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## Technical Memorandum

# Exploratory and Shallow Well Drilling Rio Grande Watershed Study–Phase I San Acacia Surface Water/Groundwater Investigation

*Prepared For:*

U.S. Army Corps of Engineers – Albuquerque District  
Contract No. DACW47-99-C-0012, Modification No. P00007

*Prepared By:*



**S.S. PAPADOPULOS & ASSOCIATES, INC.**  
Boulder, Colorado

December 5, 2003



## Technical Memorandum

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Date: December 1, 2003

From: S. S. Papadopoulos & Associates, Inc.

To: Ron Kneebone – U. S. Army Corps of Engineers  
Page Pegram – New Mexico Interstate Stream Commission

Subject: **Exploratory and Shallow Well Drilling, Rio Grande Watershed Study - Phase I, San Acacia Surface Water/Groundwater Investigation**

This memorandum transmits data collected from the drilling of exploratory boreholes and the drilling and construction of monitoring wells conducted as part of the Rio Grande Watershed Study, Phase 1. Exploratory and monitoring well drilling was conducted by Geotest, Inc. Drive-point monitoring wells were installed at the San Acacia transect on the east side of the Rio Grande by Detech, Inc. Test extraction wells were drilled and constructed by WDC Exploration and Wells. All drilling and well construction activities were supervised by an S.S. Papadopoulos and Associates, Inc. (SSP&A), geologist. Procedures followed during drilling, soil sampling, geologic logging, and well construction are presented in detail in the Work Plan for Exploratory and Shallow Well Drilling Activities, Rio Grande Watershed Study, Phase 1 (SSP&A, 2002). The primary purpose of this memorandum is to present data collected during this phase of the Rio Grande Water Supply Study.

### DATA PACKAGE

The following data is transmitted as part of this memorandum:

- Drilling program base map and individual transect plan view maps (Figures 1 through 9)
- Tabulated well construction data (Table 1)
- Tabulated well and staff gage survey data (Tables 2 through 9)
- Geologic logs and well construction diagrams (Appendix A)
- Geophysical logs for SAC east-side boreholes (Appendix B)
- Geologic cross sections for each transect (Figures 10 through 16)
- Graphical presentation of the results of grain size distribution analyses (Figures 17 through 23)

