531	14.331	14.124
%11974300.00	15.418	15.233	15.031	14.816	14.593	14.365
%11974407.00	15.796	15.582	15.352	15.110	14.860	14.608
%11974514.00	16.197	15.949	15.685	15.410	15.131	14.852
%11974621.00	16.624	16.333	16.027	15.715	15.402	15.093
%11974728.00	17.076	16.732	16.377	16.021	15.670	15.328
%11974835.00	17.551	17.140	16.727	16.321	15.929	15.552
%11974942.00	18.043	17.550	17.069	16.609	16.172	15.760
%11975049.00	18.537	17.947	17.391	16.873	16.392	15.944
%11975156.00	19.006	18.309	17.676	17.101	16.578	16.098
%11975263.00	19.410	18.606	17.902	17.279	16.720	16.215
%11975370.00	19.690	18.805	18.050	17.393	16.810	16.288
%11975477.00	19.795	18.877	18.103	17.433	16.842	16.313
%11975584.00	19.700	18.811	18.054	17.396	16.812	16.289
%11975691.00	19.426	18.617	17.910	17.284	16.724	16.218
%11975798.00	19.027	18.323	17.686	17.109	16.583	16.102
%11975905.00	18.558	17.963	17.403	16.882	16.398	15.948
%11976012.00	18.064	17.566	17.081	16.618	16.179	15.764
%11976119.00	17.570	17.155	16.738	16.330	15.935	15.556
%11976226.00	17.092	16.745	16.387	16.028	15.675	15.332

Y [ft] <- X [ft] ->

	1453146	1453253	1453360	1453467	1453574	1453681
%11976333.00	16.638	16.344	16.036	15.721	15.407	15.096
%11976440.00	16.208	15.958	15.691	15.415	15.134	14.854
%11976547.00	15.804	15.589	15.356	15.113	14.862	14.609
%11976654.00	15.423	15.237	15.034	14.818	14.593	14.364
%11976761.00	15.066	14.903	14.723	14.531	14.330	14.122
%11976868.00	14.729	14.585	14.425	14.253	14.072	13.884
%11976975.00	14.411	14.283	14.141	13.986	13.822	13.650
%11977082.00	14.111	13.996	13.868	13.728	13.579	13.422
%11977189.00	13.827	13.723	13.607	13.480	13.344	13.200
%11977296.00	13.557	13.462	13.357	13.241	13.116	12.984
%11977403.00	13.300	13.214	13.117	13.011	12.896	12.774
%11977510.00	13.055	12.976	12.887	12.789	12.683	12.571
%11977617.00	12.821	12.748	12.666	12.576	12.478	12.373
%11977724.00	12.597	12.530	12.454	12.370	12.279	12.182
%11977831.00	12.383	12.320	12.250	12.172	12.087	11.996
%11977938.00	12.178	12.119	12.053	11.980	11.901	11.816
%11978045.00	11.980	11.925	11.863	11.795	11.721	11.641
%11978152.00	11.790	11.738	11.680	11.616	11.546	11.471
%11978259.00	11.607	11.558	11.503	11.443	11.377	11.306
%11978366.00	11.430	11.384	11.332	11.275	11.213	11.146
%11978473.00	11.260	11.216	11.167	11.112	11.053	10.990
%11978580.00	11.095	11.053	11.006	10.955	10.899	10.839
%11978687.00	10.935	10.895	10.851	10.802	10.749	10.691
%11978794.00	10.780	10.742	10.700	10.653	10.602	10.548
%11978901.00	10.630	10.594	10.553	10.509	10.460	10.408
%11979008.00	10.485	10.450	10.411	10.368	10.322	10.272
%11979115.00	10.343	10.310	10.272	10.231	10.187	10.139
%11979222.00	10.206	10.173	10.137	10.098	10.055	10.010
%11979329.00	10.072	10.041	10.006	9.968	9.927	9.884
%11979436.00	9.942	9.912	9.878	9.842	9.802	9.760
%11979543.00	9.815	9.786	9.753	9.718	9.680	9.640
%11979650.00	9.691	9.663	9.632	9.598	9.561	9.522
%11979757.00	9.571	9.543	9.513	9.480	9.445	9.407
%11979864.00	9.453	9.426	9.397	9.365	9.331	9.294
%11979971.00	9.338	9.312	9.283	9.253	9.219	9.184
%11980078.00	9.225	9.200	9.173	9.143	9.111	9.076
%11980185.00	9.116	9.091	9.064	9.035	9.004	8.971
%11980292.00	9.008	8.984	8.958	8.930	8.900	8.867
%11980399.00	8.903	8.880	8.854	8.827	8.797	8.766
%11980506.00	8.800	8.777	8.752	8.726	8.697	8.667

Y [ft]	<- X [ft] ->					
	1453146	1453253	1453360	1453467	1453574	1453681
%11980613.00	8.699	8.677	8.653	8.627	8.599	8.569

Y [ft]	<- X [ft] ->					
	1453788	1453895	1454002	1454109	1454216	1454323
%11970876.00	9.087	9.048	9.007	8.964	8.920	8.874
%11970983.00	9.192	9.152	9.110	9.066	9.020	8.972
%11971090.00	9.300	9.258	9.215	9.169	9.122	9.072
%11971197.00	9.410	9.367	9.322	9.275	9.225	9.175
%11971304.00	9.522	9.478	9.431	9.382	9.331	9.278
%11971411.00	9.637	9.591	9.542	9.492	9.439	9.384
%11971518.00	9.755	9.707	9.656	9.604	9.549	9.492
%11971625.00	9.875	9.825	9.773	9.718	9.661	9.602
%11971732.00	9.998	9.946	9.892	9.835	9.776	9.714
%11971839.00	10.124	10.070	10.013	9.954	9.892	9.829
%11971946.00	10.253	10.197	10.138	10.076	10.011	9.945
%11972053.00	10.385	10.327	10.265	10.200	10.133	10.064
%11972160.00	10.521	10.460	10.395	10.327	10.257	10.185
%11972267.00	10.660	10.596	10.528	10.457	10.384	10.308
%11972374.00	10.803	10.735	10.664	10.590	10.513	10.433
%11972481.00	10.950	10.878	10.804	10.726	10.645	10.562
%11972588.00	11.100	11.025	10.946	10.864	10.779	10.692
%11972695.00	11.255	11.176	11.092	11.006	10.917	10.825
%11972802.00	11.414	11.330	11.242	11.151	11.057	10.960
%11972909.00	11.577	11.488	11.395	11.299	11.200	11.098
%11973016.00	11.745	11.651	11.552	11.450	11.345	11.237
%11973123.00	11.918	11.817	11.713	11.604	11.493	11.380
%11973230.00	12.096	11.988	11.877	11.762	11.644	11.524
%11973337.00	12.278	12.163	12.044	11.922	11.797	11.670
%11973444.00	12.466	12.343	12.216	12.085	11.952	11.818
%11973551.00	12.659	12.526	12.390	12.251	12.110	11.967
%11973658.00	12.857	12.714	12.568	12.419	12.269	12.117
%11973765.00	13.060	12.906	12.749	12.590	12.429	12.268
%11973872.00	13.267	13.101	12.932	12.762	12.590	12.419
%11973979.00	13.479	13.299	13.117	12.934	12.751	12.569
%11974086.00	13.695	13.500	13.304	13.107	12.912	12.719
%11974193.00	13.914	13.702	13.490	13.279	13.071	12.865
%11974300.00	14.135	13.904	13.676	13.450	13.227	13.009
%11974407.00	14.356	14.105	13.858	13.616	13.379	13.148
%11974514.00	14.575	14.303	14.037	13.778	13.526	13.282
%11974621.00	14.790	14.495	14.209	13.932	13.665	13.407
%11974728.00	14.997	14.678	14.371	14.077	13.795	13.524
%11974835.00	15.192	14.849	14.522	14.210	13.914	13.630
%11974942.00	15.370	15.003	14.657	14.329	14.019	13.724

Y [ft] <- X [ft] ->

	1453788	1453895	1454002	1454109	1454216	1454323
%11975049.00	15.527	15.138	14.773	14.431	14.108	13.804
%11975156.00	15.657	15.248	14.868	14.513	14.180	13.867
%11975263.00	15.754	15.330	14.938	14.574	14.233	13.914
%11975370.00	15.814	15.381	14.982	14.611	14.266	13.942
%11975477.00	15.835	15.398	14.996	14.624	14.277	13.952
%11975584.00	15.815	15.382	14.982	14.611	14.266	13.942
%11975691.00	15.756	15.331	14.939	14.574	14.233	13.913
%11975798.00	15.659	15.250	14.869	14.514	14.180	13.867
%11975905.00	15.530	15.140	14.774	14.431	14.108	13.803
%11976012.00	15.373	15.005	14.658	14.329	14.018	13.723
%11976119.00	15.195	14.850	14.522	14.210	13.912	13.629
%11976226.00	14.999	14.679	14.371	14.076	13.793	13.522
%11976333.00	14.791	14.495	14.208	13.931	13.663	13.405
%11976440.00	14.576	14.302	14.035	13.775	13.523	13.278
%11976547.00	14.355	14.104	13.856	13.613	13.375	13.144
%11976654.00	14.133	13.902	13.672	13.445	13.222	13.004
%11976761.00	13.911	13.698	13.486	13.274	13.065	12.859
%11976868.00	13.691	13.495	13.298	13.101	12.905	12.711
%11976975.00	13.473	13.293	13.110	12.927	12.743	12.561
%11977082.00	13.260	13.093	12.924	12.753	12.581	12.409
%11977189.00	13.050	12.897	12.739	12.580	12.419	12.257
%11977296.00	12.846	12.703	12.557	12.408	12.257	12.105
%11977403.00	12.647	12.514	12.378	12.238	12.097	11.954
%11977510.00	12.452	12.329	12.202	12.071	11.938	11.803
%11977617.00	12.263	12.148	12.029	11.907	11.781	11.654
%11977724.00	12.079	11.972	11.860	11.745	11.627	11.507
%11977831.00	11.900	11.799	11.694	11.586	11.475	11.361
%11977938.00	11.726	11.631	11.533	11.431	11.326	11.218
%11978045.00	11.556	11.467	11.374	11.278	11.179	11.077
%11978152.00	11.391	11.308	11.220	11.129	11.035	10.938
%11978259.00	11.231	11.152	11.069	10.982	10.893	10.802
%11978366.00	11.075	11.000	10.921	10.839	10.755	10.667
%11978473.00	10.923	10.852	10.777	10.699	10.619	10.536
%11978580.00	10.775	10.707	10.636	10.562	10.486	10.406
%11978687.00	10.631	10.566	10.499	10.428	10.355	10.280
%11978794.00	10.490	10.429	10.364	10.297	10.227	10.155
%11978901.00	10.353	10.294	10.233	10.169	10.102	10.033
%11979008.00	10.219	10.163	10.105	10.043	9.979	9.913
%11979115.00	10.089	10.035	9.979	9.920	9.859	9.795
%11979222.00	9.961	9.910	9.856	9.800	9.741	9.680

Y [ft]	<- X [ft] ->					
	1453788	1453895	1454002	1454109	1454216	1454323
%11979329.00	9.837	9.788	9.736	9.682	9.625	9.567
%11979436.00	9.715	9.668	9.618	9.566	9.512	9.456
%11979543.00	9.597	9.551	9.503	9.453	9.401	9.346
%11979650.00	9.480	9.436	9.390	9.342	9.292	9.239
%11979757.00	9.367	9.324	9.280	9.233	9.185	9.134
%11979864.00	9.256	9.215	9.172	9.127	9.080	9.031
%11979971.00	9.147	9.107	9.066	9.022	8.977	8.930
%11980078.00	9.040	9.002	8.962	8.920	8.876	8.830
%11980185.00	8.936	8.899	8.860	8.819	8.777	8.732
%11980292.00	8.833	8.797	8.760	8.720	8.679	8.636
%11980399.00	8.733	8.698	8.661	8.623	8.583	8.542
%11980506.00	8.635	8.601	8.565	8.528	8.489	8.449
%11980613.00	8.538	8.505	8.471	8.435	8.397	8.358

Y [ft]	<- X [ft] ->					
	1454430	1454537	1454644	1454751	1454858	1454965
%11970876.00	8.826	8.777	8.727	8.675	8.622	8.567
%11970983.00	8.923	8.872	8.820	8.767	8.712	8.656
%11971090.00	9.022	8.969	8.915	8.860	8.803	8.746
%11971197.00	9.122	9.068	9.012	8.955	8.896	8.837
%11971304.00	9.224	9.168	9.110	9.051	8.990	8.929
%11971411.00	9.328	9.270	9.210	9.149	9.086	9.022
%11971518.00	9.434	9.373	9.311	9.248	9.183	9.117
%11971625.00	9.541	9.479	9.414	9.348	9.281	9.213
%11971732.00	9.651	9.586	9.519	9.451	9.381	9.310
%11971839.00	9.763	9.695	9.625	9.555	9.482	9.409
%11971946.00	9.876	9.806	9.734	9.660	9.585	9.508
%11972053.00	9.992	9.919	9.843	9.767	9.689	9.609
%11972160.00	10.110	10.033	9.955	9.875	9.794	9.712
%11972267.00	10.230	10.150	10.068	9.985	9.900	9.815
%11972374.00	10.352	10.268	10.183	10.096	10.008	9.919
%11972481.00	10.476	10.389	10.299	10.209	10.117	10.024
%11972588.00	10.602	10.511	10.418	10.323	10.227	10.131
%11972695.00	10.731	10.635	10.537	10.438	10.339	10.238
%11972802.00	10.861	10.760	10.658	10.555	10.451	10.346
%11972909.00	10.994	10.888	10.781	10.673	10.564	10.454
%11973016.00	11.128	11.017	10.904	10.791	10.677	10.563
%11973123.00	11.264	11.147	11.029	10.911	10.792	10.672
%11973230.00	11.402	11.279	11.155	11.031	10.906	10.782
%11973337.00	11.541	11.412	11.281	11.151	11.020	10.891
%11973444.00	11.682	11.545	11.408	11.271	11.135	10.999
%11973551.00	11.823	11.679	11.535	11.391	11.249	11.107
%11973658.00	11.965	11.813	11.661	11.511	11.361	11.214

Y [ft]	<- X [ft] ->					
	1454430	1454537	1454644	1454751	1454858	1454965
%11973765.00	12.107	11.946	11.787	11.629	11.473	11.319
%11973872.00	12.248	12.079	11.911	11.746	11.583	11.422
%11973979.00	12.389	12.210	12.034	11.861	11.690	11.523
%11974086.00	12.527	12.339	12.154	11.973	11.795	11.620
%11974193.00	12.663	12.465	12.271	12.081	11.896	11.715
%11974300.00	12.796	12.587	12.384	12.186	11.993	11.805
%11974407.00	12.923	12.704	12.492	12.285	12.085	11.890
%11974514.00	13.045	12.816	12.594	12.379	12.171	11.970
%11974621.00	13.159	12.920	12.689	12.466	12.251	12.044
%11974728.00	13.265	13.016	12.776	12.546	12.324	12.111
%11974835.00	13.360	13.102	12.854	12.617	12.389	12.171
%11974942.00	13.444	13.177	12.923	12.679	12.446	12.222
%11975049.00	13.515	13.241	12.980	12.731	12.493	12.265
%11975156.00	13.571	13.291	13.025	12.772	12.530	12.299
%11975263.00	13.613	13.328	13.058	12.802	12.557	12.324
%11975370.00	13.638	13.350	13.078	12.820	12.574	12.339
%11975477.00	13.646	13.358	13.085	12.826	12.579	12.343
%11975584.00	13.638	13.350	13.078	12.819	12.573	12.338
%11975691.00	13.612	13.327	13.057	12.801	12.556	12.323
%11975798.00	13.571	13.290	13.024	12.771	12.529	12.298
%11975905.00	13.514	13.239	12.978	12.729	12.491	12.263
%11976012.00	13.442	13.175	12.920	12.677	12.443	12.219
%11976119.00	13.358	13.099	12.852	12.614	12.386	12.167
%11976226.00	13.262	13.012	12.773	12.542	12.320	12.107
%11976333.00	13.156	12.916	12.685	12.462	12.247	12.039
%11976440.00	13.041	12.811	12.589	12.374	12.166	11.964
%11976547.00	12.918	12.699	12.486	12.279	12.079	11.884
%11976654.00	12.790	12.581	12.377	12.179	11.986	11.797
%11976761.00	12.657	12.458	12.264	12.074	11.888	11.706
%11976868.00	12.520	12.331	12.146	11.964	11.786	11.611
%11976975.00	12.380	12.201	12.025	11.851	11.680	11.513
%11977082.00	12.239	12.069	11.901	11.735	11.572	11.411
%11977189.00	12.096	11.935	11.776	11.617	11.461	11.307
%11977296.00	11.953	11.800	11.649	11.498	11.349	11.201
%11977403.00	11.810	11.665	11.521	11.378	11.235	11.093
%11977510.00	11.667	11.530	11.393	11.256	11.120	10.984
%11977617.00	11.525	11.396	11.265	11.135	11.005	10.875
%11977724.00	11.385	11.262	11.138	11.014	10.889	10.765
%11977831.00	11.246	11.129	11.011	10.892	10.773	10.654
%11977938.00	11.109	10.998	10.885	10.772	10.658	10.544

Y [ft]	<- X [ft] ->					
	1454430	1454537	1454644	1454751	1454858	1454965
%11978045.00	10.973	10.867	10.760	10.652	10.543	10.434
%11978152.00	10.839	10.739	10.637	10.534	10.429	10.325
%11978259.00	10.708	10.612	10.514	10.416	10.316	10.216
%11978366.00	10.578	10.487	10.394	10.299	10.204	10.107
%11978473.00	10.450	10.363	10.274	10.184	10.092	10.000
%11978580.00	10.325	10.242	10.157	10.070	9.982	9.894
%11978687.00	10.202	10.122	10.041	9.958	9.873	9.788
%11978794.00	10.081	10.004	9.926	9.847	9.766	9.684
%11978901.00	9.962	9.889	9.814	9.737	9.659	9.581
%11979008.00	9.845	9.775	9.703	9.629	9.554	9.479
%11979115.00	9.730	9.662	9.593	9.523	9.451	9.378
%11979222.00	9.617	9.552	9.486	9.418	9.349	9.278
%11979329.00	9.506	9.444	9.380	9.315	9.248	9.180
%11979436.00	9.397	9.337	9.276	9.213	9.148	9.083
%11979543.00	9.290	9.233	9.173	9.112	9.050	8.987
%11979650.00	9.185	9.130	9.072	9.014	8.954	8.892
%11979757.00	9.082	9.028	8.973	8.916	8.858	8.799
%11979864.00	8.981	8.929	8.875	8.821	8.765	8.707
%11979971.00	8.881	8.831	8.779	8.726	8.672	8.617
%11980078.00	8.783	8.735	8.685	8.633	8.581	8.527
%11980185.00	8.687	8.640	8.591	8.542	8.491	8.439
%11980292.00	8.592	8.547	8.500	8.452	8.402	8.352
%11980399.00	8.499	8.455	8.410	8.363	8.315	8.266
%11980506.00	8.408	8.365	8.321	8.275	8.229	8.181
%11980613.00	8.318	8.276	8.233	8.189	8.144	8.098

Y [ft]	<- X [ft] ->					
	1455072	1455179	1455286	1455393	1455500	1455607
%11970876.00	8.512	8.456	8.399	8.341	8.282	8.223
%11970983.00	8.599	8.541	8.482	8.422	8.362	8.301
%11971090.00	8.687	8.627	8.566	8.505	8.442	8.379
%11971197.00	8.776	8.714	8.651	8.588	8.524	8.459
%11971304.00	8.866	8.802	8.738	8.672	8.606	8.539
%11971411.00	8.957	8.891	8.825	8.757	8.689	8.620
%11971518.00	9.050	8.982	8.913	8.843	8.773	8.702
%11971625.00	9.143	9.073	9.002	8.930	8.857	8.784
%11971732.00	9.238	9.165	9.092	9.017	8.942	8.867
%11971839.00	9.334	9.259	9.182	9.105	9.028	8.950
%11971946.00	9.431	9.353	9.274	9.194	9.114	9.034
%11972053.00	9.529	9.448	9.366	9.284	9.201	9.118
%11972160.00	9.628	9.544	9.459	9.374	9.289	9.203
%11972267.00	9.728	9.641	9.553	9.465	9.377	9.288
%11972374.00	9.829	9.739	9.648	9.556	9.465	9.373

