

**BEFORE THE ENVIRONMENTAL APPEALS BOARD  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.**

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In re: )  
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Florence Copper, Inc. ) UIC Appeal No. 17-03  
)  
)  
UIC Permit No. R9UIC-AZ3-FY11-1 )  
)  
)  

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**PERMITTEE FLORENCE COPPER, INC.'s RESPONSE TO PETITION FOR REVIEW  
FILED BY SWVP-GTIS MR, LLC AND THE TOWN OF FLORENCE**

**ATTACHMENT 5**

**Town of Florence's Comments on Draft Permit**

April 10, 2015

**Via Federal Express**

**Via E-Mail ([rumrill.nancy@epa.gov](mailto:rumrill.nancy@epa.gov))**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IX  
Drinking Water Protection Section  
Mail Code WTR-3-2  
75 Hawthorne Street  
San Francisco, California 94105  
Attn: Nancy Rumrill

**Re: Florence Copper Project-Comments of the Town of Florence, Arizona  
to Draft Underground Injection Control Permit R9UIC-AZ3-FY11-1 ("Draft  
Permit")**

Dear Ms. Rumrill:

The Town of Florence (the "Town") would like to thank the United States Environmental Protection Agency ("EPA") for this opportunity to provide EPA with the Town's comments regarding the Draft Permit.

First, the Town would like to draw EPA's attention to the enclosed April 10, 2015 correspondence that was prepared for the Town by Southwest Groundwater Consultants ("SGC"). The above correspondence from SGC (the "SGC Correspondence") evaluates the potential adverse effects associated with Florence Copper, Inc.'s plans to engage in copper mining operations within the boundaries of the Town. The enclosed SGC Correspondence constitutes a portion of the Town's comments regarding the Draft Permit.

According to SGC, which conducted the work that is discussed in the SGC Correspondence some years before the current controversy arose, it is reasonably anticipated that groundwater from the Lower Basin Fill Unit ("LBFU") immediately down gradient from Florence Copper's proposed Pilot Test Facility ("PTF") will be an important source of groundwater for the Town in the future. At the time Magma Copper Company applied for its UIC permit for this site in 1996, the area north of the Town of Florence and the Gila River consisted primarily of unincorporated, privately held and State-owned land. Because of past changes in surface land use and settlement patterns, however, this is no longer the case. Thus, as the SGC Correspondence indicates, potential groundwater contamination from the PTF and,

Nancy Rumrill  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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subsequently, any full scale mining operations by Florence Copper may have an adverse effect on groundwater that is of immense importance to the Town.

In addition to submitting the SGC Correspondence to EPA as part of the Town's comments regarding the Draft Permit, the Town also joins in and supports the comments regarding the Draft Permit that have been submitted to EPA by Southwest Value Partners ("SWVP") in that April 10, 2015 letter from SWVP's counsel, Ronnie P. Hawks, Esq., of Jennings, Haug & Cunningham. In the above letter (and the attachments and exhibits thereto), SWVP provides a detailed analysis of the deficiencies associated with the Draft Permit. The above correspondence from SWVP's counsel and the attachments and exhibits thereto are hereby collectively referred to as the SWVP Comment Letter which, by this reference is hereby incorporated into the Town's comments regarding the Draft Permit.

As a review of the SWVP Comment Letter indicates, in addition to other deficiencies, in approving the Draft Permit, EPA: (i) failed to exercise reasonable care in drafting the UIC Permit; (ii) adopted an improper and illegal aquifer exemption; and (iii) needs to revise the deficient portions of the Draft Permit.

Finally, the Town resubmits to EPA its February 21, 2014 letter regarding the Draft Memoranda of Agreement under Section 106 of the National Historic Preservation Act concerning the proposed Florence Copper Production Test Facility in Florence, Arizona. Because the July 2014 Draft Memorandum of Agreement regarding the Florence Copper PTF that was attached to the Draft Permit as Exhibit "G" did not address the issues raised by the Town in the above February 21, 2014 correspondence, the Town is re-submitting the above correspondence for EPA's reconsideration.

Based on the above information being provided to EPA, the Town believes that the Draft Permit should be withdrawn by EPA so that EPA may address the deficiencies identified in the Draft Permit.