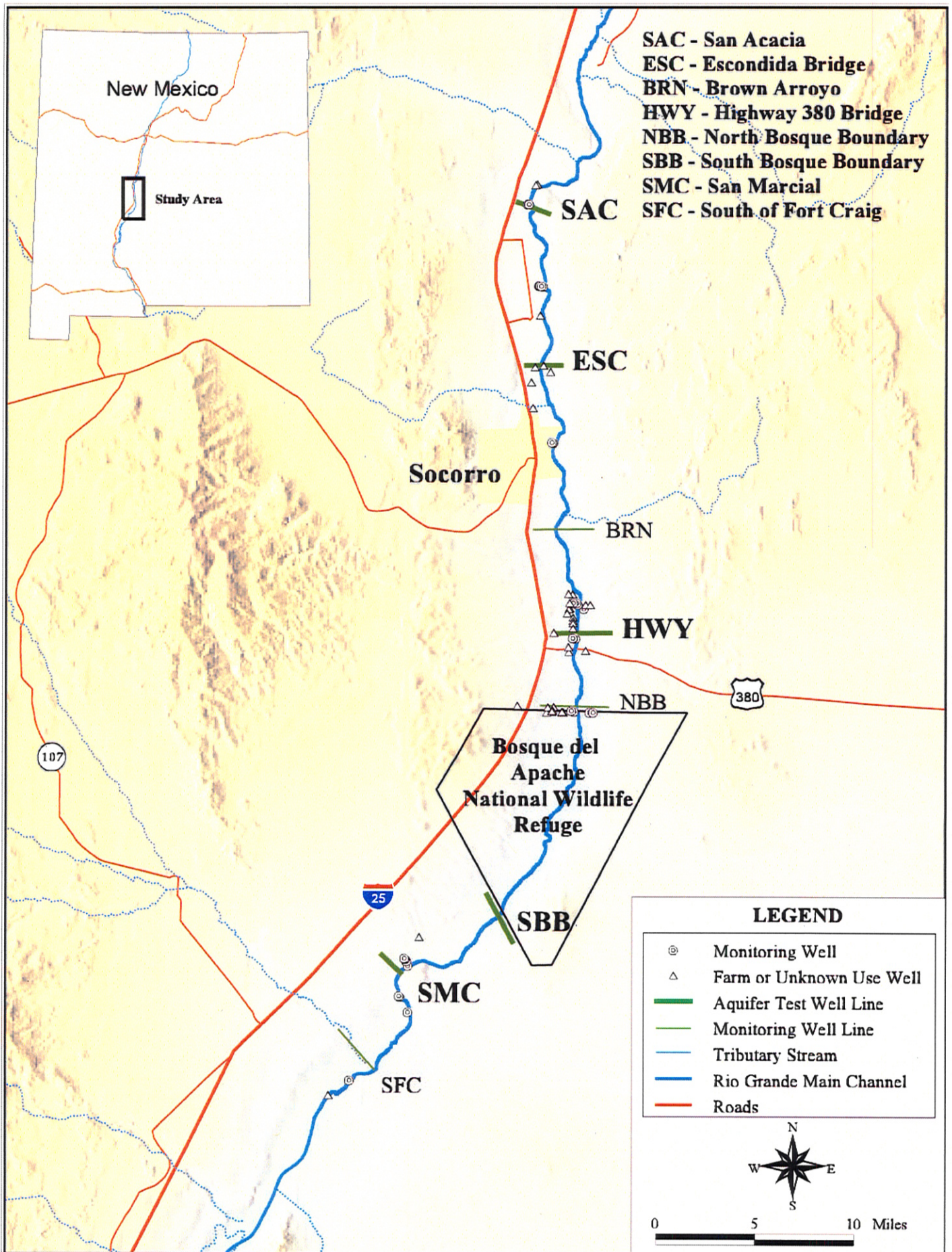


Figure 1. Well transects, Rio Grande Watershed Study, Phase 1

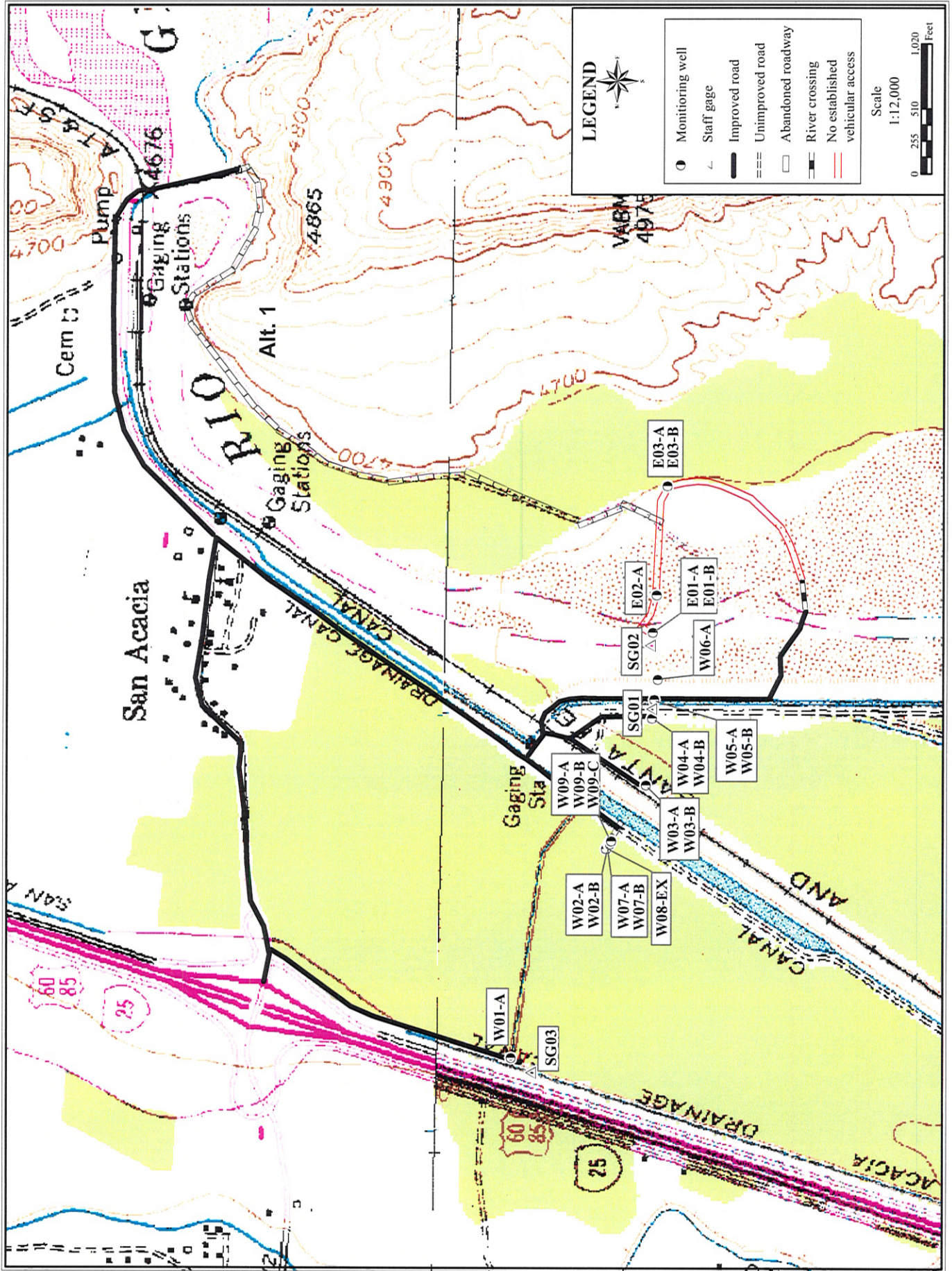