Y [ft]	<- X [ft] ->					
	1455072	1455179	1455286	1455393	1455500	1455607
%11972481.00	9.931	9.837	9.743	9.648	9.553	9.458
%11972588.00	10.034	9.936	9.838	9.740	9.642	9.544
%11972695.00	10.137	10.035	9.934	9.832	9.730	9.629
%11972802.00	10.241	10.135	10.029	9.924	9.819	9.714
%11972909.00	10.345	10.235	10.125	10.016	9.907	9.799
%11973016.00	10.449	10.335	10.221	10.108	9.995	9.883
%11973123.00	10.553	10.435	10.316	10.199	10.082	9.967
%11973230.00	10.658	10.534	10.411	10.290	10.169	10.049
%11973337.00	10.761	10.633	10.506	10.379	10.255	10.131
%11973444.00	10.864	10.731	10.599	10.468	10.339	10.211
%11973551.00	10.967	10.828	10.691	10.555	10.422	10.290
%11973658.00	11.067	10.923	10.781	10.641	10.503	10.367
%11973765.00	11.167	11.017	10.869	10.725	10.582	10.442
%11973872.00	11.264	11.108	10.956	10.806	10.659	10.515
%11973979.00	11.358	11.197	11.039	10.885	10.733	10.585
%11974086.00	11.450	11.283	11.120	10.960	10.804	10.652
%11974193.00	11.538	11.365	11.197	11.032	10.872	10.716
%11974300.00	11.622	11.443	11.270	11.101	10.936	10.776
%11974407.00	11.701	11.517	11.339	11.165	10.997	10.832
%11974514.00	11.775	11.586	11.403	11.225	11.052	10.885
%11974621.00	11.843	11.649	11.461	11.280	11.103	10.932
%11974728.00	11.905	11.706	11.514	11.329	11.149	10.975
%11974835.00	11.960	11.757	11.561	11.372	11.190	11.013
%11974942.00	12.007	11.801	11.602	11.410	11.224	11.045
%11975049.00	12.047	11.837	11.635	11.441	11.253	11.072
%11975156.00	12.078	11.866	11.662	11.465	11.276	11.093
%11975263.00	12.100	11.886	11.680	11.483	11.292	11.108
%11975370.00	12.114	11.899	11.692	11.493	11.301	11.117
%11975477.00	12.118	11.902	11.695	11.496	11.304	11.120
%11975584.00	12.113	11.898	11.691	11.492	11.301	11.116
%11975691.00	12.099	11.885	11.679	11.481	11.291	11.107
%11975798.00	12.076	11.864	11.660	11.463	11.274	11.091
%11975905.00	12.045	11.835	11.633	11.438	11.250	11.069
%11976012.00	12.004	11.798	11.598	11.406	11.221	11.042
%11976119.00	11.956	11.753	11.557	11.368	11.186	11.009
%11976226.00	11.901	11.702	11.510	11.324	11.144	10.970
%11976333.00	11.838	11.644	11.456	11.274	11.098	10.927
%11976440.00	11.769	11.580	11.397	11.219	11.046	10.878
%11976547.00	11.694	11.510	11.332	11.158	10.989	10.825
%11976654.00	11.614	11.436	11.262	11.093	10.928	10.768

Y [ft]	<- X [ft] ->					
	1455072	1455179	1455286	1455393	1455500	1455607
%11976761.00	11.529	11.357	11.188	11.024	10.863	10.707
%11976868.00	11.441	11.274	11.110	10.951	10.795	10.642
%11976975.00	11.348	11.187	11.029	10.874	10.723	10.574
%11977082.00	11.253	11.097	10.945	10.795	10.648	10.504
%11977189.00	11.155	11.005	10.857	10.712	10.570	10.430
%11977296.00	11.055	10.910	10.768	10.628	10.490	10.354
%11977403.00	10.953	10.814	10.677	10.541	10.408	10.276
%11977510.00	10.850	10.716	10.584	10.453	10.324	10.197
%11977617.00	10.745	10.617	10.490	10.364	10.239	10.115
%11977724.00	10.641	10.517	10.395	10.273	10.152	10.033
%11977831.00	10.535	10.417	10.299	10.181	10.065	9.949
%11977938.00	10.430	10.316	10.202	10.089	9.976	9.865
%11978045.00	10.325	10.215	10.105	9.996	9.888	9.779
%11978152.00	10.219	10.114	10.009	9.903	9.798	9.694
%11978259.00	10.115	10.013	9.912	9.810	9.709	9.608
%11978366.00	10.010	9.913	9.815	9.717	9.619	9.521
%11978473.00	9.907	9.813	9.719	9.624	9.530	9.435
%11978580.00	9.804	9.714	9.623	9.532	9.440	9.349
%11978687.00	9.702	9.615	9.527	9.439	9.351	9.263
%11978794.00	9.601	9.517	9.433	9.348	9.262	9.177
%11978901.00	9.501	9.420	9.338	9.256	9.174	9.091
%11979008.00	9.402	9.324	9.245	9.166	9.086	9.006
%11979115.00	9.303	9.228	9.152	9.076	8.999	8.921
%11979222.00	9.207	9.134	9.061	8.987	8.912	8.837
%11979329.00	9.111	9.041	8.970	8.898	8.826	8.753
%11979436.00	9.016	8.948	8.880	8.810	8.740	8.670
%11979543.00	8.922	8.857	8.791	8.723	8.656	8.587
%11979650.00	8.830	8.767	8.703	8.637	8.572	8.505
%11979757.00	8.739	8.678	8.615	8.552	8.489	8.424
%11979864.00	8.649	8.589	8.529	8.468	8.406	8.344
%11979971.00	8.560	8.502	8.444	8.385	8.325	8.264
%11980078.00	8.472	8.417	8.360	8.302	8.244	8.185
%11980185.00	8.386	8.332	8.277	8.221	8.164	8.107
%11980292.00	8.300	8.248	8.194	8.140	8.085	8.030
%11980399.00	8.216	8.165	8.113	8.061	8.007	7.953
%11980506.00	8.133	8.083	8.033	7.982	7.930	7.877
%11980613.00	8.051	8.003	7.954	7.904	7.853	7.802

Y [ft]	<- X [ft] ->					
	1455714	1455821	1455928	1456035	1456142	1456249
%11970876.00	8.163	8.102	8.041	7.980	7.918	7.856
%11970983.00	8.239	8.177	8.114	8.051	7.988	7.924
%11971090.00	8.316	8.252	8.188	8.123	8.058	7.992

Y [ft]	<- X [ft] ->					
	1455714	1455821	1455928	1456035	1456142	1456249
%11971197.00	8.394	8.328	8.262	8.195	8.128	8.061
%11971304.00	8.472	8.404	8.336	8.268	8.199	8.130
%11971411.00	8.551	8.481	8.411	8.341	8.270	8.200
%11971518.00	8.630	8.558	8.486	8.414	8.342	8.269
%11971625.00	8.710	8.636	8.562	8.488	8.413	8.339
%11971732.00	8.791	8.715	8.638	8.562	8.485	8.409
%11971839.00	8.872	8.793	8.715	8.636	8.557	8.478
%11971946.00	8.953	8.872	8.791	8.710	8.629	8.548
%11972053.00	9.035	8.951	8.868	8.785	8.701	8.618
%11972160.00	9.117	9.031	8.945	8.859	8.773	8.688
%11972267.00	9.199	9.110	9.022	8.933	8.845	8.758
%11972374.00	9.281	9.190	9.099	9.008	8.917	8.827
%11972481.00	9.364	9.269	9.175	9.082	8.989	8.896
%11972588.00	9.446	9.349	9.252	9.156	9.060	8.965
%11972695.00	9.528	9.428	9.328	9.229	9.130	9.033
%11972802.00	9.610	9.506	9.404	9.302	9.200	9.100
%11972909.00	9.691	9.585	9.479	9.374	9.270	9.167
%11973016.00	9.772	9.662	9.553	9.445	9.338	9.232
%11973123.00	9.852	9.739	9.626	9.515	9.405	9.297
%11973230.00	9.931	9.814	9.698	9.584	9.472	9.360
%11973337.00	10.009	9.888	9.770	9.652	9.536	9.422
%11973444.00	10.085	9.961	9.839	9.719	9.600	9.483
%11973551.00	10.160	10.033	9.907	9.783	9.662	9.542
%11973658.00	10.234	10.102	9.973	9.846	9.722	9.599
%11973765.00	10.305	10.170	10.037	9.907	9.780	9.654
%11973872.00	10.373	10.235	10.099	9.966	9.835	9.707
%11973979.00	10.440	10.298	10.158	10.022	9.889	9.758
%11974086.00	10.503	10.357	10.215	10.076	9.940	9.806
%11974193.00	10.563	10.414	10.269	10.126	9.987	9.852
%11974300.00	10.620	10.467	10.319	10.174	10.033	9.894
%11974407.00	10.673	10.517	10.366	10.218	10.074	9.934
%11974514.00	10.722	10.563	10.409	10.259	10.113	9.970
%11974621.00	10.766	10.605	10.448	10.296	10.148	10.003
%11974728.00	10.806	10.643	10.484	10.329	10.179	10.033
%11974835.00	10.842	10.676	10.515	10.358	10.206	10.059
%11974942.00	10.872	10.704	10.541	10.383	10.230	10.081
%11975049.00	10.897	10.727	10.563	10.404	10.249	10.099
%11975156.00	10.916	10.745	10.580	10.420	10.264	10.113
%11975263.00	10.930	10.758	10.592	10.431	10.275	10.123
%11975370.00	10.938	10.766	10.599	10.438	10.281	10.129

Y [ft]	<- X [ft] ->					
	1455714	1455821	1455928	1456035	1456142	1456249
%11975477.00	10.941	10.768	10.601	10.440	10.283	10.131
%11975584.00	10.938	10.765	10.599	10.437	10.280	10.128
%11975691.00	10.929	10.757	10.591	10.430	10.273	10.121
%11975798.00	10.914	10.743	10.578	10.417	10.262	10.111
%11975905.00	10.894	10.724	10.560	10.401	10.246	10.096
%11976012.00	10.868	10.700	10.538	10.380	10.226	10.077
%11976119.00	10.837	10.671	10.510	10.354	10.202	10.054
%11976226.00	10.801	10.638	10.479	10.324	10.174	10.028
%11976333.00	10.761	10.599	10.443	10.290	10.142	9.998
%11976440.00	10.715	10.557	10.403	10.253	10.106	9.964
%11976547.00	10.666	10.510	10.359	10.211	10.067	9.927
%11976654.00	10.612	10.459	10.311	10.166	10.024	9.886
%11976761.00	10.554	10.405	10.260	10.118	9.979	9.843
%11976868.00	10.493	10.348	10.205	10.066	9.930	9.797
%11976975.00	10.429	10.287	10.148	10.012	9.878	9.748
%11977082.00	10.362	10.224	10.088	9.955	9.824	9.696
%11977189.00	10.293	10.158	10.025	9.895	9.768	9.642
%11977296.00	10.221	10.089	9.960	9.833	9.709	9.586
%11977403.00	10.147	10.019	9.893	9.770	9.648	9.528
%11977510.00	10.071	9.947	9.824	9.704	9.585	9.469
%11977617.00	9.993	9.873	9.754	9.637	9.521	9.407
%11977724.00	9.915	9.798	9.682	9.568	9.455	9.344
%11977831.00	9.835	9.721	9.609	9.498	9.388	9.280
%11977938.00	9.754	9.644	9.535	9.427	9.320	9.214
%11978045.00	9.672	9.565	9.460	9.355	9.251	9.148
%11978152.00	9.590	9.486	9.384	9.282	9.181	9.081
%11978259.00	9.507	9.407	9.307	9.208	9.110	9.012
%11978366.00	9.424	9.327	9.230	9.134	9.038	8.943
%11978473.00	9.341	9.247	9.153	9.059	8.966	8.874
%11978580.00	9.257	9.166	9.075	8.984	8.894	8.804
%11978687.00	9.174	9.086	8.997	8.909	8.821	8.734
%11978794.00	9.091	9.005	8.919	8.834	8.749	8.663
%11978901.00	9.008	8.925	8.842	8.759	8.676	8.593
%11979008.00	8.925	8.845	8.764	8.683	8.603	8.522
%11979115.00	8.843	8.765	8.686	8.608	8.530	8.451
%11979222.00	8.761	8.685	8.609	8.533	8.457	8.380
%11979329.00	8.680	8.606	8.532	8.458	8.384	8.310
%11979436.00	8.599	8.527	8.455	8.384	8.311	8.239
%11979543.00	8.518	8.449	8.379	8.309	8.239	8.169
%11979650.00	8.438	8.371	8.303	8.235	8.167	8.099

Y [ft]	<- X [ft] ->					
	1455714	1455821	1455928	1456035	1456142	1456249
%11979757.00	8.359	8.294	8.228	8.162	8.095	8.029
%11979864.00	8.281	8.217	8.153	8.089	8.024	7.959
%11979971.00	8.203	8.141	8.079	8.016	7.953	7.890
%11980078.00	8.126	8.066	8.005	7.944	7.883	7.821
%11980185.00	8.049	7.991	7.932	7.872	7.813	7.753
%11980292.00	7.973	7.917	7.859	7.801	7.743	7.685
%11980399.00	7.898	7.843	7.787	7.731	7.674	7.617
%11980506.00	7.824	7.770	7.716	7.661	7.606	7.550
%11980613.00	7.750	7.698	7.645	7.592	7.538	7.483

Y [ft]	<- X [ft] ->					
	1456356	1456463	1456570	1456677	1456784	1456891
%11970876.00	7.794	7.731	7.669	7.606	7.544	7.481
%11970983.00	7.860	7.796	7.732	7.668	7.604	7.540
%11971090.00	7.927	7.861	7.796	7.730	7.664	7.599
%11971197.00	7.994	7.927	7.859	7.792	7.725	7.658
%11971304.00	8.061	7.992	7.923	7.854	7.786	7.717
%11971411.00	8.129	8.058	7.987	7.917	7.846	7.776
%11971518.00	8.196	8.124	8.051	7.979	7.907	7.835
%11971625.00	8.264	8.190	8.116	8.041	7.968	7.894
%11971732.00	8.332	8.256	8.180	8.104	8.028	7.953
%11971839.00	8.400	8.322	8.244	8.166	8.088	8.011
%11971946.00	8.468	8.387	8.307	8.228	8.149	8.070
%11972053.00	8.536	8.453	8.371	8.289	8.208	8.128
%11972160.00	8.603	8.519	8.434	8.351	8.268	8.185
%11972267.00	8.671	8.584	8.498	8.412	8.327	8.242
%11972374.00	8.738	8.649	8.560	8.472	8.385	8.299
%11972481.00	8.804	8.713	8.622	8.532	8.443	8.355
%11972588.00	8.870	8.777	8.684	8.592	8.501	8.411
%11972695.00	8.936	8.840	8.745	8.651	8.557	8.465
%11972802.00	9.001	8.902	8.805	8.709	8.613	8.519
%11972909.00	9.065	8.964	8.864	8.766	8.668	8.572
%11973016.00	9.128	9.024	8.922	8.822	8.722	8.624
%11973123.00	9.190	9.084	8.980	8.876	8.775	8.675
%11973230.00	9.250	9.142	9.035	8.930	8.826	8.724
%11973337.00	9.310	9.199	9.090	8.983	8.877	8.772
%11973444.00	9.368	9.255	9.143	9.033	8.925	8.819
%11973551.00	9.424	9.308	9.195	9.083	8.973	8.865
%11973658.00	9.479	9.361	9.244	9.130	9.018	8.908
%11973765.00	9.531	9.411	9.292	9.176	9.062	8.950
%11973872.00	9.582	9.459	9.338	9.220	9.104	8.990
%11973979.00	9.630	9.505	9.382	9.262	9.144	9.028
%11974086.00	9.676	9.548	9.424	9.301	9.182	9.064

Y [ft]	<- X [ft] ->					
	1456356	1456463	1456570	1456677	1456784	1456891
%11974193.00	9.719	9.589	9.463	9.338	9.217	9.098
%11974300.00	9.760	9.628	9.499	9.373	9.250	9.129
%11974407.00	9.797	9.663	9.533	9.405	9.280	9.159
%11974514.00	9.832	9.696	9.564	9.435	9.308	9.185
%11974621.00	9.863	9.726	9.592	9.461	9.334	9.209
%11974728.00	9.891	9.752	9.617	9.485	9.356	9.231
%11974835.00	9.915	9.775	9.639	9.506	9.376	9.249
%11974942.00	9.936	9.795	9.657	9.523	9.393	9.265
%11975049.00	9.953	9.811	9.672	9.538	9.406	9.278
%11975156.00	9.966	9.823	9.684	9.549	9.417	9.288
%11975263.00	9.975	9.832	9.693	9.557	9.424	9.295
%11975370.00	9.981	9.837	9.698	9.561	9.429	9.300
%11975477.00	9.983	9.839	9.699	9.563	9.430	9.301
%11975584.00	9.980	9.837	9.697	9.561	9.428	9.299
%11975691.00	9.974	9.831	9.691	9.555	9.423	9.294
%11975798.00	9.964	9.821	9.682	9.547	9.415	9.286
%11975905.00	9.950	9.808	9.670	9.535	9.403	9.275
%11976012.00	9.932	9.791	9.654	9.520	9.389	9.262
%11976119.00	9.911	9.771	9.634	9.501	9.372	9.245
%11976226.00	9.886	9.747	9.612	9.480	9.351	9.226
%11976333.00	9.857	9.720	9.586	9.455	9.328	9.204
%11976440.00	9.825	9.690	9.557	9.428	9.302	9.179
%11976547.00	9.790	9.656	9.526	9.398	9.273	9.151
%11976654.00	9.752	9.620	9.491	9.365	9.242	9.122
%11976761.00	9.710	9.581	9.454	9.330	9.208	9.089
%11976868.00	9.666	9.539	9.414	9.292	9.172	9.055
%11976975.00	9.620	9.495	9.372	9.252	9.134	9.018
%11977082.00	9.571	9.448	9.327	9.209	9.093	8.979
%11977189.00	9.520	9.399	9.281	9.164	9.050	8.939
%11977296.00	9.466	9.348	9.232	9.118	9.006	8.896
%11977403.00	9.411	9.295	9.181	9.070	8.960	8.851
%11977510.00	9.354	9.240	9.129	9.019	8.912	8.805
%11977617.00	9.295	9.184	9.075	8.968	8.862	8.758
%11977724.00	9.234	9.126	9.020	8.915	8.811	8.709
%11977831.00	9.173	9.067	8.963	8.860	8.759	8.659
%11977938.00	9.110	9.007	8.905	8.804	8.705	8.607
%11978045.00	9.046	8.945	8.846	8.748	8.650	8.554
%11978152.00	8.981	8.883	8.786	8.690	8.595	8.501
%11978259.00	8.916	8.820	8.725	8.631	8.538	8.446
%11978366.00	8.849	8.756	8.663	8.571	8.481	8.391

Y [ft]	<- X [ft] ->					
	1456356	1456463	1456570	1456677	1456784	1456891
%11978473.00	8.782	8.691	8.601	8.511	8.422	8.334
%11978580.00	8.715	8.626	8.538	8.450	8.364	8.278
%11978687.00	8.647	8.560	8.474	8.389	8.304	8.220
%11978794.00	8.579	8.494	8.411	8.327	8.244	8.162
%11978901.00	8.510	8.428	8.346	8.265	8.184	8.104
%11979008.00	8.442	8.362	8.282	8.203	8.124	8.045
%11979115.00	8.373	8.295	8.217	8.140	8.063	7.986
%11979222.00	8.304	8.228	8.152	8.077	8.001	7.926
%11979329.00	8.236	8.162	8.088	8.014	7.940	7.867
%11979436.00	8.167	8.095	8.023	7.951	7.879	7.807
%11979543.00	8.098	8.028	7.958	7.887	7.817	7.747
%11979650.00	8.030	7.962	7.893	7.824	7.756	7.688
%11979757.00	7.962	7.895	7.828	7.761	7.694	7.628
%11979864.00	7.894	7.829	7.764	7.698	7.633	7.568
%11979971.00	7.827	7.763	7.699	7.636	7.572	7.508
%11980078.00	7.759	7.697	7.635	7.573	7.511	7.448
%11980185.00	7.692	7.632	7.571	7.511	7.450	7.389
%11980292.00	7.626	7.567	7.508	7.448	7.389	7.329
%11980399.00	7.560	7.502	7.444	7.387	7.328	7.270
%11980506.00	7.494	7.438	7.382	7.325	7.268	7.211
%11980613.00	7.429	7.374	7.319	7.264	7.208	7.152