Very truly yours,

DICKINSON WRIGHT PLLC



Kenneth A. Hodson  
For the Firm

KAH:kaa  
PHOENIX 55462-1 211630v2



April 10, 2015

Town of Florence  
c/o Mr. Ken Hodson, Esquire  
Dickinson Wright, PLLC  
1850 N. Central Avenue, Suite 1400  
Phoenix, Arizona 85004

**SUBJECT: SUMMARY OF PREVIOUS WORK COMPLETED FOR THE TOWN OF FLORENCE HIGHLIGHTING THE IMPORTANCE OF AREA GROUNDWATER RESOURCES IN REGARDS TO THE USEPA DRAFT UIC PERMIT FOR FLORENCE COPPER**

Dear Mr. Hodson:

Southwest Ground-water Consultants, Inc. (SGC) is pleased to provide this summary letter report of previous work completed for the Town of Florence by SGC. This work highlights the importance of protecting groundwater resources in the Town of Florence Planning Area, especially in the area of the proposed Florence Copper, Incorporated (FCI) Pilot Test Facility (PTF). The location of the FCI PTF and its location within the Town of Florence Planning Area are shown in Figure 1, included in Attachment 1.

The Town's Designation of Assured Water Supply (DAWS) was approved by the Arizona Department of Water Resources (ADWR) in 1999. Due to anticipated future development in the area, in 2011, SGC prepared a Modification to the DAWS for the Town. The Modification was presented to ADWR to request an increase in the approved water supply to a total annual demand of 33,310 ac-ft/yr projected for the year 2025. The projected future water demand was based on a Water Master Plan, which was prepared for the Town by Fluid Solutions.

The primary water supply available to the Town of Florence consists of groundwater from the Lower Basin Fill Unit (LBFU) of the regional alluvial aquifer. The LBFU is generally found in the area at depths greater than 400 feet below land surface (bls). Other units within the regional alluvial aquifer include the Upper Basin Fill Unit (UBFU) and the Middle Fine-Grained Unit (MFGU). The UBFU is mostly saturated and is a source of drinking water, but is typically not targeted due to higher nitrate concentrations resulting from agricultural activities. The MFGU, which is also saturated, separates the UBFU and the LBFU. The MFGU is locally discontinuous and is not a targeted source of drinking

water. Water to meet projected demand for the Town of Florence will be provided by existing and *future* wells producing water primarily from the LBFU.

As part of the application submitted to ADWR, SGC prepared a hydrologic study demonstrating the physical availability of ground water to Florence for 100 years using historic and existing hydrologic data in conjunction with current ground-water models developed for the region. SGC conducted an impact analysis simulating pumping an estimated 33,310 ac-ft/yr for Florence using four existing wells and twenty-nine proposed wells spread throughout the Florence Planning Area. Florence is the owner of the existing wells and will install additional wells in the future as needed. A location map showing the Florence Planning Area and the simulated wells is presented on Figure 2, (Attachment 1). A summary of the wells used in the simulation is presented below.