Figure 2. San Acacia (SAC) surveyed well locations and access roads

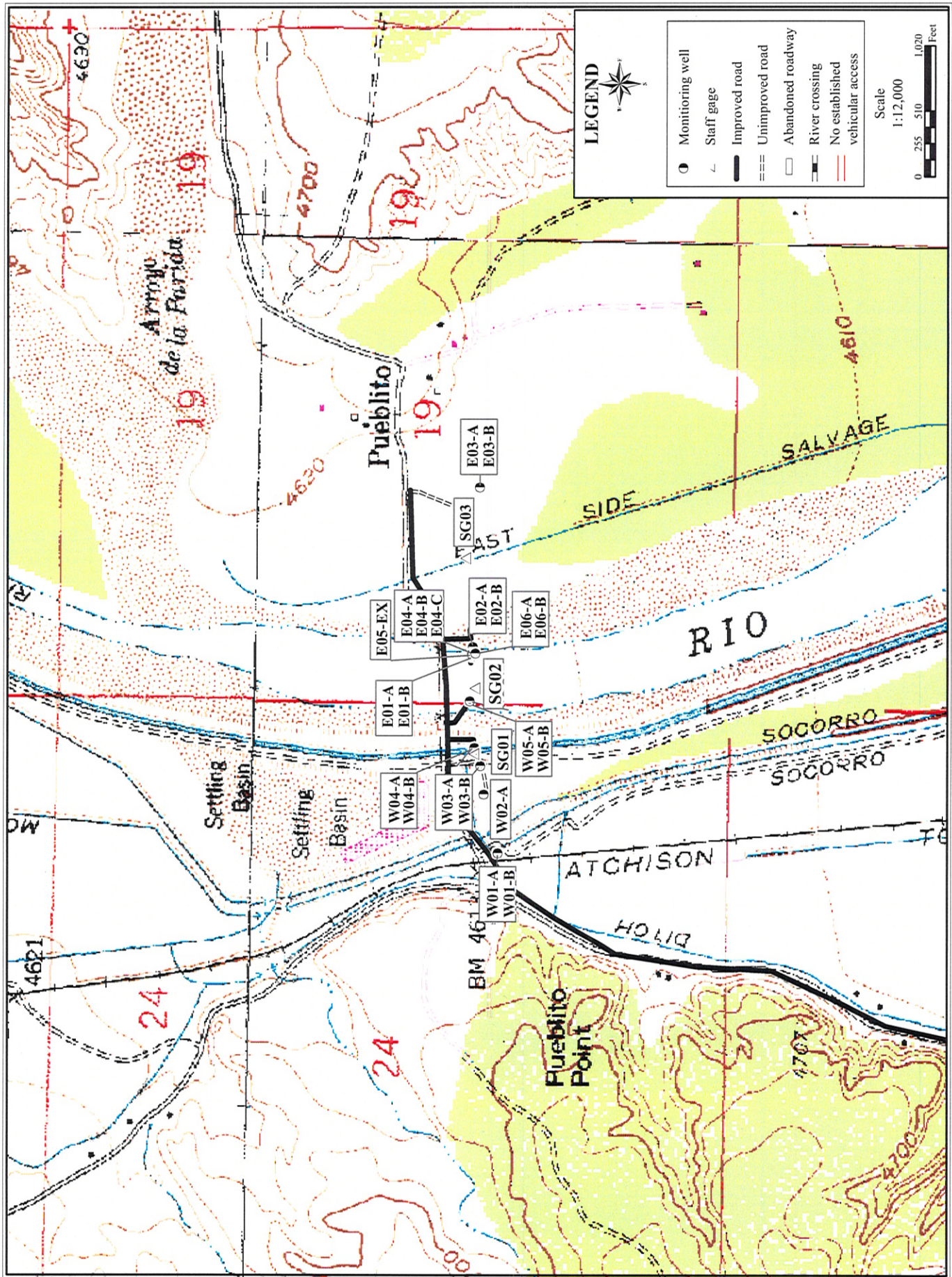