Y [ft]	<- X [ft] ->					
	1456998	1457105	1457212	1457319	1457426	1457533
%11970876.00	7.418	7.356	7.293	7.231	7.169	7.107
%11970983.00	7.476	7.412	7.348	7.284	7.221	7.157
%11971090.00	7.533	7.468	7.403	7.338	7.273	7.208
%11971197.00	7.591	7.524	7.457	7.391	7.325	7.259
%11971304.00	7.648	7.580	7.512	7.444	7.377	7.310
%11971411.00	7.706	7.636	7.567	7.497	7.429	7.360
%11971518.00	7.763	7.692	7.621	7.550	7.480	7.410
%11971625.00	7.821	7.748	7.675	7.603	7.531	7.460
%11971732.00	7.878	7.803	7.729	7.656	7.582	7.510
%11971839.00	7.935	7.859	7.783	7.708	7.633	7.559
%11971946.00	7.991	7.913	7.836	7.759	7.683	7.608
%11972053.00	8.048	7.968	7.889	7.811	7.733	7.656
%11972160.00	8.103	8.022	7.942	7.862	7.782	7.704
%11972267.00	8.159	8.076	7.993	7.912	7.831	7.751
%11972374.00	8.214	8.129	8.045	7.962	7.879	7.798
%11972481.00	8.268	8.181	8.096	8.011	7.927	7.844
%11972588.00	8.321	8.233	8.146	8.059	7.973	7.889
%11972695.00	8.374	8.284	8.195	8.107	8.019	7.933
%11972802.00	8.426	8.334	8.243	8.153	8.065	7.977

Y [ft]	<- X [ft] ->					
	1456998	1457105	1457212	1457319	1457426	1457533
%11972909.00	8.477	8.383	8.290	8.199	8.109	8.020
%11973016.00	8.527	8.431	8.337	8.244	8.152	8.061
%11973123.00	8.576	8.478	8.382	8.287	8.194	8.102
%11973230.00	8.623	8.524	8.426	8.330	8.235	8.141
%11973337.00	8.670	8.569	8.469	8.371	8.275	8.179
%11973444.00	8.715	8.612	8.511	8.411	8.313	8.216
%11973551.00	8.758	8.653	8.551	8.449	8.350	8.252
%11973658.00	8.800	8.694	8.589	8.486	8.385	8.286
%11973765.00	8.840	8.732	8.626	8.522	8.419	8.319
%11973872.00	8.878	8.769	8.661	8.555	8.452	8.350
%11973979.00	8.915	8.804	8.694	8.587	8.482	8.379
%11974086.00	8.949	8.836	8.726	8.618	8.511	8.407
%11974193.00	8.981	8.867	8.755	8.646	8.538	8.433
%11974300.00	9.012	8.896	8.783	8.672	8.564	8.457
%11974407.00	9.039	8.923	8.808	8.696	8.587	8.479
%11974514.00	9.065	8.947	8.831	8.718	8.608	8.500
%11974621.00	9.088	8.969	8.852	8.738	8.627	8.518
%11974728.00	9.108	8.988	8.871	8.756	8.644	8.534
%11974835.00	9.126	9.005	8.887	8.771	8.659	8.548
%11974942.00	9.141	9.019	8.901	8.785	8.671	8.560
%11975049.00	9.153	9.031	8.912	8.795	8.681	8.570
%11975156.00	9.163	9.040	8.920	8.803	8.689	8.577
%11975263.00	9.169	9.047	8.927	8.809	8.695	8.582
%11975370.00	9.173	9.050	8.930	8.813	8.698	8.586
%11975477.00	9.175	9.051	8.931	8.814	8.699	8.586
%11975584.00	9.173	9.050	8.929	8.812	8.697	8.585
%11975691.00	9.168	9.045	8.925	8.808	8.693	8.581
%11975798.00	9.161	9.038	8.918	8.801	8.687	8.575
%11975905.00	9.150	9.028	8.909	8.792	8.678	8.567
%11976012.00	9.137	9.016	8.897	8.781	8.668	8.557
%11976119.00	9.122	9.001	8.883	8.767	8.654	8.544
%11976226.00	9.103	8.983	8.866	8.751	8.639	8.529
%11976333.00	9.082	8.963	8.847	8.733	8.621	8.512
%11976440.00	9.058	8.940	8.825	8.712	8.602	8.493
%11976547.00	9.032	8.916	8.801	8.689	8.580	8.472
%11976654.00	9.004	8.888	8.775	8.664	8.556	8.450
%11976761.00	8.973	8.859	8.747	8.638	8.530	8.425
%11976868.00	8.940	8.827	8.717	8.609	8.502	8.398
%11976975.00	8.905	8.794	8.685	8.578	8.473	8.370
%11977082.00	8.868	8.758	8.651	8.545	8.441	8.340

Y [ft] <- X [ft] ->	1456998	1457105	1457212	1457319	1457426	1457533
%11977189.00	8.829	8.721	8.615	8.511	8.408	8.308
%11977296.00	8.788	8.681	8.577	8.474	8.374	8.274
%11977403.00	8.745	8.641	8.538	8.437	8.337	8.240
%11977510.00	8.701	8.598	8.497	8.398	8.300	8.203
%11977617.00	8.655	8.554	8.455	8.357	8.261	8.166
%11977724.00	8.608	8.509	8.411	8.315	8.220	8.127
%11977831.00	8.560	8.462	8.366	8.272	8.179	8.087
%11977938.00	8.510	8.415	8.320	8.227	8.136	8.045
%11978045.00	8.459	8.366	8.273	8.182	8.092	8.003
%11978152.00	8.408	8.316	8.225	8.136	8.047	7.960
%11978259.00	8.355	8.265	8.176	8.088	8.001	7.915
%11978366.00	8.302	8.213	8.126	8.040	7.954	7.870
%11978473.00	8.247	8.161	8.075	7.991	7.907	7.824
%11978580.00	8.192	8.108	8.024	7.941	7.859	7.777
%11978687.00	8.137	8.054	7.972	7.890	7.810	7.730
%11978794.00	8.080	7.999	7.919	7.839	7.760	7.682
%11978901.00	8.024	7.945	7.866	7.788	7.710	7.634
%11979008.00	7.967	7.889	7.812	7.736	7.660	7.585
%11979115.00	7.909	7.834	7.758	7.683	7.609	7.535
%11979222.00	7.852	7.778	7.704	7.630	7.558	7.485
%11979329.00	7.794	7.721	7.649	7.577	7.506	7.435
%11979436.00	7.736	7.665	7.594	7.524	7.454	7.384
%11979543.00	7.678	7.608	7.539	7.470	7.402	7.333
%11979650.00	7.619	7.551	7.484	7.416	7.349	7.282
%11979757.00	7.561	7.495	7.428	7.362	7.296	7.231
%11979864.00	7.503	7.438	7.373	7.308	7.244	7.180
%11979971.00	7.444	7.381	7.317	7.254	7.191	7.128
%11980078.00	7.386	7.324	7.262	7.200	7.138	7.076
%11980185.00	7.328	7.267	7.206	7.146	7.085	7.025
%11980292.00	7.270	7.210	7.151	7.091	7.032	6.973
%11980399.00	7.212	7.154	7.096	7.037	6.979	6.921
%11980506.00	7.154	7.097	7.040	6.983	6.926	6.870
%11980613.00	7.097	7.041	6.985	6.929	6.874	6.818

Y [ft] <- X [ft] ->	1457640	1457747	1457854	1457961
%11970876.00	7.045	6.983	6.922	6.861
%11970983.00	7.094	7.032	6.969	6.907
%11971090.00	7.144	7.080	7.016	6.953
%11971197.00	7.194	7.128	7.063	6.999
%11971304.00	7.243	7.176	7.110	7.045
%11971411.00	7.292	7.224	7.157	7.090
%11971518.00	7.341	7.272	7.203	7.135

Y [ft]	<- X [ft] ->			
	1457640	1457747	1457854	1457961
%11971625.00	7.389	7.319	7.249	7.180
%11971732.00	7.437	7.366	7.295	7.224
%11971839.00	7.485	7.412	7.340	7.268
%11971946.00	7.533	7.458	7.385	7.312
%11972053.00	7.580	7.504	7.429	7.355
%11972160.00	7.626	7.549	7.473	7.397
%11972267.00	7.672	7.593	7.516	7.439
%11972374.00	7.717	7.637	7.558	7.480
%11972481.00	7.762	7.680	7.600	7.520
%11972588.00	7.805	7.723	7.641	7.560
%11972695.00	7.848	7.764	7.681	7.599
%11972802.00	7.890	7.805	7.721	7.637
%11972909.00	7.932	7.845	7.759	7.675
%11973016.00	7.972	7.884	7.797	7.711
%11973123.00	8.011	7.921	7.833	7.746
%11973230.00	8.049	7.958	7.868	7.780
%11973337.00	8.086	7.994	7.903	7.813
%11973444.00	8.121	8.028	7.936	7.845
%11973551.00	8.156	8.061	7.968	7.876
%11973658.00	8.189	8.092	7.998	7.905
%11973765.00	8.220	8.123	8.027	7.933
%11973872.00	8.250	8.151	8.055	7.960
%11973979.00	8.278	8.179	8.081	7.985
%11974086.00	8.305	8.204	8.106	8.009
%11974193.00	8.330	8.228	8.129	8.031
%11974300.00	8.353	8.250	8.150	8.051
%11974407.00	8.374	8.271	8.169	8.070
%11974514.00	8.393	8.289	8.187	8.087
%11974621.00	8.411	8.306	8.203	8.103
%11974728.00	8.426	8.321	8.218	8.116
%11974835.00	8.440	8.334	8.230	8.128
%11974942.00	8.451	8.345	8.240	8.138
%11975049.00	8.461	8.354	8.249	8.146
%11975156.00	8.468	8.361	8.256	8.153
%11975263.00	8.473	8.365	8.260	8.157
%11975370.00	8.476	8.368	8.263	8.160
%11975477.00	8.476	8.369	8.264	8.160
%11975584.00	8.475	8.368	8.262	8.159
%11975691.00	8.471	8.364	8.259	8.156
%11975798.00	8.466	8.359	8.254	8.151

Y [ft]	<- X [ft] ->			
	1457640	1457747	1457854	1457961
%11975905.00	8.458	8.351	8.246	8.144
%11976012.00	8.448	8.341	8.237	8.135
%11976119.00	8.436	8.330	8.226	8.124
%11976226.00	8.422	8.316	8.213	8.112
%11976333.00	8.405	8.301	8.198	8.097
%11976440.00	8.387	8.283	8.181	8.081
%11976547.00	8.367	8.264	8.163	8.063
%11976654.00	8.345	8.243	8.142	8.044
%11976761.00	8.321	8.220	8.120	8.023
%11976868.00	8.296	8.195	8.097	8.000
%11976975.00	8.269	8.169	8.072	7.976
%11977082.00	8.240	8.141	8.045	7.950
%11977189.00	8.209	8.112	8.016	7.923
%11977296.00	8.177	8.081	7.987	7.894
%11977403.00	8.143	8.049	7.956	7.864
%11977510.00	8.108	8.015	7.923	7.833
%11977617.00	8.072	7.980	7.889	7.800
%11977724.00	8.035	7.944	7.854	7.766
%11977831.00	7.996	7.906	7.818	7.731
%11977938.00	7.956	7.868	7.781	7.695
%11978045.00	7.915	7.828	7.743	7.659
%11978152.00	7.873	7.788	7.704	7.621
%11978259.00	7.830	7.747	7.664	7.582
%11978366.00	7.787	7.704	7.623	7.542
%11978473.00	7.742	7.661	7.581	7.502
%11978580.00	7.697	7.617	7.539	7.461
%11978687.00	7.651	7.573	7.495	7.419
%11978794.00	7.605	7.528	7.452	7.376
%11978901.00	7.557	7.482	7.407	7.333
%11979008.00	7.510	7.436	7.362	7.289
%11979115.00	7.462	7.389	7.317	7.245
%11979222.00	7.413	7.342	7.271	7.201
%11979329.00	7.364	7.294	7.225	7.156
%11979436.00	7.315	7.246	7.178	7.110
%11979543.00	7.266	7.198	7.131	7.065
%11979650.00	7.216	7.150	7.084	7.018
%11979757.00	7.166	7.101	7.036	6.972
%11979864.00	7.116	7.052	6.989	6.926
%11979971.00	7.065	7.003	6.941	6.879
%11980078.00	7.015	6.954	6.893	6.832

Y [ft]	<- X [ft] ->			
	1457640	1457747	1457854	1457961
%11980185.00	6.964	6.904	6.845	6.785
%11980292.00	6.914	6.855	6.796	6.738
%11980399.00	6.863	6.806	6.748	6.691
%11980506.00	6.813	6.756	6.700	6.643
%11980613.00	6.762	6.707	6.651	6.596

From: Cynthia Pogue
To: Danita Haywood
Date: 11/16/07 8:19AM
Subject: Fwd: Extending Response for Information: Well # 55-215421

FOR FILE:
Danita - Please put this in Woodriff Water S-216240 (55-215421) File with their Application to Operate a Non-Exempt, Servic e Area Well.
Thanks
Cindy

>>> Cynthia Pogue 11/08/07 03:47PM >>>
Brian -
Correction to Application number. Application number is incorrect in the letter dated September 24. I apologize for the error.
Application for Woodruff Water for well 55-215421 is **S-216240**.

As mutually agreed, this application will be extended an additional 30 days in order to attain the necessary waivers. Initial date for response would have been November 23rd; new date for response to ADWR is December 23, 2007.

Please keep me posted with any updates over the next few months. If I can be of any assistance, please do not hesitate to contact me. Thank you
Cindy Pogue

>>> "Hall, Brian" <bhall@pivotalgroup.com> 11/08/07 02:08PM >>>
Cindy,

As we discussed on the phone a few minutes ago, Woodruff Water Company would like to ask for a 30 day extension on the above referenced application, to secure necessary waivers.

Thank you for your assistance in this.

Brian

Brian R. Hall
General Manager
Woodruff Water & Utility
2555 E. Camelback Rd., Suite 700
Phoenix, Arizona 85016
(602) 956-7200
Fax: (602) 956-2313
bhall@pivotalgroup.com

Mail Envelope Properties (473DB4FD.478 : 7 : 36819)

Subject: Fwd: Extending Response for Information: Well # 55-215421
Creation Date: 11/16/07 8:19AM
From: Cynthia Pogue

Created By: capogue@azwater.gov

Recipients
azwater.gov
PHOENIX.ADWR
dmhaywood (Danita Haywood)

Post Office	Route
PHOENIX.ADWR	azwater.gov

Files	Size	Date & Time
MESSAGE	3107	11/16/07 08:19AM

Options

Expiration Date:	None
Priority:	Standard
Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

ARIZONA DEPARTMENT OF WATER RESOURCES
Pinal Active Management Area
1729 N. Trekell Road, Suite 105 • Casa Grande, Arizona 85222
Telephone (520) 836-4857 • Fax (520) 836-9208

Janet Napolitano
Governor

Herbert R. Guenther
Director

September 24, 2007

Woodruff Water Company
Brian Hall
2555 E. Camelback Road
Suite 700
Phoenix, AZ 85016

RE: Application for Permission to Operate Non-Exempt, Service Area Well for Woodruff Water Company - Application S-215977 Well #55-215421

Dear Mr. Hall:

The Arizona Department of Water Resources (Department) has completed an impact study of the proposed well for which you are applying in the above referenced application. The review has concluded that the proposed site for the new well will have a 10-foot drawdown radius ranging from 4,250-5,750 feet. Records of the Department indicate that the following wells could be impacted by your well: 55-639134, 55-621834, 55-621828, 55-638458, 55-621829, and 55-621827. Enclosed is a copy of the screen print for the well. .

The Department may not grant a well permit that will cause increasing damage to surrounding land and water users.

The following options are available to you for addressing the issue of adverse impact:

1. You may reduce the annual volume of pumpage from the well to an amount, which does not affect surrounding wells.

2. You may negotiate and obtain waivers from the impacted well owner(s).

3. You may amend the location of the proposed well to a site, which does not contain a concentration of wells.

4. You may submit evidence, which proves that the well of record is not within the radius of impact. This evidence will be subject to field verification by the Pinal AMA.

5. You may withdraw your application.

Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

Please advise within 60 days of the date of this letter what action you intend to take on the application. Failure to submit the information requested within 60 days may result in the denial of the application. The Department's substantive review time frame is suspended until all of the requested information is provided.

If you have any questions regarding the values used in calculating the area of impact, please contact Alene McCracken in the Hydrology Division at 602-771-8535.

Please direct the additional information to Cindy Pogue at the Pinal AMA at (520) 538-4857. If you have any additional questions regarding the application, please do not hesitate to contact her.

Sincerely,

Randy Edmond
Pinal Active Management Area Director

cc: Kevin Hebert, Southwest Ground-Water Consultants, Inc.
Alene McCracken, Hydrology
Darlene Sumpter-King, Phoenix AMA

Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

Arizona Department of Water Resources
Well Impact Waiver
10 Feet of Additional Drawdown

The undersigned is the registered owner (or an authorized representative of the owner) of a well that has been assigned well registration number 55-_____ as reflected in the Arizona Department of Water Resources (ADWR) well registration records. The undersigned hereby acknowledges the following:

1. _____ ("Applicant") has filed or intends to file an Application to Drill or Operate a Non-Exempt Well Within an Active Management Area ("Application"). If the Application has not yet been filed with ADWR, a copy of the Application is attached. If the Application has been filed with ADWR, the Application number is the following: _____.

2. ADWR or the Applicant has performed a well impact analysis utilizing the proposed maximum annual withdrawal volume(s) reflected in the Application in accordance with A.R.S. § 45-599 or 45-834.01. Based on this analysis, which considers only withdrawals from the proposed well or wells identified in the Application ("Proposed Well(s)") at the withdrawal rate(s) set forth in the Application, ***the impact on the undersigned's well will likely be greater than 10 feet of additional drawdown after the first five (5) years of withdrawals from the Proposed Wells(s)***. ADWR considers this to be an unreasonable impact.

3. The undersigned also understands that additional drawdown will likely occur at the undersigned's well during the same five-year period as a result of the undersigned's own withdrawals and withdrawals from other wells, and in fact drawdown at the undersigned's well may currently exceed 10 feet over a five-year period.

Notwithstanding the preceding, the undersigned hereby consents to the withdrawal of water from the Proposed Well(s) at the location(s) identified in the Application and at withdrawal rate(s) equal to or less than the maximum annual volume(s) set forth in the Application. The undersigned waives any impacts from the Proposed Well(s) at the proposed maximum annual withdrawal volume(s) set forth in the Application.

_____ _____

Signature of Well Owner (or authorized representative) Date

_____

Printed Name and Title

STATE OF ARIZONA)

)SS.