ADWR Registration Number	Florence Well Name	Cadastral Location	Casing Depth (ft bls)	Water Level (ft bls)	Saturated Thickness (ft)	Pump Capacity (gpm)
55-610433	#1	D(4-9)25 BDC	350	179	171	1,400
55-215446	#3B	D(4-9)36 CAC	736	194	541	1,600
55-619533	#4	D(4-9)36 CAC	375	194*	181*	850
55-619534	#5	D(5-9)2 ADA	562	194*	368*	1,300
South Proposed Well	N/A	D(5-9)1 CCB	1083*	225*	858**	1,600*
Proposed Well #1	N/A	D(5-9)3 CBB	852*	190*	662**	1,600*
Proposed Well #2	N/A	D(5-9)3 BAB	830*	190*	640**	1,600*
Proposed Well #3	N/A	D(5-9)6 DAB	832*	130*	702**	1,600*
Proposed Well #4	N/A	D(5-9)5 ACA	838*	149*	689**	1,600*
Proposed Well #5	N/A	D(5-10)6 DBB	1000*	139*	948**	1,600*
Proposed Well #6	N/A	D(4-10)31 DAD	1000*	230*	848**	1,600*
Proposed Well #7	N/A	D(5-9)10 DBB	905*	116*	789**	1,600*
Proposed Well #8	N/A	D(5-9)12 CAA	1000*	152*	905**	1,600*
Proposed Well #9	N/A	D(5-10)8 DBB	1000*	222*	872**	1,600*
Proposed Well #10	N/A	D(5-9)16 ACC	968*	115*	853**	1,600*
Proposed Well #11	N/A	D(5-9)14 ACC	1000*	165*	908**	1,600*
Proposed Well #12	N/A	D(5-10)18 ACC	1000*	215*	907**	1,600*
Proposed Well #13	N/A	D(5-10)12 ACC	1000*	304*	761**	1,600*
Proposed Well #14	N/A	D(4-9)32 BAB	1000*	165*	1035**	1,600*
Proposed Well #15	N/A	D(5-9)22 BDD	1000*	159*	991**	1,600*
Proposed Well #16	N/A	D(5-9)24 CAB	1000*	201*	951**	1,600*
Proposed Well #17	N/A	D(5-10)20 ACC	1000*	280*	860**	1,600*
Proposed Well #18	N/A	D(5-9)30 DBB	1000*	108*	1545**	1,600*
Proposed Well #19	N/A	D(5-9)28 BDD	1000*	154*	1272**	1,600*
Proposed Well #20	N/A	D(5-9)26 BDD	1000*	194*	1099**	1,600*



ADWR Registration Number	Florence Well Name	Cadastral Location	Casing Depth (ft bls)	Water Level (ft bls)	Saturated Thickness (ft)	Pump Capacity (gpm)
Proposed Well #21	N/A	D(5-10)30 DBB	1000*	262*	920**	1,600*
Proposed Well #22	N/A	D(5-10)28 BDD	1000*	355*	773**	1,600*
Proposed Well #23	N/A	D(5-9)36 BDD	1000*	241*	1056**	1,600*
Proposed Well #24	N/A	D(5-10)32 BDD	1000*	319*	861**	1,600*
Proposed Well #25	N/A	D(4-9)32 ACA	1000*	165*	835**	1,600*
Proposed Well #26	N/A	D(4-10)3 CDB	1000*	173*	882**	1,600*

\* Estimated value

\*\* Aquifer saturated thickness based on total model layer thicknesses less the estimated water level. Well completion in this area not anticipated to include the full aquifer depth in most cases.

As noted in the table above, all of the *proposed* wells are planned to be cased to a depth of 1,000 feet bls, and would thereby produce water from the LBFU. In the pumping simulation, wells were placed accordingly to meet future projected demands. The locations were selected based on expected aquifer conditions such as depth to bedrock and to accommodate spacing issues with existing wells. It is expected that the actual future well locations may vary depending on conditions encountered at the time those wells would need to be installed.

The modeling conducted by SGC in support of the Town of Florence DAWS also indicated that simulated future pumping for some nearby Johnson Utilities wells could not be sustained long term due to the shallow aquifer depth at their present locations. In the 2011 Modification prepared by SGC for the Town, those wells were relocated in the simulations to portions of Johnson Utilities service area just west of the FCI property where the aquifer basin was deeper. Those locations within the Johnson Utilities Service Area were selected as the most optimal in regards to basin depth. As shown in Figure 2 (Attachment 1), at that time most of the relocated wells are directly downgradient of the FCI PTF. It is important to note that Figure 2 contains the exact data from the original Figure 12 from the DAWS Modification and has simply been enlarged for clarification purposes. The original Figure 12 from the DAWS Modification is included in Attachment 1.

As is demonstrated in this summary, future demand for water resources in the area of the proposed FCI PTF is high and the portion of the regional alluvial aquifer that is most critical and requires the most protection is the LBFU. The Town of Florence is concerned that, for reasons stated more fully in the Southwest Value Partners (SWVP) comments, EPA's approval of the FCI UIC permit may result in degraded aquifer conditions in the LBFU.



Mr. Ken Hodson, Esquire  
April 10, 2015  
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If you have any questions or require additional information, please call.