Figure 3. Escondida Bridge (ESC) surveyed well locations and access roads

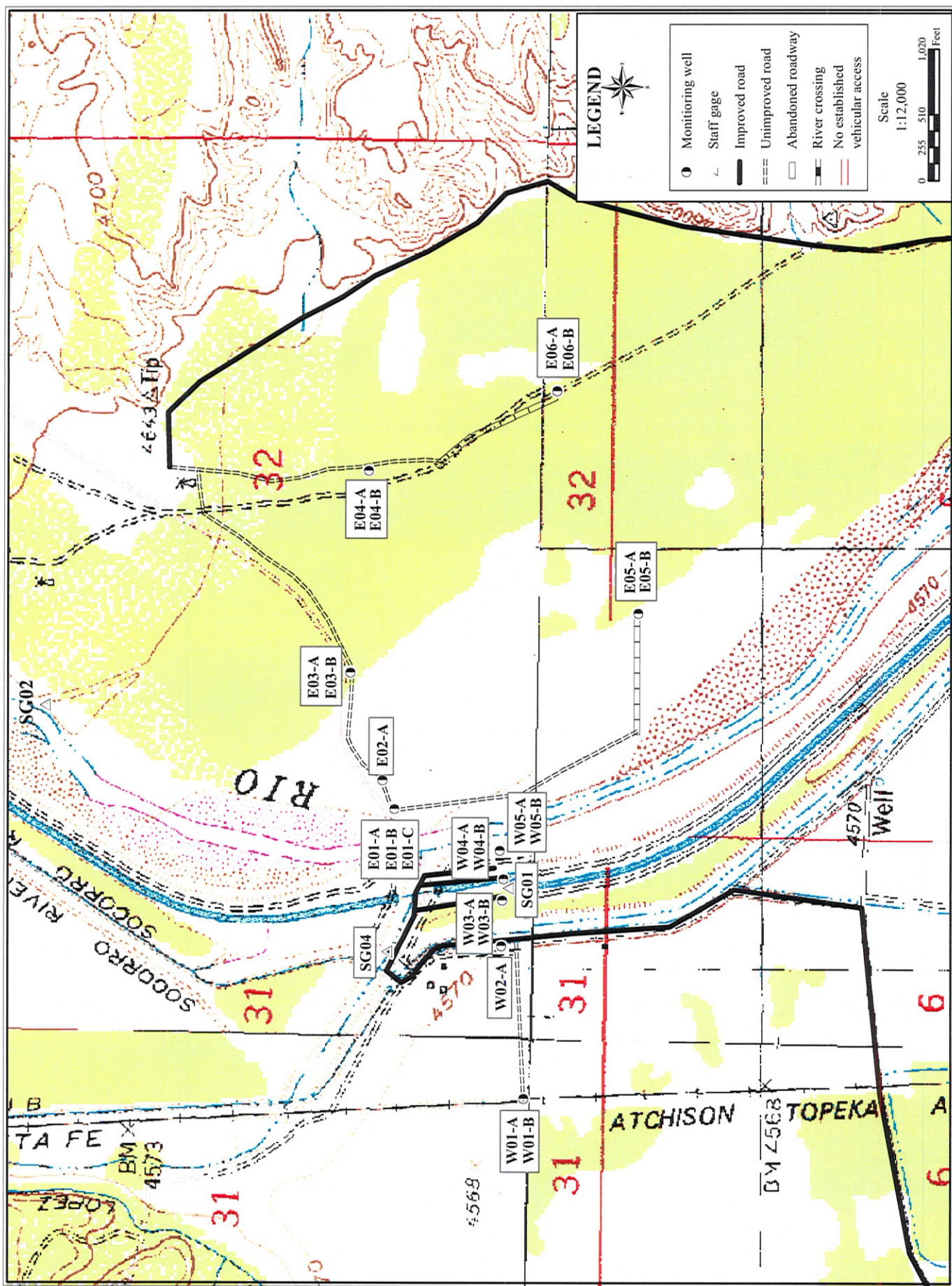


Figure 4. Brown Arroyo (BRN) surveyed well locations and access roads



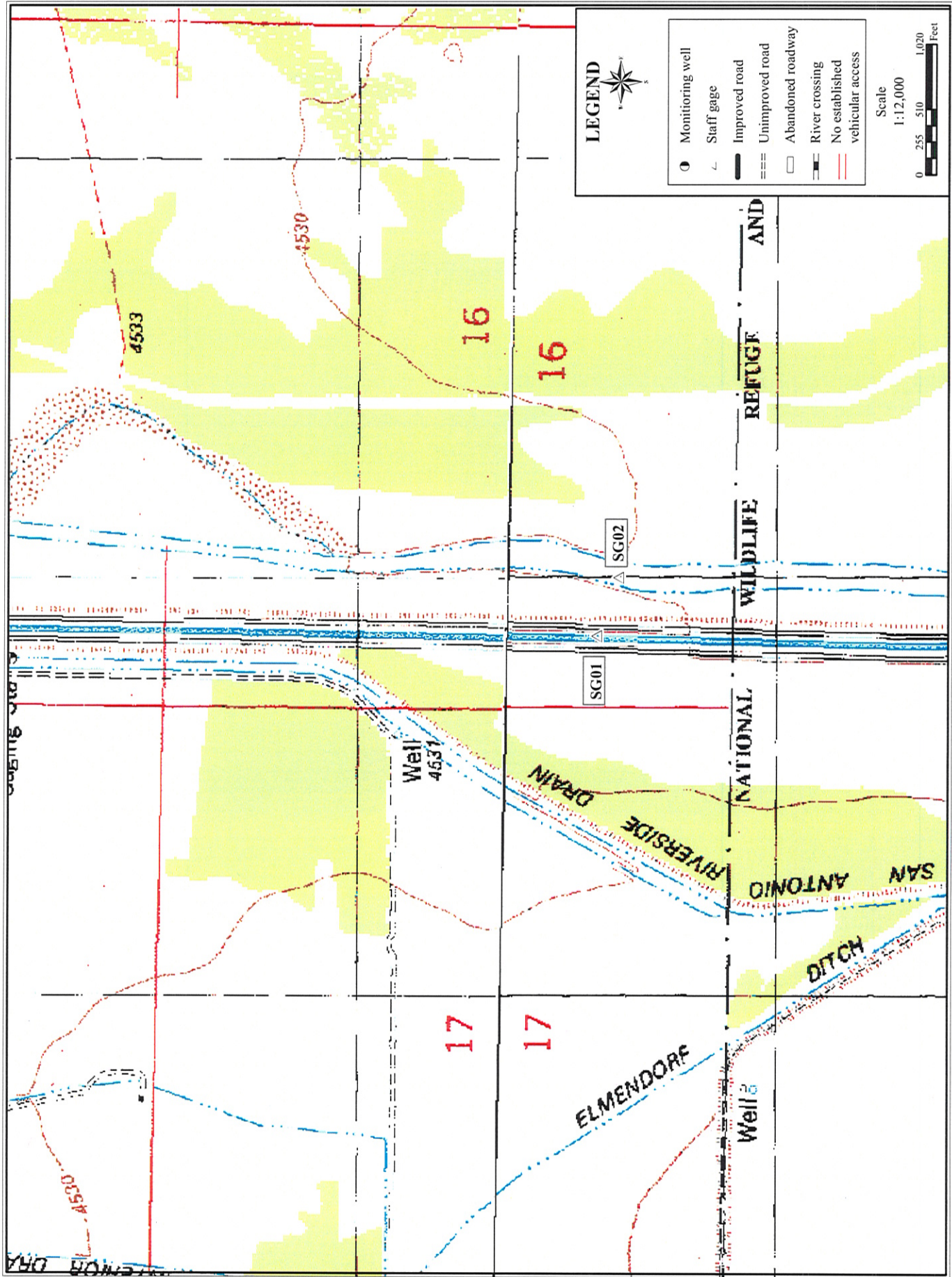


Figure 6. North Bosque Boundary (NBB) surveyed well locations and access roads



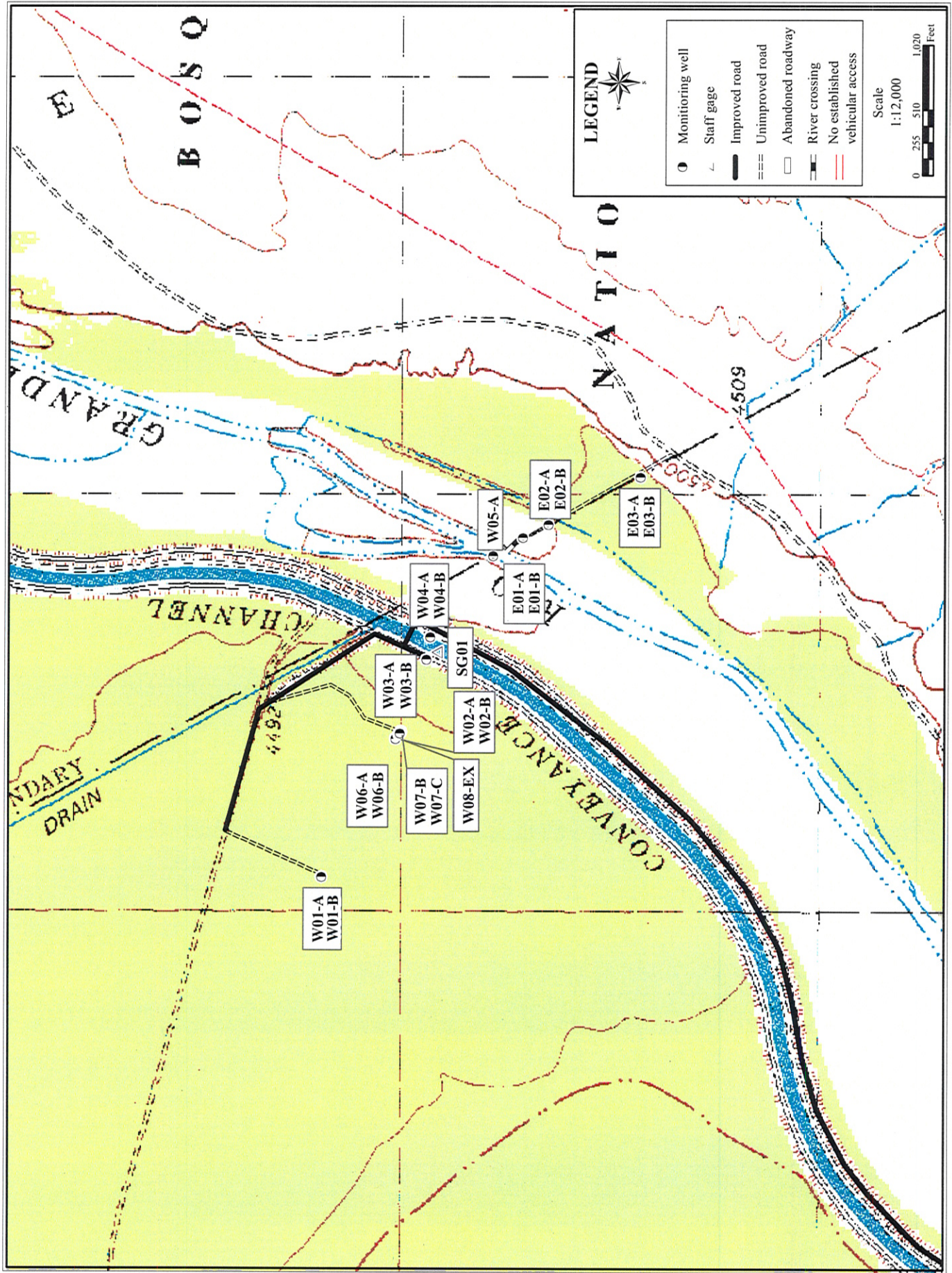


Figure 7. South Bosque Boundary (SBB) surveyed