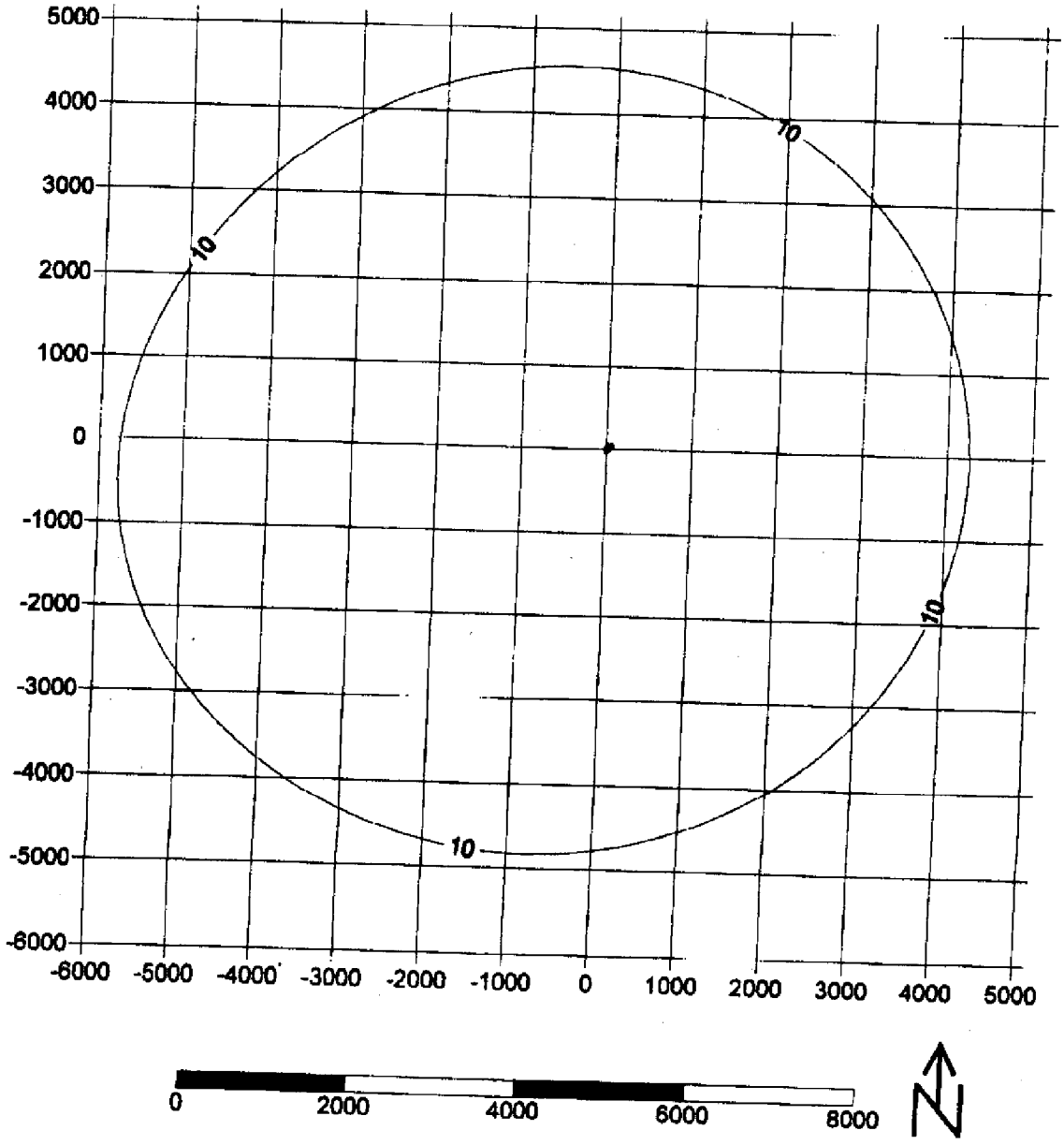
County of _____)

SUBSCRIBED AND SWORN TO before me this _____day of _____, 20____.

_____

Notary Public

Woodruff Water Co.
55-215421/S-216240
D (5-7) 14 CAB
T=88,000 gpd/ft
Sy=0.08
Q=1950 gpm



ARIZONA DEPARTMENT OF WATER RESOURCES
Hydrology Division

MEMORANDUM

TO: Cindy Pogue, Tucson AMA

THRU: Drew Swieczkowski, Manager, Water Resources Section

FROM: Alene McCracken, Hydrologist, Water Resources Section

DATE: September 17, 2007

RE: Woodruff Water Co, Application for a permit to operate a non-exempt service well in the Pinal AMA. No. S-216240; **WELL IMPACT ANALYSIS** for well no. 55-215421, D-05-07 14 CAB

Hydrology has completed its evaluation of the above referenced application for a permit to drill or operate a non-exempt non-service area well. A ten-foot drawdown analysis was performed by Hydrology for the well in D-05-07 14 CAB. Hydrology calculated a transmissivity value from a pump test of the well and used the specific yield from the Pinal AMA model to conduct both a standard Theis analysis and THWELLS calculation for the drawdown radius. One image well was used in the THWELLS analysis. The results are presented below:

Well Location & registration number:	Analysis performed by	Transmissivity Value (gpd/ft)	Specific Yield	Pumping Volume AFA	Ten-Foot Drawdown Radius After Five Years
D-05-07 14 CAB 55-215421	Applicant	88,000	0.10	3,145 (1,950 gpm)	3,465-4,207
	ADWR	88,000	0.08	3,145 (1,950 gpm)	~4,250-5,750

According to the parameters of the application, the calculated drawdown at the well is 60.2 feet for the five-year time period. For the purpose of AMA review, please use Hydrology's calculated radius.

The location of the proposed well was also reviewed for water quality and subsidence. No additional water quality or subsidence monitoring is required.

Attachments

Run Date: 09/24/2007

ARIZONA DEPARTMENT OF WATER RESOURCES WELL REPORT

Quad	Town	Range	Sect	Q160	Q40	Q10	Reg No.	Registered Full Name & Address	Well Depth	Case Depth	Case Diameter	Water Level	Pump (GPM)	Most Recent Auth. Issued: Drill Lic No	Most Recent Auth. Issued: Issue Date	Org. Drill Date	Reg Wtr Use	Wtr-shed	Log	CRT
D	5.0	7.0	14	A	A	0	55 - 639134	BECHTEL JR,R D 556 S ARIZONA BLVD COOLIDGE, AZ 85228	0	0	0	0	35	0			D	15		
B/M/P:																				
Well Type: EXEMPT																				
D	5.0	7.0	14	A	D	D	55 - 621834	WUERTZ FARMING LIMITED COMPANY 3227 WEST BECHTEL ROAD COOLIDGE, AZ 85228	466	460	20	0	0	0		07/23/1951	D	15		
B/M/P: 509-54-001																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	14	A	D	D	55 - 208403	WOODRUFF WATER COMPANY 2555 E. CAMELBACK RD, STE 70 SUITE 200 PHOENIX, AZ 85016	0	0	0	0	0	0			D	15		
Cancelled: Y B/M/P:																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	14	C	A	B	55 - 215421	WOODRUFF WATER COMPANY 2555 E. CAMELBACK ROAD, SUI PHOENIX, AZ 85016	1,254	1,120	19	151	0	7	04/17/2007	05/24/2007	D	15	X	
B/M/P:																				
Well Type: WITHDRAWAL PERMIT																				
D	5.0	7.0	14	D	C	D	55 - 621828	WUERTZ FARMING LMT CO 3227 W BECHTEL RD COOLIDGE, AZ 85228	1,230	470	20	260	1,768	0		01/01/1963	D	15		
B/M/P:																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	14				55 - 204362	PIVOTAL GROUP 2555 E CAMELBACK RD STE 700 PHOENIX, AZ 85016	0	80	10	50	0	7	07/29/2004	09/07/2004	D	15	X	
B/M/P:																				
Well Type: GEOTECHNICAL																				

– End Of Report –

Run Date: 09/24/2007

ARIZONA DEPARTMENT OF WATER RESOURCES WELL REPORT

Quad	Town	Range	Sect	Q160	Q40	Q10	Reg No.	Registered Full Name & Address	Well Depth	Case Depth	Case Diameter	Water Level	Pump (GPM)	Most Recent Auth. Issued: Drill Lic No	Most Recent Auth. Issued: Issue Date	Org. Drill Date	Reg Wtr Use	Wtr-shed	Log	CRT
D	5.0	7.0	23	A	A	D	55 - 638458	WUERTZ,H RT 1 BOX 115 A COOLIDGE, AZ 85228	438	399	8	195	35	0			D	15		
B/M/P:																				
Well Type: EXEMPT																				
D	5.0	7.0	23	A	A	D	55 - 621829	FIRST AM TITLE INS TRUST NO 2573 4801 E WASHINGTON ST STE 14 PHOENIX, AZ 85034	391	380	20	143	1,827	0		01/01/1940	D	15		
B/M/P:																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	23	A	C	A	55 - 621827	FIRST AM TITLE INS TRUST NO 2573 C/O TRUST DEPARTMENT 4801 E WASHINGTON ST STE 140 PHOENIX, AZ 85034	1,210	412	20	294	1,265	0		01/01/1962	D	15		
B/M/P:																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	23	D	A	A	55 - 612158	NAYLOR, NAN,T 853 N BARKLEY MESA, AZ 85203	312	312	20	0	600	0			D	15		
B/M/P:																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	23	D	B	A	55 - 612157	NAYLOR, NAN,T 853 N BARKLEY MESA, AZ 85203	1,000	1,000	20	200	1,000	0		01/01/1962	D	15		
B/M/P:																				
Well Type: NON-EXEMPT																				
D	5.0	7.0	23	D	D	A	55 - 612159	NAYLOR, NAN,T 853 N BARKLEY MESA, AZ 85203	1,500	1,500	20	200	1,500	0			D	15		
B/M/P:																				
Well Type: NON-EXEMPT																				

-- End Of Report --

ARIZONA DEPARTMENT OF WATER RESOURCES
Hydrology Division

MEMORANDUM

TO: Cindy Pogue, Tucson AMA

THRU: Drew Swieczkowski, Manager, Water Resources Section

FROM: Alene McCracken, Hydrologist, Water Resources Section

DATE: September 17, 2007

RE: Woodruff Water Co, Application for a permit to operate a non-exempt service well in the Pinal AMA. No. S-216240; **WELL IMPACT ANALYSIS** for well no. 55-215421, D-05-07 14 CAB

Hydrology has completed its evaluation of the above referenced application for a permit to drill or operate a non-exempt non-service area well. A ten-foot drawdown analysis was performed by Hydrology for the well in D-05-07 14 CAB. Hydrology calculated a transmissivity value from a pump test of the well and used the specific yield from the Pinal AMA model to conduct both a standard Theis analysis and THWELLS calculation for the drawdown radius. One image well was used in the THWELLS analysis. The results are presented below:

Well Location & registration number:	Analysis performed by	Transmissivity Value (gpd/ft)	Specific Yield	Pumping Volume AFA	Ten-Foot Drawdown Radius After Five Years
D-05-07 14 CAB 55-215421	Applicant	88,000	0.10	3,145 (1,950 gpm)	3,465-4,207
	ADWR	88,000	0.08	3,145 (1,950 gpm)	~4,250-5,750

According to the parameters of the application, the calculated drawdown at the well is 60.2 feet for the five-year time period. For the purpose of AMA review, please use Hydrology's calculated radius.

The location of the proposed well was also reviewed for water quality and subsidence. No additional water quality or subsidence monitoring is required.

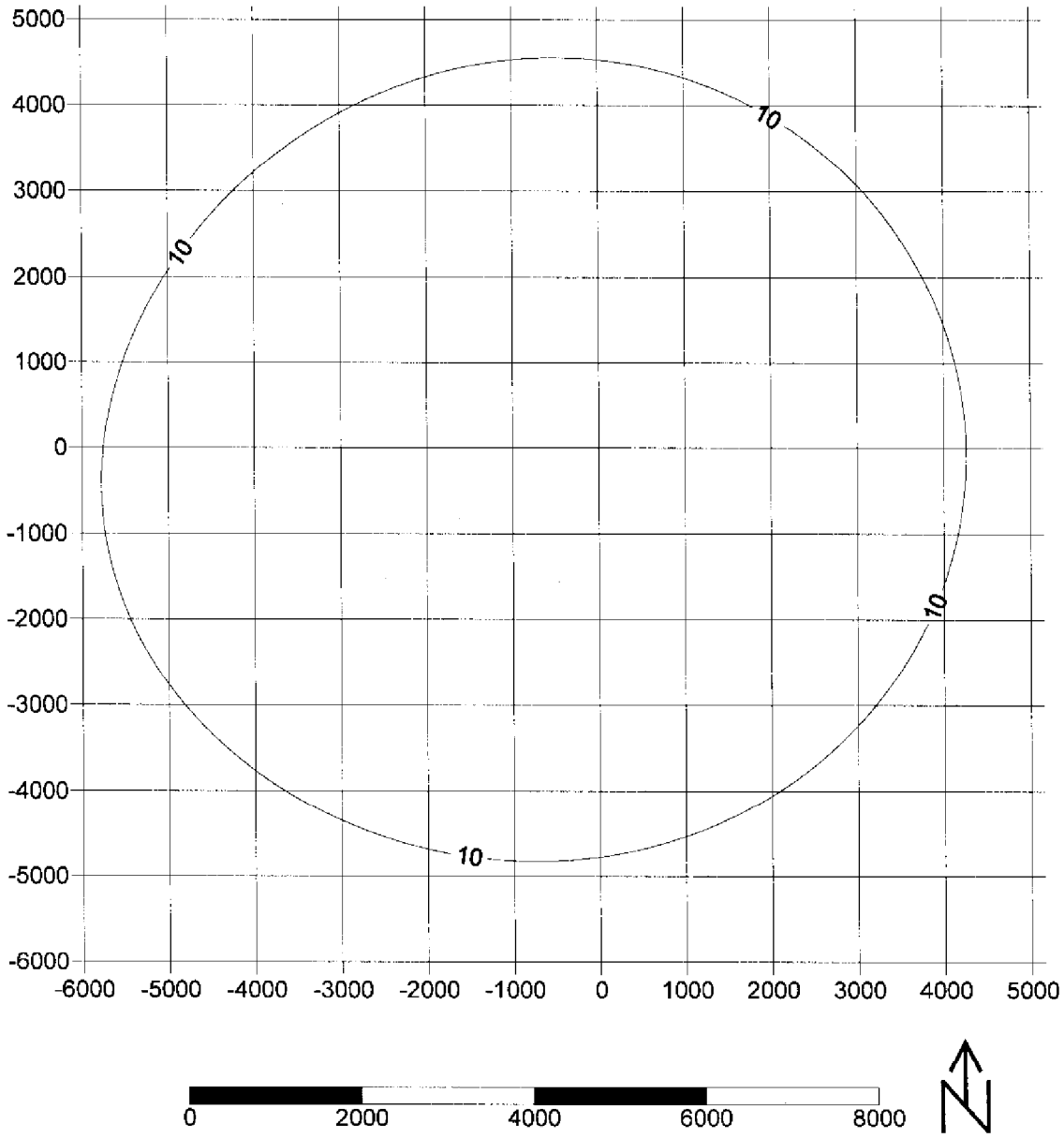
Attachments

Well Reg. No.	***55-215421***		Well Location:	***D (5-7) 14 CAB***
Applicant:	***Woodruff Water Co.***			
Depth of well:	***1120***	feet		
Diameter:	***18.625***	in.		
Proposed Well:	***no***	Replacement: ***NA***		
Existing:	***yes***	Replacement no:		
Proposed volume:	***3,145***	acre-ft/yr		
Q =	***1950***	gpm		
T =	***88,000***	gpd/ft	T Source:	***Determined from Pump test of well***
Sy =	***0.08***		Sy Source:	***Pinal Model***
10 foot drawdown radius =	~ 4250 -5,750	***feet (see attached map)***		
drawdown at well =	60.2	***feet***		
WQARF Concerns:		***none***		
Subsidence Concerns:		***none***		

Analyzed by: _____ Date: 9/14/07

Checked by: _____ Date: 9-17-07

Woodruff Water Co.
55-215421/S-216240
D (5-7) 14 CAB
T=88,000 gpd/ft
Sy=0.08
Q=1950 gpm



Printed 9/14/2007

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION WELLS AND UNIFORM REGIONAL FLOW

55-215421

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]
TRANSMISSIVITY = 88000 [gpd/ft]

STORAGE COEFFICIENT = .08

REGIONAL FLOW GRADIENT
(positive--downwards--in flow direction) = 0

REGIONAL FLOW DIRECTION
(horizontal angle in degrees
counter-clockwise from positive x-axis) = 0

REGIONAL FLOW OFFSET AT ORIGIN
(positive in downwards direction) = 0 [ft]

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 1045 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1 (55-215421)

X-COORDINATE = 0 [ft]
Y-COORDINATE = 0 [ft]
PUMPING/INJECTION RATE = 2808000 [gpd]
TIME SINCE START PUMPING/INJECTION = 1825 [day]

WELL NO. 2 (Image Well)

X-COORDINATE = -22000 [ft]
Y-COORDINATE = -5000 [ft]
PUMPING/INJECTION RATE = 2808000 [gpd]
TIME SINCE START PUMPING/INJECTION = 1825 [day]

********** RESULTS ********** THWELLS - PAGE 3

---------- Drawdown in [ft] ----------

Y [ft]	<- X [ft] ->					
	-6000	-5850	-5700	-5550	-5400	-5250
-300.00	9.862	9.953	10.048	10.147	10.251	10.359
-150.00	9.856	9.948	10.044	10.143	10.247	10.356
0.00	9.847	9.939	10.035	10.135	10.240	10.349
150.00	9.835	9.927	10.023	10.124	10.228	10.337
300.00	9.819	9.912	10.008	10.108	10.212	10.321

Y [ft]	<- X [ft] ->					
	-600	-450	-300	-150	0	150
-5100.00	9.728	9.720	9.707	9.691	9.671	9.647
-4950.00	9.875	9.868	9.856	9.841	9.821	9.796
-4800.00	10.027	10.021	10.010	9.995	9.975	9.950
-4650.00	10.184	10.179	10.169	10.154	10.134	10.109
-4500.00	10.345	10.341	10.332	10.318	10.298	10.273
-4350.00	10.512	10.510	10.502	10.488	10.469	10.443
-300.00	20.074	21.167	22.404	23.603	24.162	23.561
-150.00	20.490	21.843	23.620	25.982	27.767	25.939
0.00	20.642	22.111	24.195	27.783	60.237	27.741
150.00	20.479	21.833	23.610	25.972	27.757	25.930
300.00	20.054	21.147	22.385	23.584	24.143	23.542
4200.00	10.414	10.418	10.416	10.408	10.393	10.373
4350.00	10.233	10.235	10.232	10.224	10.209	10.189
4500.00	10.057	10.059	10.055	10.046	10.031	10.011
4650.00	9.887	9.887	9.883	9.873	9.859	9.839
4800.00	9.722	9.722	9.716	9.706	9.692	9.672
4950.00	9.562	9.561	9.555	9.544	9.530	9.511

Y [ft]	<- X [ft] ->					
	3900	4050	4200	4350	4500	4650
-300.00	10.471	10.266	10.069	9.878	9.694	9.515
-150.00	10.479	10.274	10.075	9.884	9.699	9.521
0.00	10.480	10.274	10.076	9.885	9.700	9.521
150.00	10.473	10.268	10.070	9.879	9.694	9.515
300.00	10.459	10.255	10.057	9.867	9.683	9.505

Theis Calculation

Well Reg. No. 55-215421 Well Location D (5-7) 14 CAB

Applicant: Woodruff Water Co.

3145 acre-ft/yr

t =	1825 days	Q =	1950 gpm
s =	25 ft	T =	88000 gpd/ft
u =	2.97E-05	Sy =	0.08

W(u) = 9.8452

25 foot drawdown radius = 178.56 ft = 0.03 mi

3145 acre-ft/yr

t =	1825 days	Q =	1950 gpm
s =	10 ft	T =	88000 gpd/ft
u =	1.12E-02	Sy =	0.08

W(u) = 3.9381

10 foot drawdown radius = 3467.50 ft = 0.66 mi

3145 acre-ft/yr

t =	1825 days	Q =	1950 gpm
s =	1 ft	T =	88000 gpd/ft
u =	6.72E-01	Sy =	0.08

W(u) = 0.3938

1 foot drawdown radius = 26859.11 ft = 5.09 mi

r =	1 ft		
u =	9.3151E-10	drawdown at well	
W(u) =	20.21	s =	51.32 ft

Equations:

$$s = \frac{114.6\,Q}{T} W(u) \qquad W(u) = \frac{sT}{114.6Q}$$

$$u = \frac{1.87\,r^2\,Sy}{Tt} \qquad r = \sqrt{\frac{Tut}{1.87\,Sy}}$$

where:
s = drawdown, ft
r = radius from well, ft
t = time, days
Q = well discharge, gpm
T = transmissivity, gpd/ft
Sy = specific yield or storage coeff., %
u, W(u) = argument, well function

1950 gpm
2808000 gpd

ARIZONA DEPARTMENT OF WATER RESOURCES
HYDROLOGY DIVISION – WATER QUALITY UNIT

MEMORANDUM

TO: Darlene Sumpter-King
Cindy Pogue, Pinal AMA
FROM: Seandale Poe SP
Water Quality Unit
DATE: August 14, 2007
SUBJECT: **Application for Permit to Drill or Operate a Non-Exempt Well Within an AMA**
Application S-216240 Well 55-215421
Woodruff Water Company

Hydrology has reviewed the above referenced application for a permit to drill or operate a Non-Exempt Well within an AMA for water quality concerns and well construction for conformance to Arizona well construction standards.