Sincerely,  
**Southwest Ground-water Consultants, Inc.**



Kevin Hebert, P.G.  
Project Geologist

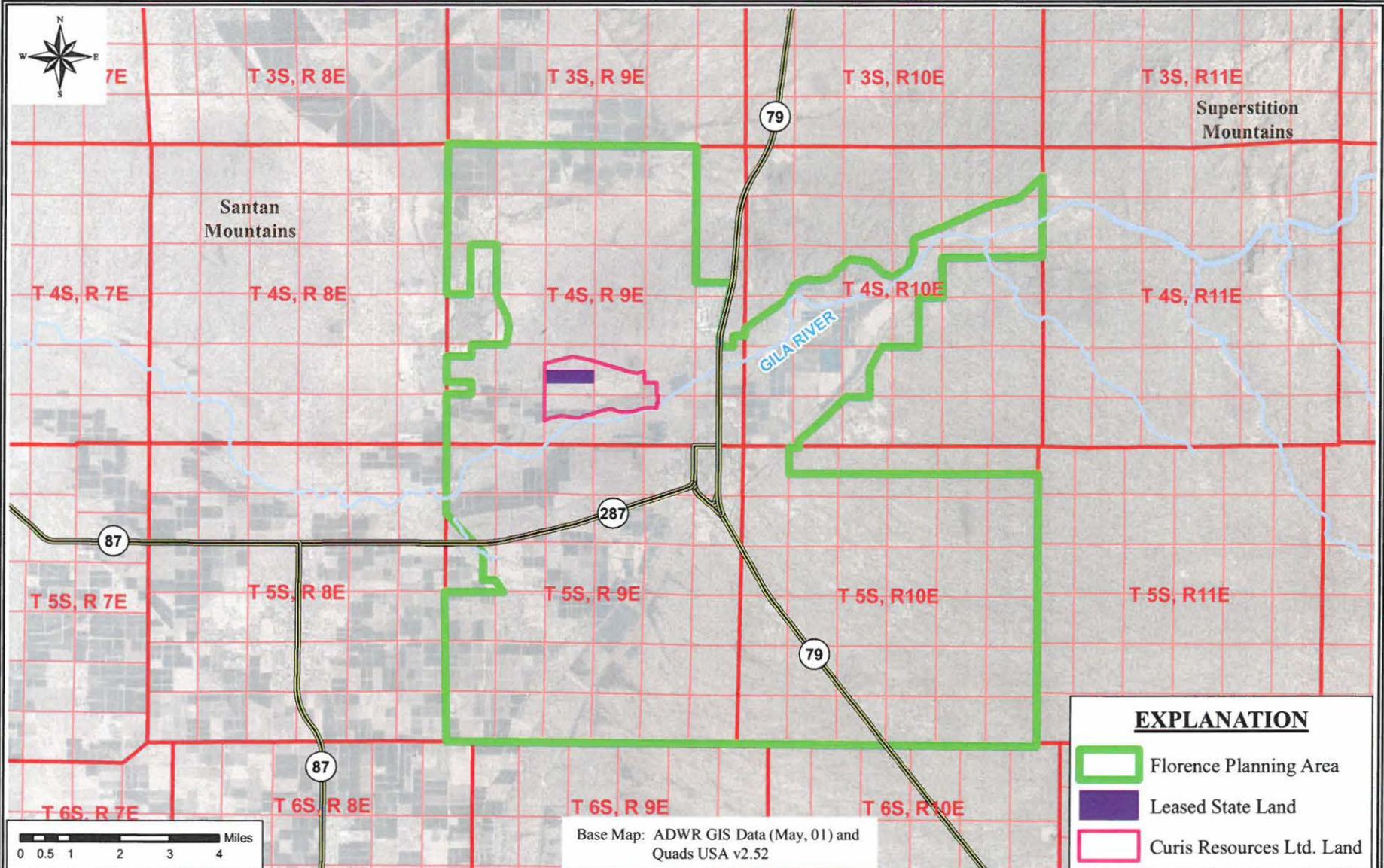