well locations and access roads

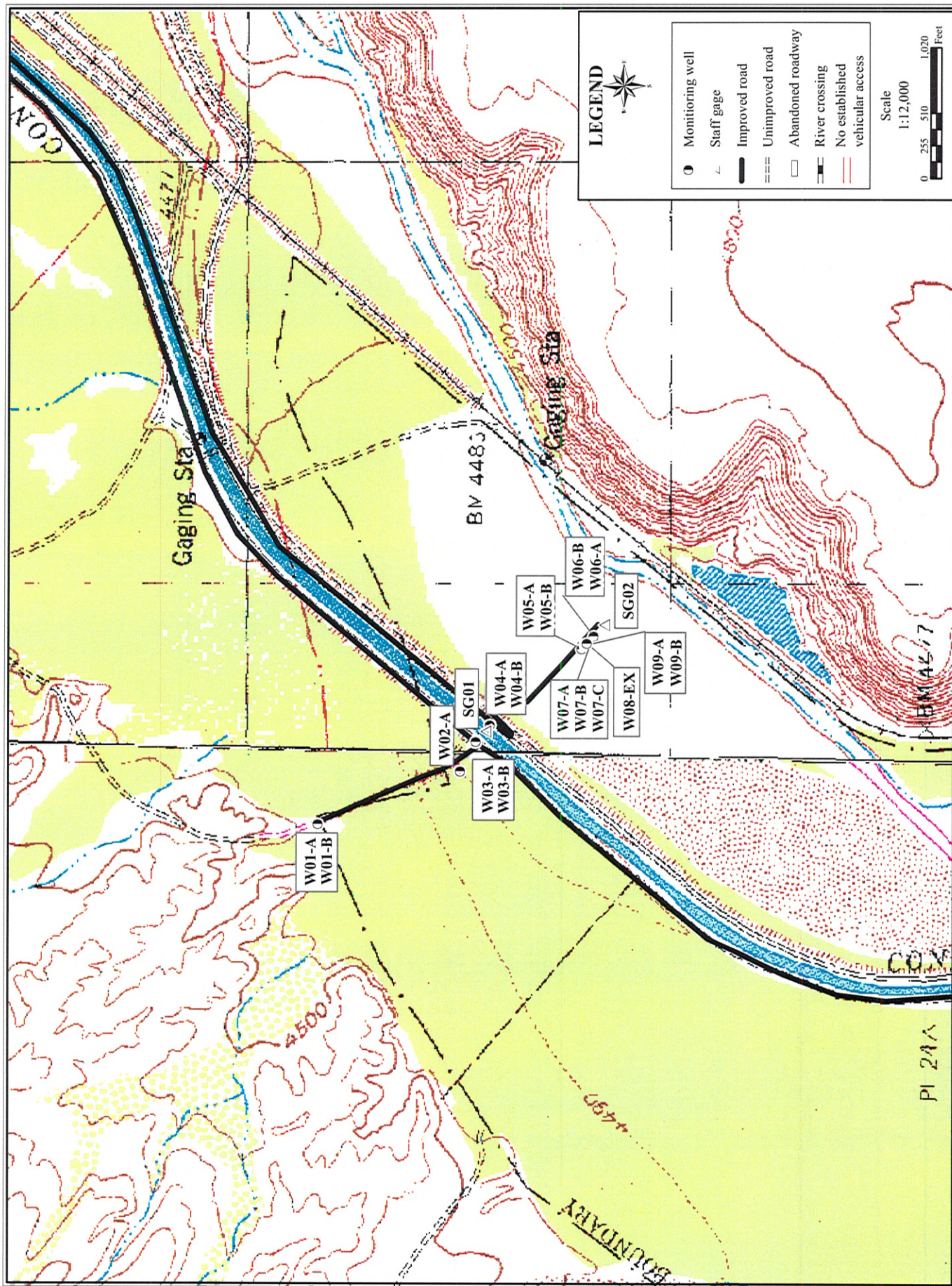


Figure 8. San Marcial (SMC) surveyed well locations and access roads