Water Quality

1. The subject well is not near an area of known groundwater contamination that is being remediated pursuant to an U.S. Environmental Protection Agency, Arizona Department of Environmental Quality (ADEQ), or Department of Defense program.

2. According to the ADEQ Groundwater Database, sample results from wells located within one mile of the proposed well exceed the secondary MCL for chloride. The water quality results were from 1960; therefore, current aquifer conditions are unknown. No other water quality data are readily available.

Well Construction Standards

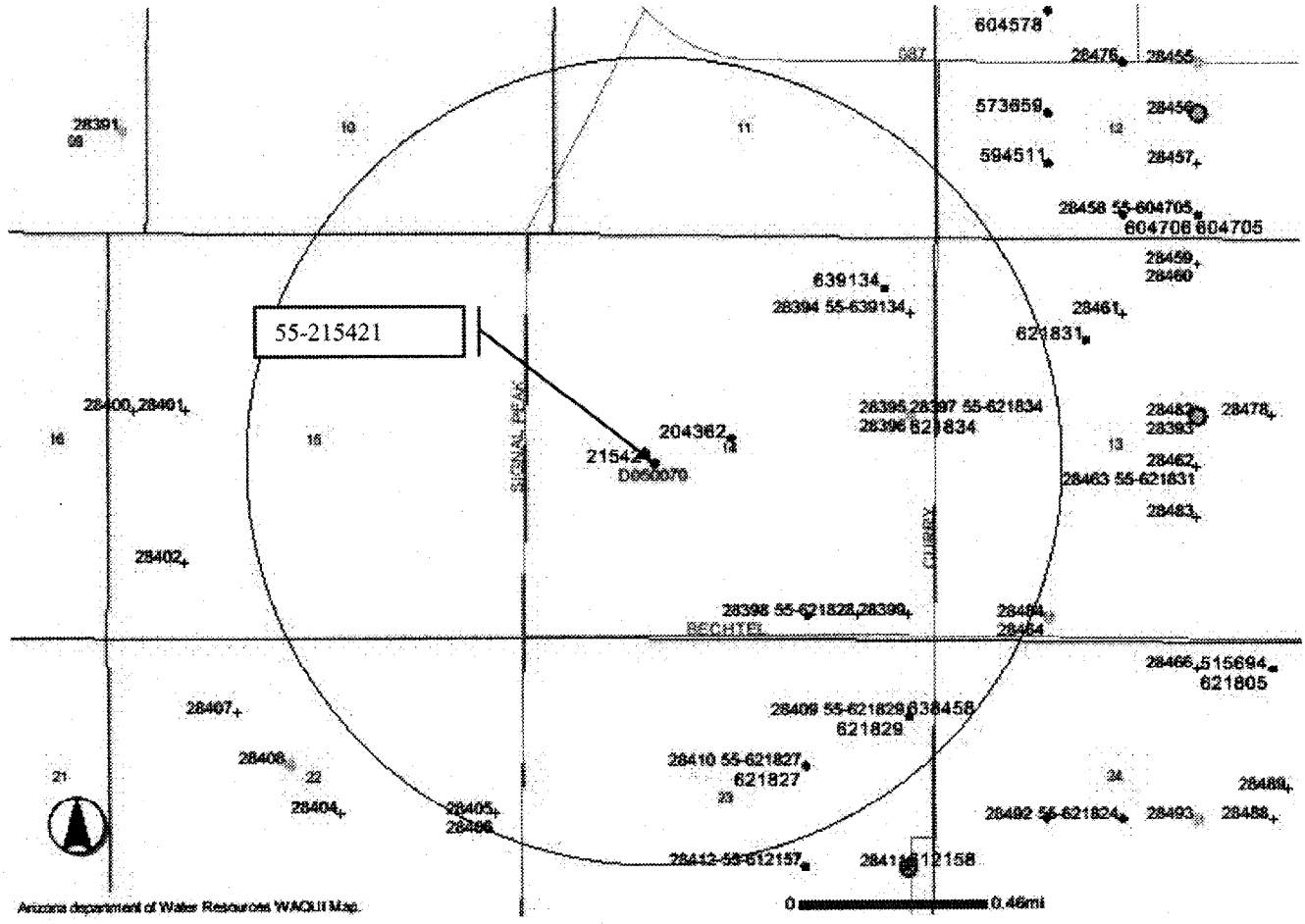
3. The subject well was drilled to 1130 feet below the land surface and screened from 800 to 1100 feet. The well will be completed in the lower alluvial unit. The wells meet minimum well construction standards. No special well construction requirements are necessary.

The Hydrology Water Quality Unit has no objections to approving this permit. If additional information is needed, please contact me at extension 1-8565.

C: Alene McCracken, Hydrology
Enclosure Water Quality map
Water Quality Table

Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

55-215421 / S-216240 / Woodruff Water Company
Permit to Drill or Operate a Non-Exempt Well within an AMA, D(5-7)14CAB



Legend
- Highlighted Feature
- theBufferPolygons
- theBufferTarget
- ADEQ Wells
- Wells > HBGL
- Wells > Secondary MCL
- Wells > MCL
- No Exceedence
- REGISTERED WELLS
- Streets
- Sections
- Townships
- GWR LUST Buffer
- RCRA Site Buffer
- VRP Site Buffer
- Registry
- 1 Mi. WQARF Buffer
- WQARF Sites

Working Together

Arizona Department of Environmental Quality

Arizona Department of Water Resources

Map generated on 8/14/2007

Water Quality Sample Test Results for ADEQ Wells

Information provided is preliminary and subject to revision.

It may not represent the full extent of known water quality concerns.

Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

55-215421 / S-216240 / Woodruff Water Company
Permit to Drill or Operate a Non-Exempt Well within an AMA, D(5-7)14CAB

ADEQ Wells

Rec	Results	Units	Detection Limits	Detection Limit Units	MCL	MCL Units	MCL2	MCL2 Units	Sample Date	Parameter Name	HBGL	HBGL Units	DEQ Well	Registry ID
1	1480	mg/L		mg/L			250	mg/L	JUN 12 1960	CHLORIDE,TOTAL IN WATER			28397	55-621834

From: Cynthia Pogue
To: Curtis, Patty ; Sumpter-King, Darlene
Date: 8/8/07 4:21PM
Subject: Woodruff Water S-app Conversion 55-215421

I just received application shown above.
I am mailing this application directly to Darlene

8-13-07

Patty,

Please complete

_ Wells 55

_ Access

_ file

Thanks!

STATE OF ARIZONA
DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT SUPPORT SECTION
MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458
3550 North Central Avenue, Phoenix, Arizona 85012
Phone (602) 771-8585 Fax (602) 771-8688

RECEIVED
AUG - 8 2007
PINAL AMA

APPLICATION FOR A PERMIT TO DRILL OR OPERATE A NON-EXEMPT WELL WITHIN AN ACTIVE MANAGEMENT AREA PURSUANT TO A.R.S. § 45-599

I. INSTRUCTIONS:

1. **This application should be used to obtain a permit to:**
   (a) Drill a non-exempt well in conjunction with a new or existing General Industrial Use Permit Application, a Certificate of Grandfathered Right, a Service Area Right, or an Irrigation District Right.
   (b) Convert an existing well to a non-exempt well, or increase the annual permitted volume to be withdrawn from the well.
2. **Complete all appropriate items on this application, sign in the appropriate place and mail to P.O. Box 458, Phoenix, Arizona 85001-0458 or hand deliver to 3550 North Central Avenue, Phoenix, Arizona 85012**
3. **Pursuant to A.R.S. § 45-599, the application fee is $150.00. Pursuant to A.A.C. R12-15-151(B)(4), the permit fee is $30.00. You may submit both fees at the time of filing the application.**

II. GENERAL DATA:

FOR DEPARTMENT USE ONLY
Application No. S-216240 Registration No. 55-215421
File No. D(5-7)14 CAB
Date Received 8-8-2007
AMA Pinal
W/S 15 S/B 11

1. Applicant Woodruff Water Company
   Mailing Address 2555 E. Camelback Rd., Ste.700
   Phoenix (City) AZ (State) 85016 (Zip Code)
   Contact Person Brian Hall
   Telephone Number (602) 956-7200
2. Name of Land Owner First American Title Co., Trust #8583
   Mailing Address 4801 E. Washington, #140, Phoenix, AZ 85034
   Attn: Charlotte Knoll, Sr. Trust Officer (602) 685-7036
   (City / State / Zip / Telephone Number)
3. Applicant is: ☒ Owner ☐ Lessee
4. Proposed well is: ☐ **New well** ☒ **Conversion (enlargement) of existing well** ☐ **Replacement well in a new location.**
5. Claim of entitlement to withdraw groundwater is based upon:
   ☐ Certificate of Grandfathered Right No: _____
   ☐ General Industrial Use Permit No. 59- _____
   ☒ Service Area Right No: 56-001359.0000
   ☐ Irrigation District Right No: _____
6. The principal use(s) of groundwater will be (**be specific**) Municipal & Industrial
7. Well location: B (10 Acre) ¼ A (40 Acre) ¼ C (160 Acre) ¼ Section 14 Township 5 N(S) Range 7 E(W)
8. Position location of the well: Latitude 32 ° 59 ' 20 " N Longitude 111 ° 36 ' 48 " W
9. Design Pump Capacity 1,950 gpm Depth 1130 feet
   Diameter 18 inches Type of casing Cu Bearing Steel
10. Proposed annual volume of water 3,145 acre feet
11. Well is located in the Eloy subbasin of the Pinal Active Management Area.
12. If the well is located in the Santa Cruz AMA, please attach documentation and explanation showing that the location of the proposed well will not result in local water tables experiencing a long-term decline.

13. Approximate date construction will begin: MONTH April YEAR 2007

Estimated time to complete new well 3 months. (If longer than 1 year, attach explanation.)

14. Legal description of the land where the groundwater will be used:
_____ ¼ _____ ¼ _____ ¼ Section 14 Township 5 N(S) Range 7 (E)W. County Pinal
10 Acre 40 Acre 160 Acre

15. Is the proposed well site within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility or storage area of hazardous materials? ☐ Yes ☒ No (if yes, a request for a variance must accompany this application pursuant to R12-15-820.)

16. Driller's Name Layne Christensen DWR License No: 07 ROC License Category A-04

Mailing Address: 12030 E. Riggs Rd., Chandler AZ 85249 (480) 895-9404
Street City State Zip Telephone Number

17. **Attach a Well Construction Supplement, DWR form 55-90, and include a detailed construction diagram as indicated on the form.**

III. FOR SERVICE AREA WELLS AND IRRIGATION DISTRICT WELLS ONLY:

AUG 8 - 2007

18. Is the proposed well located in your service area? XX Yes ☐ No

19. Will groundwater withdrawn be used in your service area? XX Yes ☐ No **(If answer is no, attach explanation.)**

IV. FOR REPLACEMENT WELL IN NEW LOCATION ONLY:

20. Registration number of original well 55- _____.

21. Location of the original well: _____ ¼ _____ ¼ _____ ¼ Section _____ Township _____ N/S Range _____ E/W
10 Acre 40 Acre 160 Acre

22. Distance between original well and proposed replacement well_____ feet.

23. When determining impacts under the Department's well spacing rules, the director will take into account the collective efforts of reducing or terminating withdrawals from the well being replaced combined with the proposed withdrawals from the replacement well if the applicant submits a hydrological study demonstrating those collective effects to the satisfaction of the director.
Will a hydrological study be submitted? ☐ Yes ☐ No

24. Will the original well be abandoned if applicant receives a permit to drill a replacement well? ☐ Yes ☐ No.
(If yes, please submit a completed Notice of Intent to Abandon a Well along with this application.)
If no, explain the planned use of the original well_____

V. FOR CONVERSION (ENLARGEMENT) OF EXISTING WELL ONLY:

Hydrologic Testing

25. Registration number of the existing well 55- 215421 Present pump design capacity N/A gallons per minute.
Present permitted volume 28 acre-feet per year.

26. The new design pump capacity will be 1,950 gallons per minute. New permitted volume will be 3,145 acre-feet per year.

27. The existing well has previously been used in conjunction with or for the following: New Well - Current withdrawal permit No. 59-215420.0001 for testing aquifer transmissivity.

It is understood that the permit, if granted, will be in accordance with the Groundwater Management Act (Title 45, Chapter 2), and the rules adopted thereunder. The permittee will be bound by the provisions of such law and the provisions of the permit issued.

I (we), Brian Hall **(print name)** **hereby affirm that all information provided in this application is true and correct to the best of my/our knowledge and belief.**

Signature of Applicant Brian K. Hall **Date** 7-25-07

PINAL AMA
CHECK DEPOSIT REQUESTS

SUBMITTED BY:	GLORIA TAPIA
DATE	8/8/2007
APPLICANT	WOODRUFF WATER COMPANY
CHECK NUMBER	#308818
CHECK AMOUNT	$150.00
NAME ON CHECK	FENNEMORE CRAIG
ADDRESS	3003 NORTH CENTRAL AVENUE, SUITE 2600
CITY, STATE, ZIP	PHOENIX, ARIZONA 85012-2913
TELEPHONE NO.	602-916-5000
RIGHT NUMBER	**#56-001359.0000**
IGFR Conveyance(58)___ Type 1 Non-Irrigation GFR(58)_____	
Registered Well (55)_____ Type 2 Non-Irrigation GFR (58) ___	
Notice of Intent to Drill___ Annual Water Report (2006) ___	
Well Permit _____ Annual Water Report (2006-Late) ___	
Extinguishment___ Well Change Information ___	
Application Fee Non-Exempt Well _XX___	

ARIZONA DEPARTMENT OF WATER RESOURCES

WATER MANAGEMENT DIVISION
3550 North Central Avenue, Phoenix, Arizona 85012
Phone (602) 771-8585 Fax (602) 771-8688

AUG 8 - 2007

WELL CONSTRUCTION SUPPLEMENT (form DWR 55-90)

Well Registration Number 55- 215421

1. **Well Location:**

   NW (10AC) ¼ of the NE (40AC) ¼ of the SW (160AC) ¼, Sec. 14, Township 5 S Range 7 E.

2. **Position Location of the Well:**

   Latitude 32 ° 59 ' 20 " **Longitude** 111 ° 36 ' 48 "

   Datum: □ NAD 83 XX NAD 27 □ Other: _____

3. **County** Pinal.

4. **Date construction to start:** April 2007.

5. **Time period well will remain in use:** Indefinitely.

6. **Is pump equipment to be installed?** Yes **If so, design pump capacity:** 1,950 **GPM.**

7. **Well construction plan:**

   a. **Drilling method (mud rotary, hollow-stem auger, etc.)** Reverse Rotary.

   b. **Borehole diameters** 36 **inches from** 0 **feet to** 39 **feet.**

      28 **inches from** 39 **feet to** 1130 **feet.**

   c. **Casing materials** Cu Bearing Steel.

   d. **Method of well development (bail, air lift, surge, etc.)** Swab, Airlift, Pump & Surge.

   e. **Will surface or conductor casing extend above grade?** Yes.

8. **Include a detailed construction diagram of the proposed well design. The diagram should verify consistency with minimum construction requirements specified in the Department's well construction rules found in Arizona Administrative Code (A.A.C.) R12-15-801 *et seq.* Specifically, the diagram should include borehole diameters; casing materials and diameters; perforation intervals; the expected water level; depth and thickness of the surface seal; proposed grouting materials; and the length that the surface or conductor casing will extend above grade, or vault details, if specified.**

   Pursuant to Arizona Revised Statutes (A.R.S.) § 45-594.B, all well construction, replacement, deepening and abandonment operations shall comply with the rules adopted pursuant to this section. Therefore, any existing well that is deepened or modified must be brought into compliance with minimum well construction standards specified above, if not already in compliance.

9. **Proposed materials and method of abandonment if well is to be abandoned after project is completed (Minimum requirements per A.A.C. R12-15-816):**

10. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material, or petroleum storage area or tank? _____Yes __X__No

AUG 8 - 2007

11. Is this well to monitor existing contamination? ____Yes __x__No

Potential contamination?_____Yes __X__No If yes, please provide explanation:_____

12. Name of Consulting firm, if any: Southwest Ground-water Consultants, Inc.

3033 N. 44th Street, Suite 120 Phoenix AZ 85018
Address City State Zip

Contact Person: Kevin Hebert Telephone Number: (602) 955-5547

13. Drilling firm Layne Christensen

DWR License Number: 07 ROC License Category: A-04

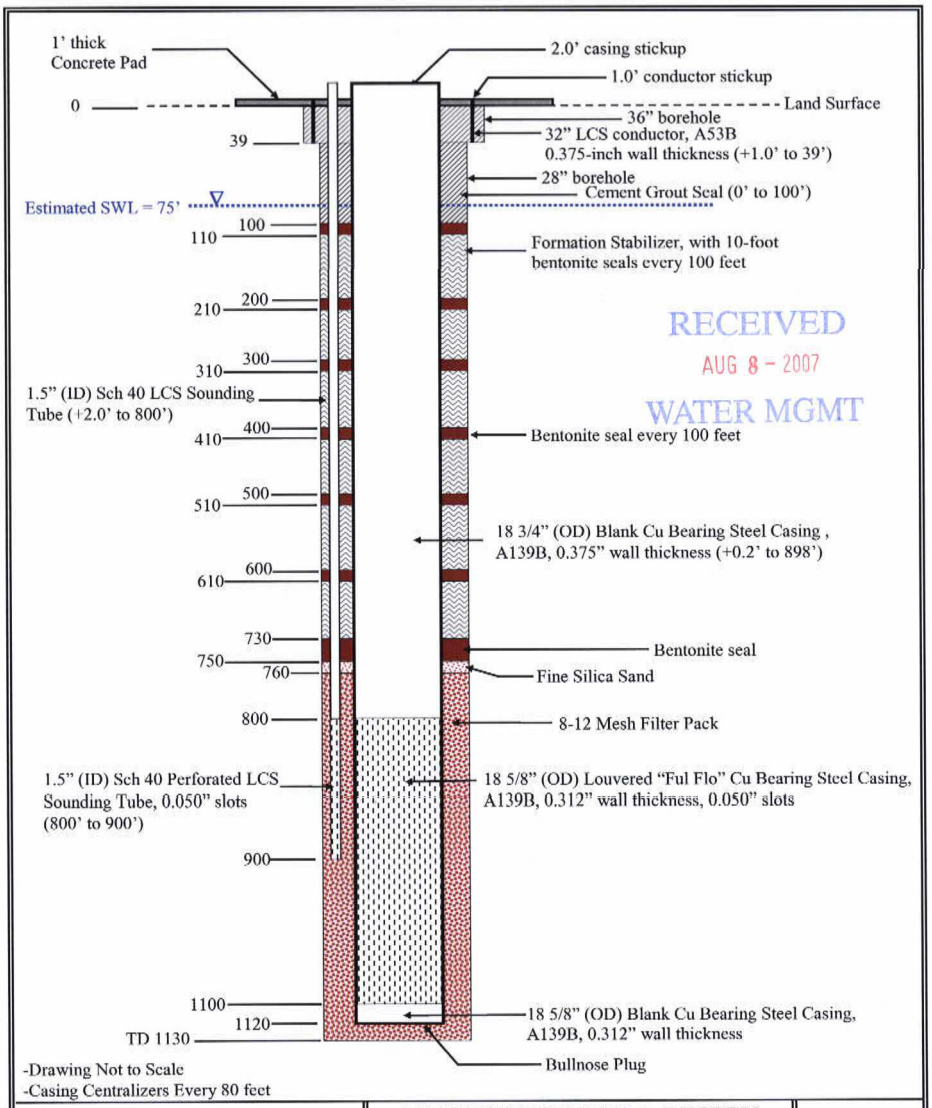
14. Special construction standards, if any, required pursuant to A.A.C. R12-15-821: N/A

I (we), Brian Hall (print name) hereby affirm that all information provided in this application is true and correct to the best of my/our knowledge and belief.