Attachment 1: Figures 1, 2, and 12



# **ATTACHMENT 1**

**Figures 1, 2, and 12**





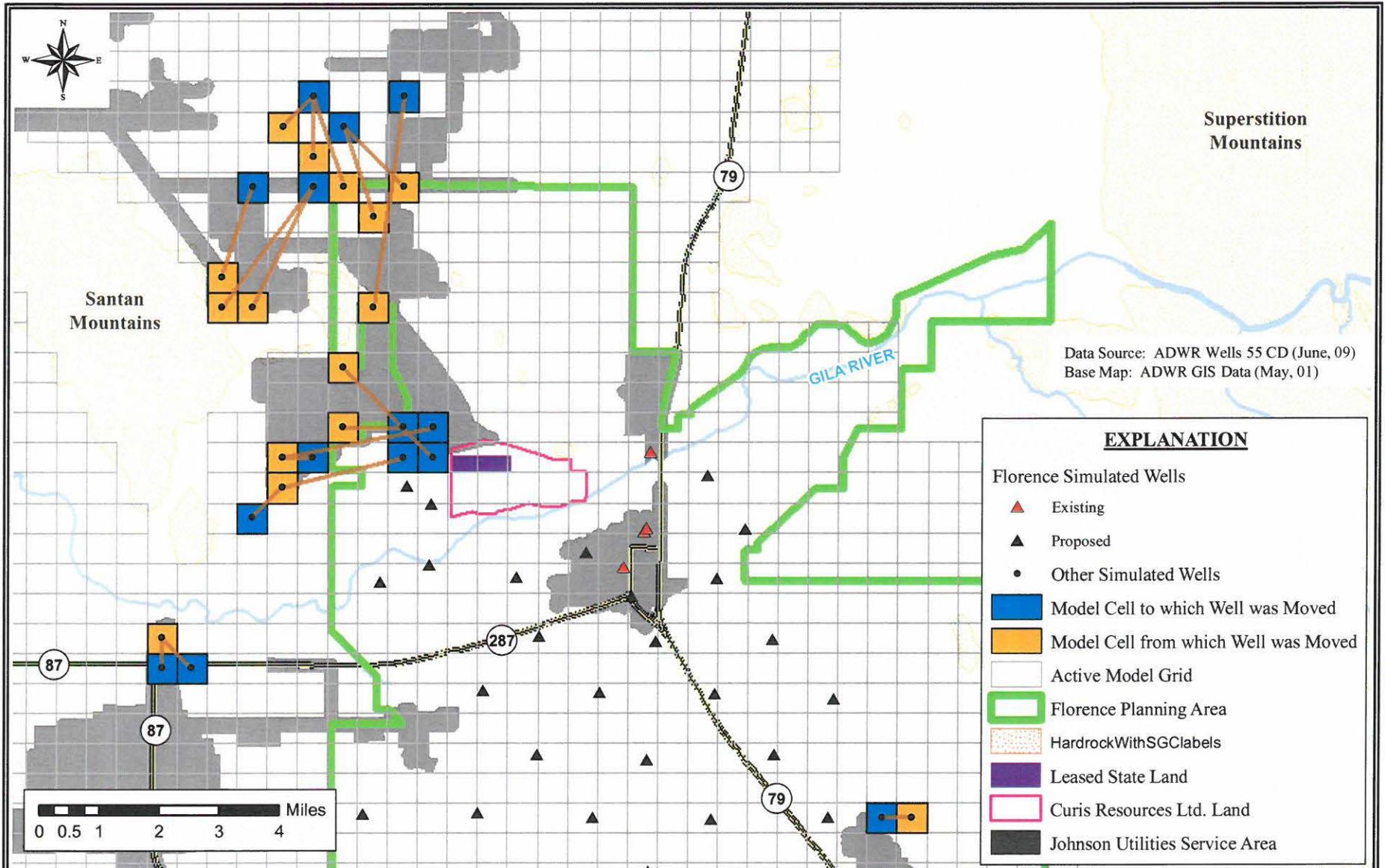
**Southwest Ground-water Consultants, Inc.**

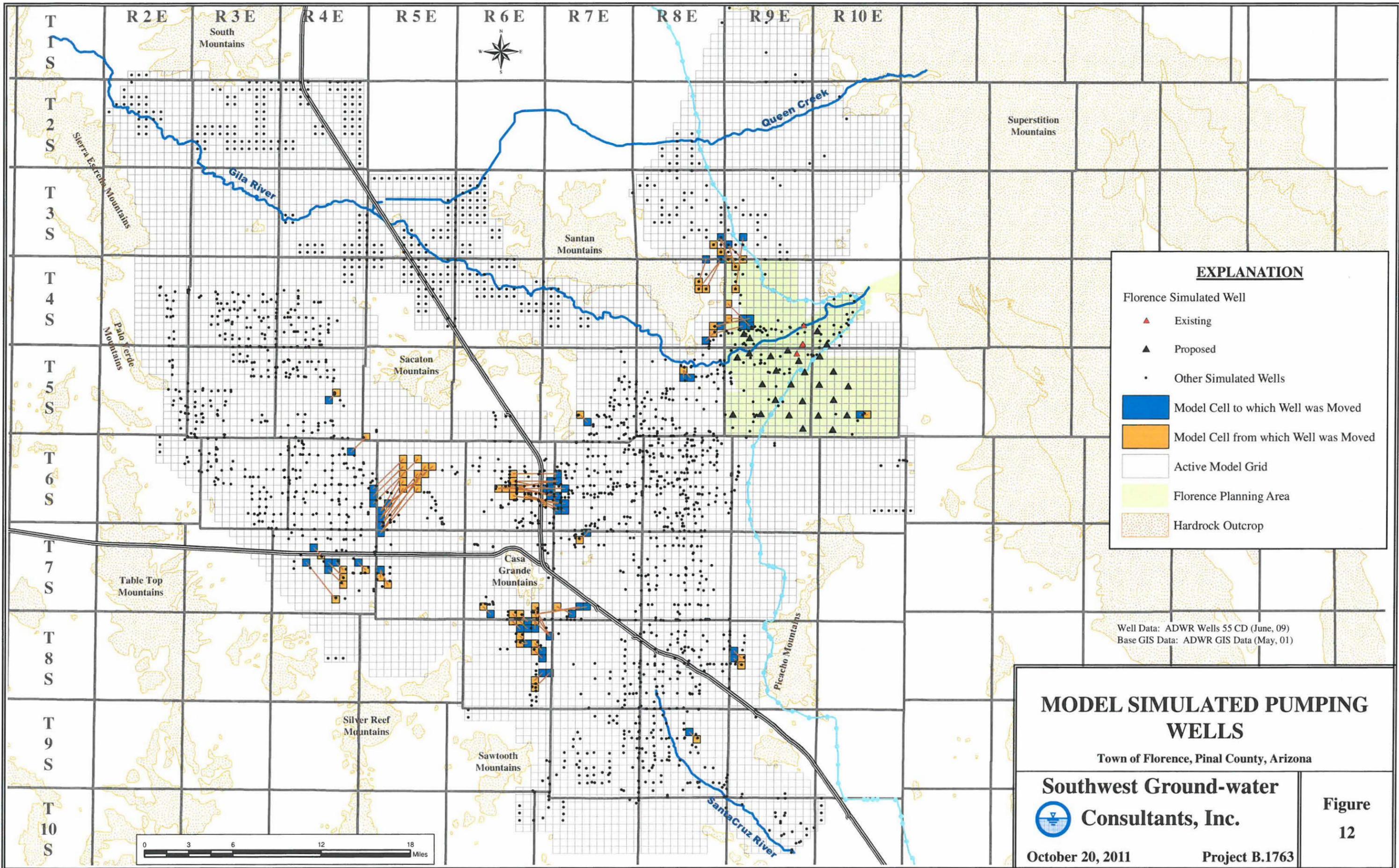
April 6, 2015    Project B.2177

**LOCATION MAP**

Town of Florence, Pinal County, Arizona

**Figure 1**





**EXPLANATION**

Florence Simulated Well

- ▲ Existing
- ▲ Proposed
- Other Simulated Wells
- Model Cell to which Well was Moved
- Model Cell from which Well was Moved
- Active Model Grid
- Florence Planning Area
- Hardrock Outcrop

Well Data: ADWR Wells 55 CD (June, 09)  
 Base GIS Data: ADWR GIS Data (May, 01)

**MODEL SIMULATED PUMPING WELLS**

Town of Florence, Pinal County, Arizona

**Southwest Ground-water Consultants, Inc.**

October 20, 2011      Project B.1763

**Figure 12**