Signature of Applicant Brian K. Hall Date 7-25-07

PINAL AMA
CHECK DEPOSIT REQUESTS

SUBMITTED BY:	GLORIA TAPIA
DATE	8/8/2007
APPLICANT	WOODRUFF WATER COMPANY
CHECK NUMBER	#308819
CHECK AMOUNT	$30.00
NAME ON CHECK	FENNEMORE CRAIG
ADDRESS	3003 NORTH CENTRAL AVENUE, SUITE 2600
CITY, STATE, ZIP	PHOENIX, ARIZONA 85012-2913
TELEPHONE NO.	602-916-5000
RIGHT NUMBER	**#56-001359.0000**
IGFR Conveyance(58)___ Type 1 Non-Irrigation GFR(58)____	
Registered Well (55)_____ Type 2 Non-Irrigation GFR (58) ___	
Notice of Intent to Drill___ Annual Water Report (2006) ___	
Well Permit _____ Annual Water Report (2006-Late) ___	
Extinguishment___ Well Change Information ___	
Permit Fee Non-Exempt Well _XX___	



RECEIVED
AUG 8 - 2007
WATER MGMT

Southwest Ground-water Consultants, Inc. **May 8, 2007** **Project B.1384**	**PRODUCTION WELL DESIGN** **SANDIA DEVELOPMENT** **Provided to Driller for Construction** **(5/08/07)** **Pinal County, Arizona**	**Figure**

Southwest Ground-water Consultants, Inc.

July 24, 2007

RECEIVED
AUG 8 - 2007
WATER RIGHT

Mr. Brian Hall
Pivotal Group
2555 East Camelback Road
Suite 700
Phoenix, Arizona 85016

SUBJECT: WELL IMPACT ANALYSIS - SANDIA PRODUCTION WELL ADWR NO. 55-215421

Dear Mr. Hall:

Southwest Ground-water Consultants, Inc. (SGC) has completed a well spacing and impact analysis to support the permitting of the Sandia Production Well (ADWR No. 55-215421). Since the well is expected to yield in excess of 500 gallons per minute (gpm), the following hydrogeology study has been prepared delineating projected ground-water level declines due to the proposed well yield as required by Arizona Department of Water Resources (ADWR) Rule R12-15-830. The location of the Sandia Development is shown in Figure 1 included in Attachment I.

The Sandia Production Well (ADWR No. 55-215421) is located in the in the NW ¼ of the NE ¼ of the SW ¼ of Section 14, Township 5 South, Range 7 East, (D(5-7)14 CAB), of the Gila and Salt River Baseline and Meridian (Figure 2, Attachment I).

Calculation Method

The aquifer impact has been estimated using THWELLS v 4.01 multi-Theis analysis software (van der Heijde, 1996), which uses the Theis nonequilibrium equation (1935). THWELLS calculates drawdown over a grid of specified data points. Using the unconfined aquifer option, the calculated drawdown at each well was corrected using the method described by Jacob (1946).

Aquifer Characteristics

Aquifer characteristic data in the study area are based on a constant rate pumping test conducted at the Sandia Production Well (ADWR No. 55-215421) in July of 2007, and a subsequent recovery test. Based on recovery data (Figure 3, Attachment I), the transmissivity was calculated to be 88,000 gallons per day per foot (gpd/ft).

Specific yield was estimated based on the lithology of drill cuttings sampled from the pilot borehole of the Sandia Production Well (ADWR No. 55-215421). The specific yield of the aquifer was estimated to be 0.10 based on the formation lithology of silty sand and gravel following values proposed by Kisser and Haimson (1982).

3033 N. 44th Street, Suite 120
Phoenix, Arizona 85018
(602) 955-5547 Fax (602) 955-7585

Phoenix, Arizona
Prescott, Arizona

RECEIVED
AUG 8 - 2007
WATER RIGHT

As required input to make the unconfined aquifer correction, a saturated thickness of 932 feet was used. This was estimated based on the depth of well perforations of 1,100 feet below land surface (bls), less the static water level of 168 feet bls (measured in the Sandia Production Well No. 55-215421 prior to the July 10, 2007 constant rate test).

Aquifer Boundary

A hydrogeologic barrier was located along the base of the Sacaton Mountains approximately 2 miles west of the Sandia property. The boundary was located based on the 400 ft depth to bedrock contour (Oppenheimer and Sumner, 1980). The impermeable boundary is simulated with image wells. The hydrologic boundary location in the impact simulation is presented in Figure 2 included in Attachment I

Calculation Grid

The grid encompasses a 9-mile by 7-mile area surrounding the proposed well. The nodal spacing was 775 feet in both the x and y directions. The grid values are in units of feet in the Universal Transverse Mercator (Zone 12, NAD 1927) coordinate system.

Well Locations

The location of the Sandia Production Well (ADWR No. 55-215421) was plotted with ADWR GIS data along with the nearby registered well locations (ADWR, 2006b) using ArcView version 3.3. The location of the Sandia Production Well (ADWR No. 55-215421) is shown in Figure 2 in Attachment I.

Registered well locations were plotted using UTM coordinates from the ADWR Groundwater Site Inventory (GWSI) Database (ADWR, 2006a) where available, as these data are generally recognized to be more precise. The base data was ADWR GIS Data CD (ADWR, 2001), which includes polygons for Townships and Sections.

The nearest existing well to the Sandia Production Well (ADWR No. 55-215421), based on the ADWR Well Registry (Wells 55 CD, September 2006), and the UTM (Zone 12, NAD 1927) coordinates is presented below:

Registration No.	UTM Easting (m)	UTM Northing (m)	Approximate Distance to Proposed Wells	Well Owner/Comments
55-639134	443840.5	3650455.6	3,694	JR Bechtel

RECEIVED
AUG 8 - 2007
WATER

Well Impact

The maximum annual well yield was calculated for the Sandia Production Well (ADWR No. 55-215421), such that the drawdown grid after 5 years of pumping did not exceed 9.9 feet at nearby off-site wells. Impacts to existing wells located within the Sandia property (Figure 2) were not considered as it was assumed that an impact waiver could be obtained from the owner, if necessary. The estimated maximum annual well yield for the Sandia Production Well (ADWR No. 55-215421) is 3,145.4 ac-ft/yr (1,950 gpm).

No wells located off-site of the Sandia Property plot within the 10-foot drawdown contour. The 5-year 10-foot drawdown contour for the Sandia Production Well (ADWR No. 55-215421) is presented in Figure 2, included in Attachment I. THWELLS input and output files are included in Attachment II.

Based on the impact analysis presented, no impact waivers are required to permit the Sandia Production Well (ADWR No. 55-215421) for an annual production volume of 3,145.4 acre-feet per year. It should be noted, however, that the results of this impact analysis are subject to ADWR review and approval.

Please call if you have any questions or require additional information.

Sincerely,

Southwest Ground-water Consultants, Inc.

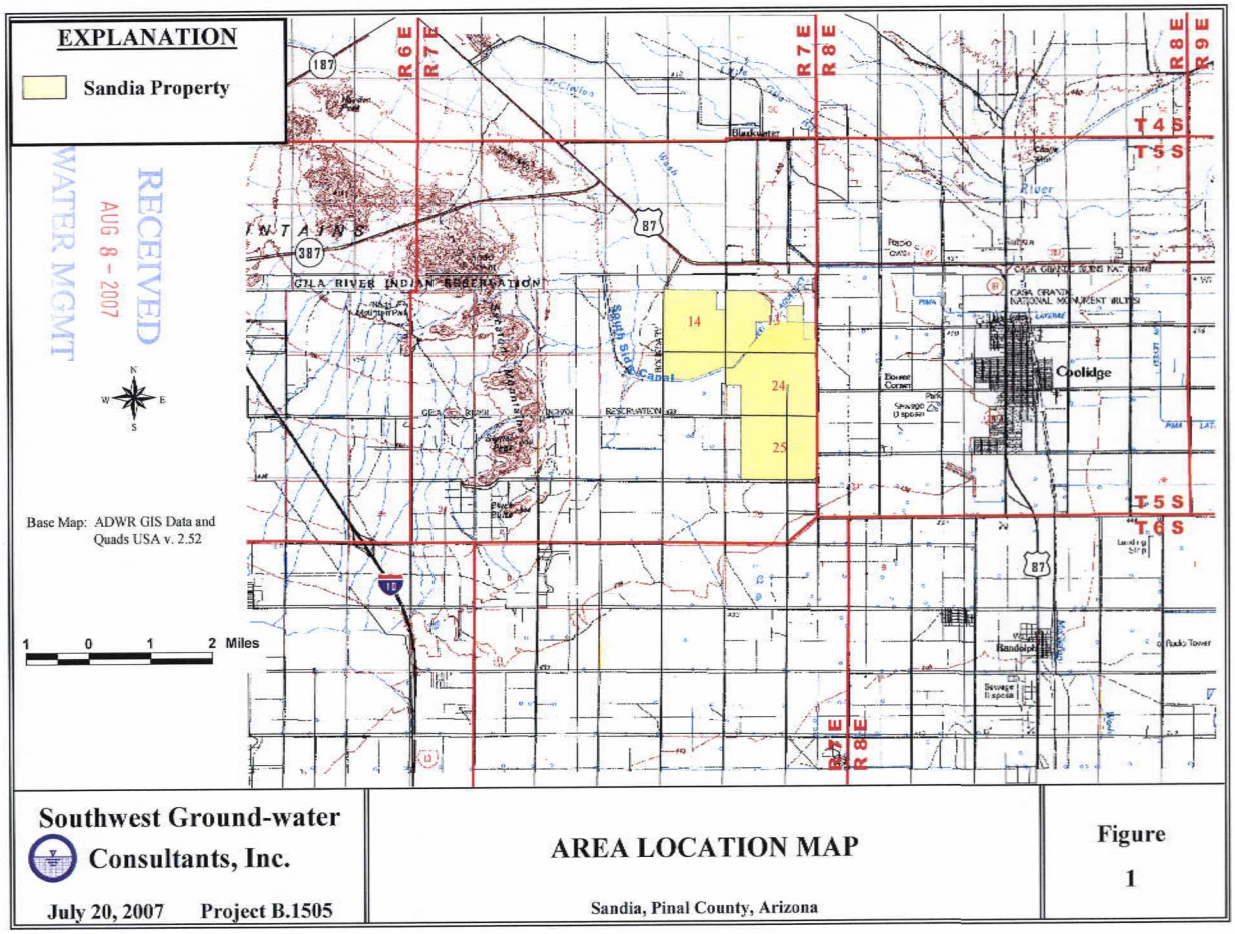
Kevin Hebert, P.G.
Project Manager

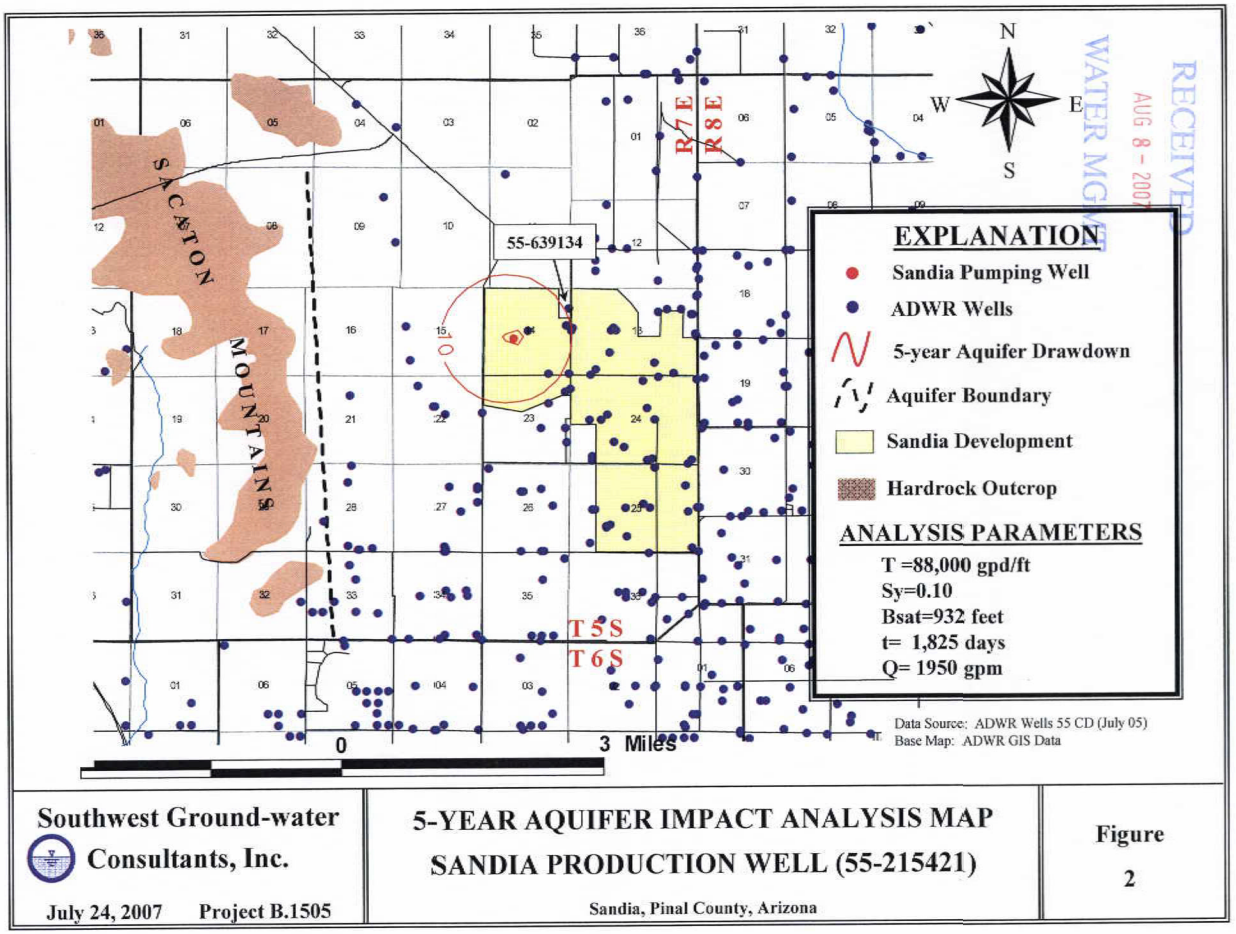
Attachments: Attachment I: Figures 1-3
Attachment II: THWELLS Input and Output Files

RECEIVED
AUG 8 - 2007
WATER RIGHT

ATTACHMENT I

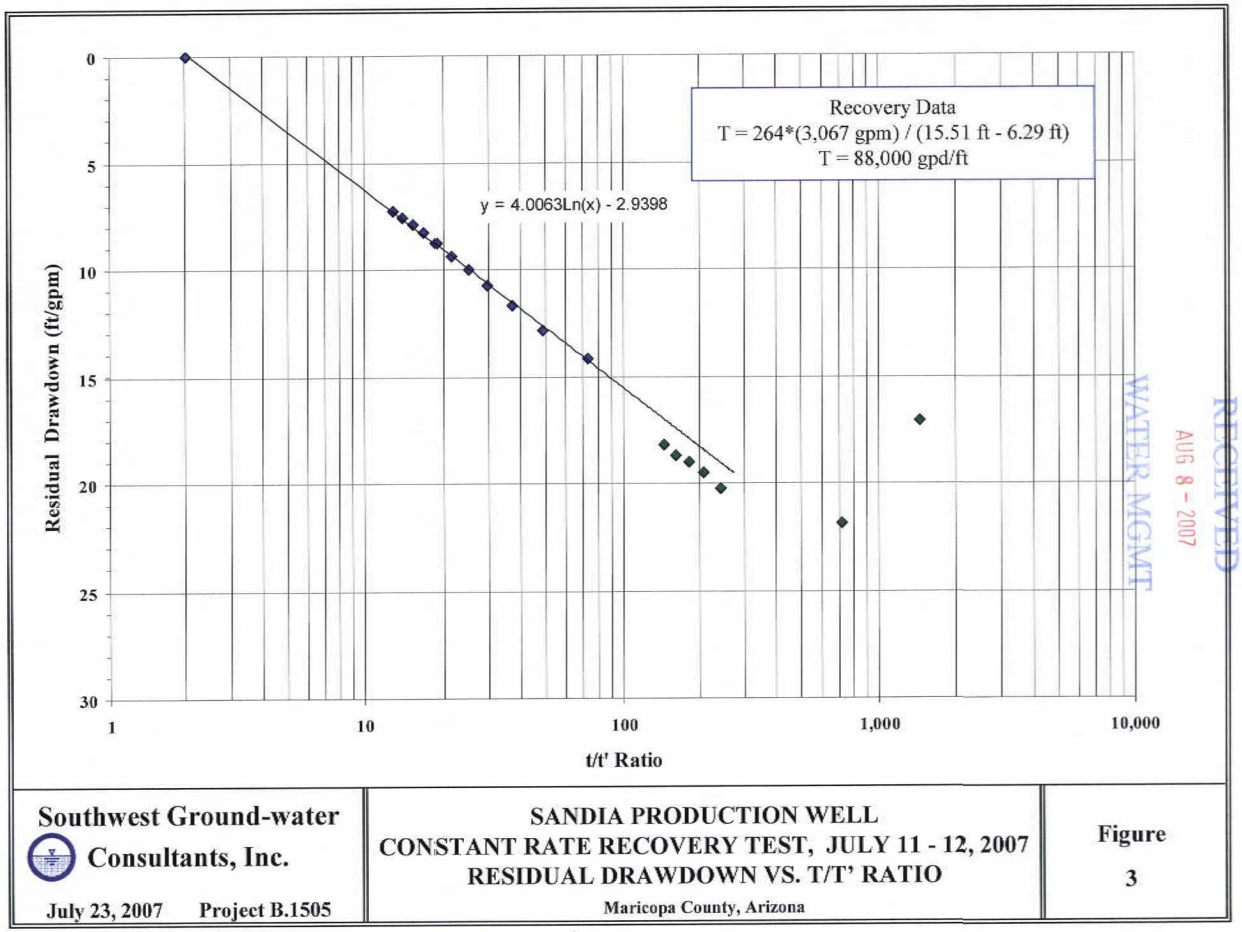
Figures 1-3


EXPLANATION
Sandia Property
RECEIVED
AUG 8 - 2007
WATER MGMT
Base Map: ADWR GIS Data and Quads USA v. 2.52
1 0 1 2 Miles
R6E
R7E
R7E
R8E
R8E
R9E
T4S
T5S
T5S
T6S
187
387
87
GILA RIVER INDIAN RESERVATION
South Side Canal
Coolidge
14
24
25
Southwest Ground-water Consultants, Inc.
July 20, 2007 Project B.1505
AREA LOCATION MAP
Sandia, Pinal County, Arizona
Figure 1



RECEIVED
AUG 8 - 2007
WATER MGMT

Southwest Ground-water Consultants, Inc. **July 24, 2007** **Project B.1505**	**5-YEAR AQUIFER IMPACT ANALYSIS MAP** **SANDIA PRODUCTION WELL (55-215421)** **Sandia, Pinal County, Arizona**	**Figure 2**



RECEIVED
AUG 8 - 2007
WATER MGMT

Southwest Ground-water Consultants, Inc. **July 23, 2007** **Project B.1505**	**SANDIA PRODUCTION WELL** **CONSTANT RATE RECOVERY TEST, JULY 11 - 12, 2007** **RESIDUAL DRAWDOWN VS. T/T' RATIO** **Maricopa County, Arizona**	**Figure 3**

RECEIVED
AUG 8 - 2007
VERMONT

ATTACHMENT II

THWELLS INPUT AND OUTPUT FILES

CALCULATION OF DRAWDOWN IN A HOMOGENEOUS, ISOTROPIC, CONFINED, LEAKY CONFINED OR UNCONFINED AQUIFER WITH MULTIPLE PRODUCTION AND INJECTION WELLS AND UNIFORM REGIONAL FLOW

5-Year Aquifer Impact Analysis

********** INPUT DATA **********

UNCONFINED AQUIFER - THEIS EQUATION WITH JACOB'S CORRECTION

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 932 [ft]
TRANSMISSIVITY = 88000 [gpd/ft]

STORAGE COEFFICIENT = .1

REGIONAL FLOW GRADIENT
(positive--downwards--in flow direction) = 0

REGIONAL FLOW DIRECTION
(horizontal angle in degrees
counter-clockwise from positive x-axis) = 0

REGIONAL FLOW OFFSET AT ORIGIN
(positive in downwards direction) = 0 [ft]

RECEIVED
AUG 8 - 2007
WATER

WATER TABLE CORRECTION APPLIED

AQUIFER THICKNESS = 932 [ft]

PUMPING/INJECTION WELL DATA

WELL NO. 1

X-COORDINATE	=	1452932 [ft]
Y-COORDINATE	=	1.197537E+07 [ft]
PUMPING/INJECTION RATE	=	2808000 [gpd]
TIME SINCE START PUMPING/INJECTION	=	1825 [day]

AUG 8 - 2007

WELL NO. 2

X-COORDINATE	=	1429307 [ft]
Y-COORDINATE	=	1.19742E+07 [ft]
PUMPING/INJECTION RATE	=	2808000 [gpd]
TIME SINCE START PUMPING/INJECTION	=	1825 [day]

---------- Drawdown in [ft] ----------

Y [ft]	<- X [ft] ->					
	1433874	1434649	1435424	1436199	1436974	1437749
%11952240.00	1.705	1.713	1.720	1.724	1.727	1.728
%11953015.00	1.841	1.849	1.856	1.860	1.862	1.863
%11953790.00	1.986	1.994	2.000	2.004	2.006	2.007
%11954565.00	2.140	2.149	2.154	2.158	2.159	2.159
%11955340.00	2.305	2.313	2.318	2.321	2.322	2.320
%11956115.00	2.480	2.488	2.492	2.494	2.493	2.491
%11956890.00	2.667	2.673	2.676	2.677	2.675	2.671
%11957665.00	2.865	2.870	2.872	2.871	2.867	2.861
%11958440.00	3.076	3.079	3.079	3.075	3.069	3.061
%11959215.00	3.300	3.300	3.297	3.291	3.282	3.271
%11959990.00	3.537	3.535	3.528	3.518	3.505	3.491
%11960765.00	3.790	3.783	3.771	3.756	3.739	3.721
%11961540.00	4.057	4.045	4.027	4.007	3.984	3.961
%11962315.00	4.341	4.321	4.296	4.268	4.239	4.210
%11963090.00	4.641	4.613	4.579	4.542	4.504	4.467
%11963865.00	4.960	4.920	4.874	4.826	4.778	4.733
%11964640.00	5.297	5.242	5.182	5.121	5.061	5.004
%11965415.00	5.653	5.580	5.503	5.425	5.350	5.281
%11966190.00	6.030	5.934	5.834	5.736	5.644	5.561
%11966965.00	6.426	6.301	6.175	6.053	5.941	5.840
%11967740.00	6.841	6.681	6.522	6.373	6.236	6.117
%11968515.00	7.274	7.069	6.872	6.690	6.526	6.385
%11969290.00	7.719	7.460	7.218	6.999	6.806	6.642
%11970065.00	8.168	7.846	7.552	7.292	7.068	6.881
%11970840.00	8.609	8.213	7.864	7.562	7.306	7.095
%11971615.00	9.020	8.546	8.140	7.796	7.511	7.278
%11972390.00	9.372	8.823	8.365	7.986	7.675	7.425
%11973165.00	9.629	9.021	8.524	8.119	7.790	7.528
%11973940.00	9.759	9.121	8.605	8.187	7.851	7.585
%11974715.00	9.743	9.112	8.602	8.188	7.855	7.592
%11975490.00	9.585	8.997	8.515	8.121	7.802	7.550
%11976265.00	9.308	8.788	8.353	7.991	7.696	7.461
%11977040.00	8.949	8.508	8.129	7.808	7.542	7.329
%11977815.00	8.540	8.178	7.857	7.581	7.349	7.160
%11978590.00	8.108	7.818	7.554	7.321	7.123	6.961
%11979365.00	7.672	7.444	7.230	7.038	6.873	6.736
%11980140.00	7.242	7.065	6.896	6.741	6.606	6.493
%11980915.00	6.824	6.690	6.559	6.436	6.327	6.237
%11981690.00	6.424	6.324	6.223	6.128	6.043	5.971

AUG 8 - 2007

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1433874	1434649	1435424	1436199	1436974	1437749
%11982465.00	6.042	5.969	5.894	5.822	5.756	5.701
%11983240.00	5.678	5.627	5.572	5.519	5.470	5.429
%11984015.00	5.333	5.299	5.261	5.223	5.188	5.159
%11984790.00	5.006	4.985	4.960	4.935	4.911	4.891
%11985565.00	4.695	4.685	4.671	4.656	4.641	4.629
%11986340.00	4.402	4.400	4.394	4.387	4.379	4.373
%11987115.00	4.124	4.128	4.129	4.128	4.126	4.125
%11987890.00	3.861	3.870	3.875	3.879	3.881	3.884
%11988665.00	3.612	3.625	3.634	3.641	3.647	3.653

Y [ft]	<- X [ft] ->					
	1438524	1439299	1440074	1440849	1441624	1442399
%11952240.00	1.728	1.726	1.724	1.720	1.715	1.709
%11953015.00	1.863	1.861	1.857	1.853	1.848	1.841
%11953790.00	2.006	2.003	1.999	1.994	1.988	1.981
%11954565.00	2.157	2.154	2.150	2.144	2.138	2.130
%11955340.00	2.318	2.314	2.308	2.302	2.295	2.287
%11956115.00	2.487	2.482	2.476	2.469	2.461	2.453
%11956890.00	2.666	2.660	2.653	2.645	2.636	2.628
%11957665.00	2.855	2.847	2.838	2.829	2.820	2.811
%11958440.00	3.052	3.043	3.033	3.023	3.013	3.003
%11959215.00	3.260	3.248	3.236	3.225	3.215	3.204
%11959990.00	3.477	3.463	3.449	3.436	3.425	3.414
%11960765.00	3.703	3.686	3.670	3.655	3.643	3.632
%11961540.00	3.938	3.917	3.898	3.882	3.869	3.858
%11962315.00	4.182	4.157	4.134	4.116	4.102	4.092
%11963090.00	4.433	4.403	4.377	4.356	4.341	4.331
%11963865.00	4.691	4.654	4.624	4.601	4.585	4.576
%11964640.00	4.954	4.911	4.876	4.850	4.833	4.825
%11965415.00	5.220	5.169	5.129	5.100	5.082	5.076
%11966190.00	5.488	5.428	5.381	5.349	5.331	5.327
%11966965.00	5.754	5.684	5.631	5.595	5.577	5.576
%11967740.00	6.015	5.935	5.875	5.836	5.818	5.820
%11968515.00	6.268	6.176	6.108	6.066	6.049	6.056
%11969290.00	6.508	6.403	6.329	6.283	6.267	6.280
%11970065.00	6.729	6.613	6.531	6.484	6.469	6.487
%11970840.00	6.927	6.799	6.712	6.662	6.650	6.675
%11971615.00	7.095	6.959	6.866	6.816	6.807	6.838
%11972390.00	7.230	7.086	6.990	6.940	6.934	6.973
%11973165.00	7.326	7.178	7.081	7.032	7.030	7.076
%11973940.00	7.380	7.231	7.135	7.089	7.091	7.143
%11974715.00	7.390	7.244	7.152	7.109	7.116	7.173
%11975490.00	7.356	7.217	7.130	7.092	7.104	7.164

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1438524	1439299	1440074	1440849	1441624	1442399
%11976265.00	7.280	7.151	7.071	7.039	7.054	7.117
%11977040.00	7.165	7.048	6.977	6.951	6.969	7.033
%11977815.00	7.015	6.912	6.850	6.830	6.851	6.914
%11978590.00	6.835	6.746	6.695	6.680	6.703	6.764
%11979365.00	6.630	6.556	6.513	6.504	6.528	6.587
%11980140.00	6.406	6.345	6.311	6.307	6.332	6.386
%11980915.00	6.166	6.117	6.092	6.092	6.117	6.167
%11981690.00	5.916	5.878	5.860	5.863	5.888	5.934
%11982465.00	5.658	5.631	5.619	5.625	5.648	5.690
%11983240.00	5.398	5.378	5.372	5.380	5.402	5.440
%11984015.00	5.137	5.124	5.122	5.131	5.153	5.186
%11984790.00	4.877	4.870	4.871	4.882	4.902	4.931
%11985565.00	4.621	4.619	4.623	4.634	4.652	4.678
%11986340.00	4.370	4.371	4.377	4.389	4.406	4.429
%11987115.00	4.126	4.130	4.137	4.149	4.164	4.184
%11987890.00	3.888	3.894	3.903	3.914	3.929	3.946
%11988665.00	3.659	3.666	3.676	3.687	3.700	3.715

Y [ft]	<- X [ft] ->					
	1443174	1443949	1444724	1445499	1446274	1447049
%11952240.00	1.702	1.693	1.684	1.674	1.662	1.649
%11953015.00	1.834	1.825	1.815	1.804	1.792	1.778
%11953790.00	1.974	1.964	1.954	1.943	1.930	1.916
%11954565.00	2.122	2.112	2.102	2.090	2.077	2.062
%11955340.00	2.278	2.269	2.258	2.246	2.233	2.218
%11956115.00	2.444	2.434	2.423	2.411	2.398	2.383
%11956890.00	2.618	2.608	2.597	2.585	2.572	2.557
%11957665.00	2.801	2.791	2.781	2.769	2.756	2.742
%11958440.00	2.994	2.984	2.974	2.963	2.951	2.937
%11959215.00	3.195	3.185	3.176	3.166	3.155	3.143
%11959990.00	3.405	3.396	3.388	3.380	3.371	3.360
%11960765.00	3.624	3.616	3.610	3.604	3.597	3.589
%11961540.00	3.850	3.845	3.841	3.837	3.834	3.829
%11962315.00	4.085	4.082	4.081	4.081	4.082	4.082
%11963090.00	4.326	4.326	4.329	4.335	4.341	4.347
%11963865.00	4.574	4.577	4.585	4.597	4.611	4.624
%11964640.00	4.826	4.834	4.849	4.868	4.891	4.914
%11965415.00	5.081	5.095	5.118	5.147	5.181	5.217
%11966190.00	5.337	5.359	5.391	5.432	5.480	5.531
%11966965.00	5.592	5.622	5.667	5.722	5.787	5.856
%11967740.00	5.843	5.884	5.942	6.015	6.099	6.192
%11968515.00	6.087	6.140	6.213	6.306	6.415	6.535
%11969290.00	6.319	6.386	6.478	6.593	6.730	6.883

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1443174	1443949	1444724	1445499	1446274	1447049
%11970065.00	6.537	6.619	6.731	6.871	7.039	7.230
%11970840.00	6.736	6.833	6.966	7.134	7.336	7.571
%11971615.00	6.910	7.023	7.177	7.374	7.613	7.894
%11972390.00	7.056	7.184	7.359	7.583	7.858	8.188
%11973165.00	7.168	7.310	7.504	7.753	8.062	8.437
%11973940.00	7.244	7.397	7.606	7.875	8.211	8.624
%11974715.00	7.280	7.442	7.660	7.942	8.296	8.734
%11975490.00	7.276	7.441	7.663	7.950	8.310	8.755
%11976265.00	7.230	7.394	7.615	7.898	8.251	8.686
%11977040.00	7.144	7.304	7.517	7.787	8.122	8.530
%11977815.00	7.021	7.173	7.374	7.626	7.934	8.303
%11978590.00	6.865	7.007	7.191	7.420	7.695	8.020
%11979365.00	6.680	6.809	6.975	7.179	7.420	7.698
%11980140.00	6.471	6.587	6.734	6.911	7.118	7.353
%11980915.00	6.244	6.346	6.474	6.626	6.801	6.995
%11981690.00	6.002	6.091	6.201	6.330	6.476	6.634
%11982465.00	5.750	5.827	5.920	6.028	6.148	6.277
%11983240.00	5.492	5.558	5.636	5.726	5.824	5.927
%11984015.00	5.231	5.287	5.352	5.426	5.505	5.587
%11984790.00	4.970	5.017	5.071	5.131	5.194	5.259
%11985565.00	4.711	4.751	4.795	4.844	4.894	4.944
%11986340.00	4.457	4.490	4.526	4.565	4.604	4.642
%11987115.00	4.208	4.235	4.265	4.296	4.326	4.355
%11987890.00	3.966	3.989	4.012	4.037	4.060	4.081
%11988665.00	3.732	3.751	3.770	3.788	3.806	3.821

Y [ft]	<- X [ft] ->					
	1447824	1448599	1449374	1450149	1450924	1451699
%11952240.00	1.635	1.619	1.601	1.582	1.561	1.538
%11953015.00	1.763	1.747	1.728	1.708	1.685	1.661
%11953790.00	1.900	1.883	1.863	1.842	1.818	1.793
%11954565.00	2.046	2.028	2.008	1.985	1.960	1.933
%11955340.00	2.201	2.182	2.161	2.138	2.112	2.083
%11956115.00	2.366	2.346	2.325	2.300	2.273	2.243
%11956890.00	2.540	2.521	2.499	2.474	2.445	2.413
%11957665.00	2.725	2.706	2.684	2.658	2.629	2.595
%11958440.00	2.921	2.902	2.880	2.854	2.824	2.789
%11959215.00	3.128	3.110	3.089	3.063	3.032	2.996
%11959990.00	3.347	3.330	3.310	3.285	3.254	3.218
%11960765.00	3.578	3.564	3.545	3.521	3.491	3.454
%11961540.00	3.822	3.811	3.795	3.773	3.744	3.707
%11962315.00	4.079	4.073	4.061	4.042	4.014	3.977
%11963090.00	4.350	4.350	4.343	4.328	4.303	4.268

 AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1447824	1448599	1449374	1450149	1450924	1451699
%11963865.00	4.636	4.643	4.643	4.634	4.613	4.580
%11964640.00	4.936	4.953	4.962	4.961	4.946	4.916
%11965415.00	5.251	5.281	5.302	5.311	5.305	5.280
%11966190.00	5.581	5.628	5.665	5.688	5.693	5.676
%11966965.00	5.927	5.994	6.052	6.094	6.114	6.107
%11967740.00	6.288	6.381	6.465	6.532	6.573	6.581
%11968515.00	6.662	6.789	6.907	7.006	7.076	7.105
%11969290.00	7.047	7.216	7.378	7.521	7.630	7.690
%11970065.00	7.440	7.660	7.879	8.082	8.246	8.350
%11970840.00	7.833	8.117	8.409	8.691	8.934	9.104
%11971615.00	8.216	8.575	8.959	9.348	9.707	9.981
%11972390.00	8.574	9.018	9.514	10.045	10.574	11.020
%11973165.00	8.886	9.418	10.040	10.752	11.527	12.270
%11973940.00	9.128	9.740	10.486	11.397	12.501	13.764
%11974715.00	9.274	9.942	10.779	11.855	13.292	15.316
%11975490.00	9.306	9.990	10.855	11.983	13.537	15.928
%11976265.00	9.219	9.876	10.693	11.728	13.074	14.855
%11977040.00	9.024	9.617	10.330	11.183	12.181	13.255
%11977815.00	8.740	9.251	9.838	10.495	11.189	11.825
%11978590.00	8.395	8.819	9.285	9.775	10.249	10.637
%11979365.00	8.012	8.356	8.717	9.077	9.402	9.644
%11980140.00	7.610	7.884	8.161	8.424	8.647	8.800
%11980915.00	7.203	7.418	7.629	7.820	7.974	8.069
%11981690.00	6.801	6.968	7.127	7.265	7.370	7.427
%11982465.00	6.409	6.538	6.657	6.756	6.825	6.856
%11983240.00	6.030	6.129	6.216	6.286	6.330	6.343
%11984015.00	5.667	5.741	5.805	5.853	5.879	5.878
%11984790.00	5.320	5.376	5.421	5.452	5.464	5.454
%11985565.00	4.990	5.031	5.062	5.080	5.082	5.065
%11986340.00	4.677	4.705	4.725	4.734	4.728	4.708
%11987115.00	4.380	4.399	4.410	4.411	4.401	4.377
%11987890.00	4.098	4.110	4.115	4.111	4.096	4.070
%11988665.00	3.832	3.838	3.838	3.830	3.813	3.786

Y [ft]	<- X [ft] ->					
	1452474	1453249	1454024	1454799	1455574	1456349
%11952240.00	1.514	1.487	1.459	1.429	1.397	1.363
%11953015.00	1.635	1.606	1.576	1.543	1.509	1.472
%11953790.00	1.764	1.734	1.701	1.666	1.628	1.589
%11954565.00	1.903	1.870	1.835	1.797	1.757	1.714
%11955340.00	2.051	2.016	1.978	1.937	1.893	1.847
%11956115.00	2.209	2.172	2.131	2.087	2.039	1.989
%11956890.00	2.377	2.338	2.294	2.247	2.196	2.141

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1452474	1453249	1454024	1454799	1455574	1456349
%11957665.00	2.557	2.515	2.469	2.417	2.362	2.303
%11958440.00	2.750	2.705	2.655	2.600	2.540	2.476
%11959215.00	2.955	2.908	2.854	2.795	2.730	2.660
%11959990.00	3.174	3.124	3.067	3.004	2.933	2.857
%11960765.00	3.409	3.356	3.296	3.227	3.151	3.067
%11961540.00	3.660	3.605	3.540	3.466	3.383	3.292
%11962315.00	3.930	3.872	3.803	3.723	3.632	3.533
%11963090.00	4.220	4.159	4.085	3.998	3.900	3.790
%11963865.00	4.532	4.469	4.390	4.295	4.187	4.065
%11964640.00	4.869	4.803	4.719	4.616	4.496	4.361
%11965415.00	5.235	5.167	5.076	4.963	4.830	4.679
%11966190.00	5.633	5.563	5.464	5.340	5.190	5.020
%11966965.00	6.069	5.997	5.890	5.751	5.582	5.388
%11967740.00	6.550	6.476	6.359	6.201	6.008	5.785
%11968515.00	7.085	7.010	6.880	6.698	6.473	6.213
%11969290.00	7.686	7.611	7.463	7.250	6.982	6.675
%11970065.00	8.371	8.297	8.124	7.866	7.541	7.171
%11970840.00	9.165	9.093	8.885	8.560	8.154	7.701
%11971615.00	10.109	10.041	9.774	9.348	8.824	8.258
%11972390.00	11.268	11.211	10.838	10.242	9.544	8.828
%11973165.00	12.762	12.729	12.139	11.244	10.285	9.377
%11973940.00	14.846	14.885	13.745	12.296	10.977	9.849
%11974715.00	18.101	18.497	15.523	13.180	11.478	10.166
%11975490.00	20.811	22.460	16.282	13.465	11.623	10.252
%11976265.00	16.904	17.111	14.983	12.940	11.347	10.083
%11977040.00	14.092	14.101	13.197	11.959	10.762	9.704
%11977815.00	12.224	12.184	11.683	10.903	10.038	9.195
%11978590.00	10.843	10.785	10.456	9.926	9.292	8.630
%11979365.00	9.752	9.687	9.446	9.060	8.581	8.057
%11980140.00	8.853	8.785	8.594	8.297	7.923	7.502
%11980915.00	8.088	8.020	7.861	7.623	7.322	6.978
%11981690.00	7.425	7.357	7.221	7.023	6.775	6.488
%11982465.00	6.840	6.773	6.653	6.485	6.276	6.033
%11983240.00	6.318	6.252	6.145	6.000	5.820	5.612
%11984015.00	5.847	5.783	5.686	5.558	5.402	5.221
%11984790.00	5.419	5.358	5.269	5.155	5.017	4.859
%11985565.00	5.028	4.969	4.888	4.785	4.663	4.523
%11986340.00	4.669	4.613	4.538	4.445	4.335	4.210
%11987115.00	4.338	4.284	4.215	4.130	4.031	3.919
%11987890.00	4.032	3.981	3.916	3.839	3.749	3.649

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1452474	1453249	1454024	1454799	1455574	1456349
%11988665.00	3.748	3.699	3.639	3.568	3.487	3.396

Y [ft]	<- X [ft] ->					
	1457124	1457899	1458674	1459449	1460224	1460999
%11952240.00	1.328	1.291	1.253	1.214	1.174	1.133
%11953015.00	1.434	1.394	1.353	1.310	1.266	1.222
%11953790.00	1.547	1.504	1.459	1.412	1.365	1.316
%11954565.00	1.668	1.621	1.572	1.521	1.469	1.416
%11955340.00	1.798	1.746	1.693	1.637	1.581	1.523
%11956115.00	1.936	1.880	1.821	1.761	1.699	1.636
%11956890.00	2.083	2.022	1.958	1.892	1.824	1.755
%11957665.00	2.240	2.173	2.103	2.031	1.957	1.882
%11958440.00	2.407	2.334	2.258	2.179	2.098	2.016
%11959215.00	2.585	2.506	2.422	2.336	2.248	2.157
%11959990.00	2.775	2.688	2.597	2.502	2.405	2.306
%11960765.00	2.978	2.882	2.782	2.678	2.572	2.463
%11961540.00	3.194	3.089	2.979	2.865	2.747	2.628
%11962315.00	3.424	3.309	3.187	3.061	2.932	2.801
%11963090.00	3.670	3.542	3.408	3.269	3.127	2.982
%11963865.00	3.933	3.791	3.642	3.488	3.330	3.171
%11964640.00	4.213	4.055	3.889	3.718	3.543	3.368
%11965415.00	4.513	4.336	4.150	3.959	3.766	3.572
%11966190.00	4.833	4.633	4.425	4.211	3.996	3.782
%11966965.00	5.175	4.949	4.713	4.474	4.234	3.997
%11967740.00	5.540	5.282	5.015	4.745	4.478	4.215
%11968515.00	5.930	5.632	5.328	5.024	4.725	4.434
%11969290.00	6.342	5.997	5.650	5.307	4.973	4.651
%11970065.00	6.777	6.375	5.976	5.589	5.217	4.863
%11970840.00	7.229	6.758	6.301	5.864	5.451	5.063
%11971615.00	7.689	7.137	6.614	6.125	5.670	5.248
%11972390.00	8.139	7.496	6.904	6.361	5.864	5.410
%11973165.00	8.552	7.814	7.153	6.560	6.026	5.543
%11973940.00	8.890	8.063	7.343	6.709	6.146	5.640
%11974715.00	9.105	8.218	7.459	6.799	6.217	5.698
%11975490.00	9.162	8.258	7.489	6.821	6.234	5.712
%11976265.00	9.048	8.177	7.428	6.774	6.197	5.681
%11977040.00	8.786	7.985	7.283	6.661	6.107	5.608
%11977815.00	8.416	7.708	7.069	6.492	5.970	5.496
%11978590.00	7.982	7.371	6.802	6.277	5.794	5.351
%11979365.00	7.522	6.999	6.500	6.029	5.589	5.179
%11980140.00	7.059	6.614	6.178	5.759	5.361	4.986
%11980915.00	6.608	6.228	5.849	5.478	5.121	4.779
%11981690.00	6.176	5.850	5.520	5.193	4.873	4.563

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1457124	1457899	1458674	1459449	1460224	1460999
%11982465.00	5.767	5.486	5.198	4.908	4.622	4.343
%11983240.00	5.382	5.138	4.886	4.629	4.374	4.122
%11984015.00	5.022	4.808	4.586	4.358	4.130	3.903
%11984790.00	4.684	4.496	4.299	4.097	3.892	3.687
%11985565.00	4.368	4.202	4.027	3.846	3.663	3.478
%11986340.00	4.073	3.925	3.769	3.607	3.442	3.275
%11987115.00	3.797	3.664	3.524	3.379	3.230	3.080
%11987890.00	3.538	3.419	3.294	3.163	3.029	2.892
%11988665.00	3.296	3.189	3.076	2.958	2.837	2.713

Y [ft]	<- X [ft] ->					
	1461774	1462549	1463324	1464099	1464874	1465649
%11952240.00	1.092	1.050	1.008	0.965	0.923	0.881
%11953015.00	1.176	1.131	1.085	1.039	0.993	0.947
%11953790.00	1.267	1.217	1.167	1.116	1.066	1.017
%11954565.00	1.362	1.308	1.253	1.198	1.144	1.090
%11955340.00	1.464	1.404	1.345	1.285	1.226	1.167
%11956115.00	1.571	1.506	1.441	1.377	1.312	1.248
%11956890.00	1.685	1.614	1.543	1.473	1.402	1.333
%11957665.00	1.805	1.728	1.651	1.574	1.497	1.422
%11958440.00	1.932	1.848	1.763	1.680	1.597	1.515
%11959215.00	2.066	1.974	1.882	1.790	1.700	1.611
%11959990.00	2.206	2.106	2.005	1.906	1.808	1.712
%11960765.00	2.353	2.244	2.134	2.026	1.920	1.815
%11961540.00	2.508	2.388	2.269	2.151	2.035	1.922
%11962315.00	2.669	2.538	2.408	2.280	2.154	2.032
%11963090.00	2.838	2.694	2.552	2.413	2.277	2.144
%11963865.00	3.013	2.855	2.700	2.549	2.401	2.259
%11964640.00	3.193	3.021	2.852	2.688	2.528	2.374
%11965415.00	3.380	3.191	3.007	2.828	2.656	2.490
%11966190.00	3.570	3.364	3.163	2.970	2.784	2.606
%11966965.00	3.764	3.538	3.320	3.111	2.911	2.720
%11967740.00	3.959	3.713	3.476	3.250	3.036	2.832
%11968515.00	4.154	3.885	3.629	3.386	3.156	2.939
%11969290.00	4.344	4.053	3.777	3.516	3.272	3.042
%11970065.00	4.528	4.213	3.916	3.639	3.379	3.137
%11970840.00	4.700	4.361	4.046	3.752	3.478	3.223
%11971615.00	4.857	4.496	4.161	3.852	3.565	3.299
%11972390.00	4.993	4.611	4.260	3.937	3.639	3.363
%11973165.00	5.104	4.705	4.339	4.005	3.697	3.414
%11973940.00	5.185	4.772	4.397	4.054	3.739	3.450
%11974715.00	5.232	4.812	4.430	4.082	3.763	3.471
%11975490.00	5.244	4.821	4.438	4.088	3.769	3.476

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1461774	1462549	1463324	1464099	1464874	1465649
%11976265.00	5.219	4.800	4.420	4.073	3.756	3.465
%11977040.00	5.158	4.749	4.377	4.037	3.724	3.438
%11977815.00	5.065	4.671	4.311	3.980	3.676	3.395
%11978590.00	4.943	4.568	4.223	3.905	3.610	3.339
%11979365.00	4.798	4.444	4.117	3.813	3.531	3.269
%11980140.00	4.633	4.303	3.995	3.707	3.439	3.188
%11980915.00	4.455	4.149	3.860	3.589	3.336	3.098
%11981690.00	4.267	3.984	3.716	3.463	3.224	2.999
%11982465.00	4.073	3.813	3.565	3.329	3.106	2.894
%11983240.00	3.876	3.638	3.410	3.191	2.982	2.784
%11984015.00	3.679	3.462	3.252	3.050	2.856	2.670
%11984790.00	3.485	3.287	3.094	2.907	2.727	2.555
%11985565.00	3.294	3.113	2.937	2.765	2.598	2.438
%11986340.00	3.109	2.944	2.782	2.623	2.470	2.321
%11987115.00	2.929	2.778	2.630	2.485	2.343	2.206
%11987890.00	2.755	2.618	2.482	2.349	2.218	2.091
%11988665.00	2.588	2.463	2.339	2.217	2.097	1.979

Y [ft]	<- X [ft] ->					
	1466424	1467199	1467974	1468749	1469524	1470299
%11952240.00	0.840	0.799	0.759	0.720	0.681	0.644
%11953015.00	0.902	0.858	0.814	0.771	0.730	0.689
%11953790.00	0.968	0.919	0.872	0.826	0.781	0.737
%11954565.00	1.037	0.984	0.933	0.883	0.834	0.786
%11955340.00	1.109	1.052	0.997	0.942	0.890	0.838
%11956115.00	1.185	1.124	1.063	1.005	0.948	0.892
%11956890.00	1.265	1.198	1.133	1.069	1.008	0.948
%11957665.00	1.348	1.276	1.205	1.137	1.070	1.006
%11958440.00	1.435	1.356	1.280	1.206	1.135	1.066
%11959215.00	1.525	1.440	1.358	1.278	1.201	1.127
%11959990.00	1.618	1.526	1.437	1.352	1.269	1.190
%11960765.00	1.714	1.615	1.520	1.427	1.339	1.254
%11961540.00	1.812	1.706	1.603	1.505	1.410	1.319
%11962315.00	1.914	1.799	1.689	1.583	1.482	1.385
%11963090.00	2.017	1.893	1.775	1.662	1.554	1.451
%11963865.00	2.121	1.989	1.862	1.742	1.627	1.517
%11964640.00	2.226	2.085	1.950	1.821	1.699	1.583
%11965415.00	2.332	2.180	2.036	1.899	1.770	1.647
%11966190.00	2.436	2.275	2.122	1.977	1.840	1.711
%11966965.00	2.539	2.367	2.205	2.052	1.907	1.772
%11967740.00	2.639	2.457	2.286	2.124	1.973	1.830
%11968515.00	2.735	2.543	2.362	2.193	2.034	1.885
%11969290.00	2.826	2.623	2.434	2.257	2.092	1.937

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1466424	1467199	1467974	1468749	1469524	1470299
%11970065.00	2.910	2.698	2.500	2.316	2.144	1.984
%11970840.00	2.986	2.765	2.560	2.369	2.191	2.026
%11971615.00	3.053	2.824	2.612	2.415	2.232	2.062
%11972390.00	3.109	2.873	2.655	2.453	2.266	2.092
%11973165.00	3.153	2.912	2.689	2.483	2.293	2.116
%11973940.00	3.185	2.940	2.714	2.505	2.311	2.133
%11974715.00	3.203	2.955	2.727	2.517	2.322	2.142
%11975490.00	3.207	2.959	2.731	2.520	2.325	2.144
%11976265.00	3.197	2.950	2.723	2.513	2.319	2.139
%11977040.00	3.173	2.930	2.705	2.497	2.305	2.127
%11977815.00	3.136	2.897	2.676	2.472	2.282	2.107
%11978590.00	3.087	2.854	2.638	2.438	2.253	2.080
%11979365.00	3.026	2.801	2.591	2.397	2.216	2.048
%11980140.00	2.955	2.738	2.536	2.347	2.172	2.009
%11980915.00	2.875	2.668	2.473	2.292	2.123	1.965
%11981690.00	2.788	2.590	2.404	2.230	2.068	1.915
%11982465.00	2.695	2.507	2.330	2.164	2.008	1.862
%11983240.00	2.596	2.419	2.251	2.093	1.945	1.805
%11984015.00	2.494	2.327	2.169	2.019	1.878	1.745
%11984790.00	2.390	2.233	2.084	1.943	1.809	1.683
%11985565.00	2.285	2.138	1.998	1.865	1.738	1.619
%11986340.00	2.178	2.041	1.910	1.785	1.666	1.554
%11987115.00	2.073	1.945	1.823	1.705	1.594	1.488
%11987890.00	1.968	1.849	1.735	1.626	1.521	1.421
%11988665.00	1.865	1.755	1.649	1.546	1.449	1.355

Y [ft]	<- X [ft] ->					
	1471074	1471849	1472624	1473399	1474174	1474949
%11952240.00	0.607	0.572	0.538	0.506	0.474	0.444
%11953015.00	0.650	0.612	0.575	0.540	0.506	0.474
%11953790.00	0.694	0.653	0.614	0.576	0.539	0.504
%11954565.00	0.741	0.696	0.654	0.613	0.574	0.536
%11955340.00	0.789	0.741	0.695	0.651	0.609	0.569
%11956115.00	0.839	0.788	0.738	0.691	0.646	0.603
%11956890.00	0.891	0.836	0.783	0.732	0.684	0.638
%11957665.00	0.945	0.885	0.829	0.775	0.723	0.674
%11958440.00	1.000	0.936	0.876	0.818	0.763	0.711
%11959215.00	1.056	0.989	0.924	0.862	0.803	0.748
%11959990.00	1.114	1.042	0.973	0.907	0.845	0.786
%11960765.00	1.173	1.096	1.022	0.953	0.886	0.824
%11961540.00	1.233	1.151	1.072	0.998	0.928	0.862
%11962315.00	1.293	1.206	1.123	1.044	0.970	0.900
%11963090.00	1.353	1.261	1.173	1.090	1.012	0.938

AUG 8 - 2007

Y [ft]	<- X [ft] ->					
	1471074	1471849	1472624	1473399	1474174	1474949
%11963865.00	1.414	1.316	1.223	1.136	1.053	0.976
%11964640.00	1.473	1.370	1.272	1.180	1.094	1.013
%11965415.00	1.532	1.423	1.320	1.224	1.133	1.049
%11966190.00	1.589	1.474	1.367	1.266	1.172	1.083
%11966965.00	1.644	1.524	1.412	1.307	1.209	1.117
%11967740.00	1.697	1.572	1.455	1.345	1.243	1.148
%11968515.00	1.746	1.616	1.495	1.382	1.276	1.177
%11969290.00	1.792	1.658	1.532	1.415	1.306	1.204
%11970065.00	1.835	1.695	1.566	1.445	1.333	1.229
%11970840.00	1.872	1.729	1.596	1.472	1.357	1.251
%11971615.00	1.904	1.758	1.622	1.495	1.378	1.269
%11972390.00	1.931	1.782	1.643	1.515	1.395	1.285
%11973165.00	1.952	1.800	1.660	1.529	1.409	1.296
%11973940.00	1.967	1.814	1.672	1.540	1.418	1.305
%11974715.00	1.975	1.821	1.678	1.546	1.423	1.310
%11975490.00	1.977	1.823	1.680	1.547	1.425	1.311
%11976265.00	1.973	1.819	1.676	1.544	1.422	1.308
%11977040.00	1.962	1.809	1.667	1.536	1.415	1.302
%11977815.00	1.944	1.793	1.653	1.524	1.403	1.292
%11978590.00	1.921	1.772	1.635	1.507	1.388	1.279
%11979365.00	1.891	1.746	1.611	1.486	1.370	1.262
%11980140.00	1.857	1.715	1.584	1.461	1.348	1.242
%11980915.00	1.817	1.680	1.552	1.433	1.322	1.219
%11981690.00	1.773	1.641	1.517	1.401	1.294	1.193
%11982465.00	1.726	1.598	1.478	1.367	1.262	1.165
%11983240.00	1.674	1.552	1.437	1.329	1.229	1.135
%11984015.00	1.620	1.503	1.393	1.290	1.193	1.103
%11984790.00	1.564	1.452	1.347	1.248	1.155	1.069
%11985565.00	1.506	1.400	1.299	1.205	1.116	1.033
%11986340.00	1.447	1.346	1.251	1.161	1.076	0.997
%11987115.00	1.387	1.291	1.201	1.116	1.035	0.960
%11987890.00	1.326	1.236	1.151	1.070	0.994	0.922
%11988665.00	1.266	1.181	1.100	1.024	0.952	0.884

Y [ft]	<- X [ft] ->				
	1475724	1476499	1477274	1478049	1478824
%11952240.00	0.415	0.388	0.362	0.337	0.313
%11953015.00	0.443	0.413	0.385	0.358	0.333
%11953790.00	0.471	0.439	0.409	0.381	0.354
%11954565.00	0.501	0.467	0.434	0.404	0.375
%11955340.00	0.531	0.495	0.460	0.428	0.397
%11956115.00	0.562	0.524	0.487	0.452	0.419
%11956890.00	0.595	0.553	0.514	0.477	0.442

AUG 8 - 2007

Y [ft]	<- X [ft] ->				
	1475724	1476499	1477274	1478049	1478824
%11957665.00	0.628	0.583	0.542	0.502	0.465
%11958440.00	0.661	0.614	0.570	0.528	0.489
%11959215.00	0.695	0.646	0.599	0.555	0.513
%11959990.00	0.730	0.677	0.628	0.581	0.537
%11960765.00	0.765	0.709	0.657	0.608	0.561
%11961540.00	0.800	0.741	0.686	0.634	0.585
%11962315.00	0.835	0.773	0.715	0.660	0.609
%11963090.00	0.869	0.804	0.743	0.686	0.633
%11963865.00	0.903	0.835	0.772	0.712	0.656
%11964640.00	0.937	0.866	0.799	0.737	0.679
%11965415.00	0.969	0.895	0.826	0.761	0.701
%11966190.00	1.001	0.924	0.852	0.784	0.722
%11966965.00	1.031	0.951	0.876	0.807	0.742
%11967740.00	1.059	0.976	0.899	0.827	0.761
%11968515.00	1.086	1.000	0.921	0.847	0.778
%11969290.00	1.110	1.022	0.941	0.865	0.794
%11970065.00	1.132	1.042	0.958	0.881	0.809
%11970840.00	1.151	1.059	0.974	0.895	0.822
%11971615.00	1.168	1.074	0.988	0.907	0.833
%11972390.00	1.182	1.087	0.999	0.917	0.842
%11973165.00	1.193	1.096	1.007	0.925	0.849
%11973940.00	1.200	1.103	1.013	0.930	0.854
%11974715.00	1.205	1.107	1.017	0.933	0.856
%11975490.00	1.205	1.108	1.018	0.934	0.857
%11976265.00	1.203	1.106	1.016	0.932	0.855
%11977040.00	1.197	1.101	1.011	0.928	0.852
%11977815.00	1.189	1.093	1.004	0.922	0.846
%11978590.00	1.177	1.082	0.994	0.913	0.838
%11979365.00	1.162	1.069	0.982	0.902	0.828
%11980140.00	1.144	1.052	0.968	0.889	0.817
%11980915.00	1.123	1.034	0.951	0.874	0.803
%11981690.00	1.100	1.013	0.932	0.858	0.788
%11982465.00	1.075	0.990	0.912	0.839	0.771
%11983240.00	1.047	0.966	0.890	0.819	0.753
%11984015.00	1.018	0.939	0.866	0.797	0.734
%11984790.00	0.988	0.912	0.841	0.775	0.713
%11985565.00	0.956	0.883	0.815	0.751	0.692
%11986340.00	0.922	0.853	0.787	0.727	0.670
%11987115.00	0.889	0.822	0.760	0.701	0.647
%11987890.00	0.854	0.791	0.731	0.675	0.623

AUG 8 - 2007

Y [ft]	<- X [ft] ->				
	1475724	1476499	1477274	1478049	1478824
%11988665.00	0.819	0.759	0.702	0.649	0.599

FENNEMORE CRAIG, P.C.

3003 North Central Avenue, Suite 2600
Phoenix, Arizona 85012-2913
(602) 916-5000

Shilpa Hunter-Patel
Direct Phone: (602) 916-5356
Direct Fax: (602) 916-5556
shilpa@fclaw.com

Law Offices
Phoenix (602) 916-5000
Tucson (520) 879-6800
Nogales (520) 281-3480
Las Vegas (702) 692-8000
Denver (303) 291-3200

August 7, 2007

RECEIVED
AUG - 8 2007
PINAL AMA

VIA FEDERAL EXPRESS

Cindy Pogue
Arizona Department of Water Resources
Pinal Active Management Area
1729 N. Trekell Road, Suite 105
Casa Grande, Arizona 85222-1743

Re: Application to Convert Existing Well to Service Area Permit for Woodruff Water Company

Dear Cindy:

Enclosed please find a revised application for Service Area Well Permit for Woodruff Water Company. As we previously discussed, we are applying to convert the current Hydrologic Testing Permit to a Service Area Well Permit based on an annual volume of 3,145 acre-feet per year. The application is supported by the enclosed Well Impact Analysis prepared by Southwest Ground-water Consultants, Inc.

I understand you have been out of the office for the last several weeks. After you have had an opportunity to review the enclosed, please give me a call to discuss.

Thank you for your assistance in this matter.

Sincerely,

FENNEMORE CRAIG, P.C.

Shilpa Hunter-Patel

cc: Brian Hall, Woodruff Water (w/o encl.)
1959929.1/05000.000