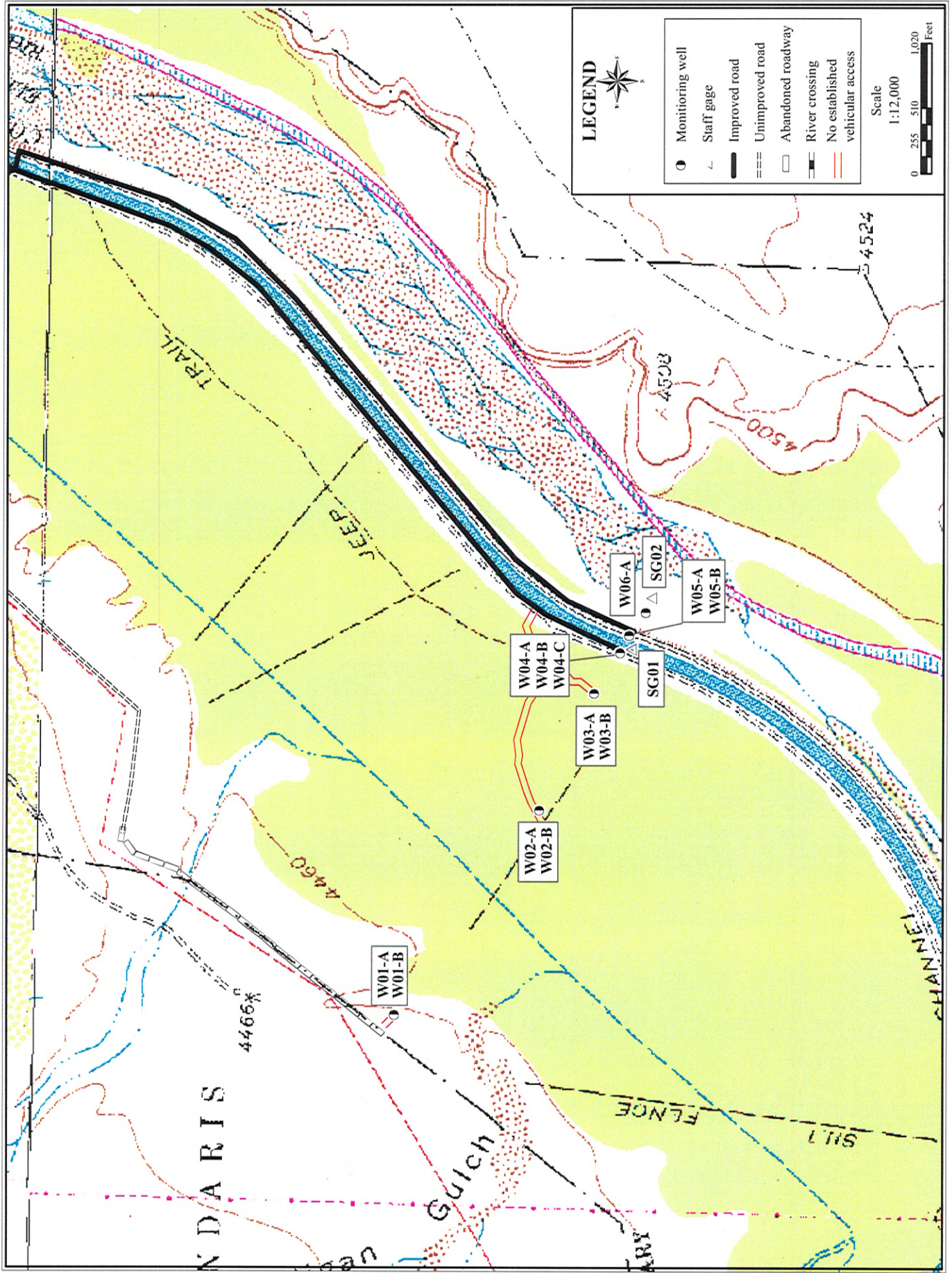


Figure 9. South of Ft. Craig (SFC) surveyed well locations and access roads



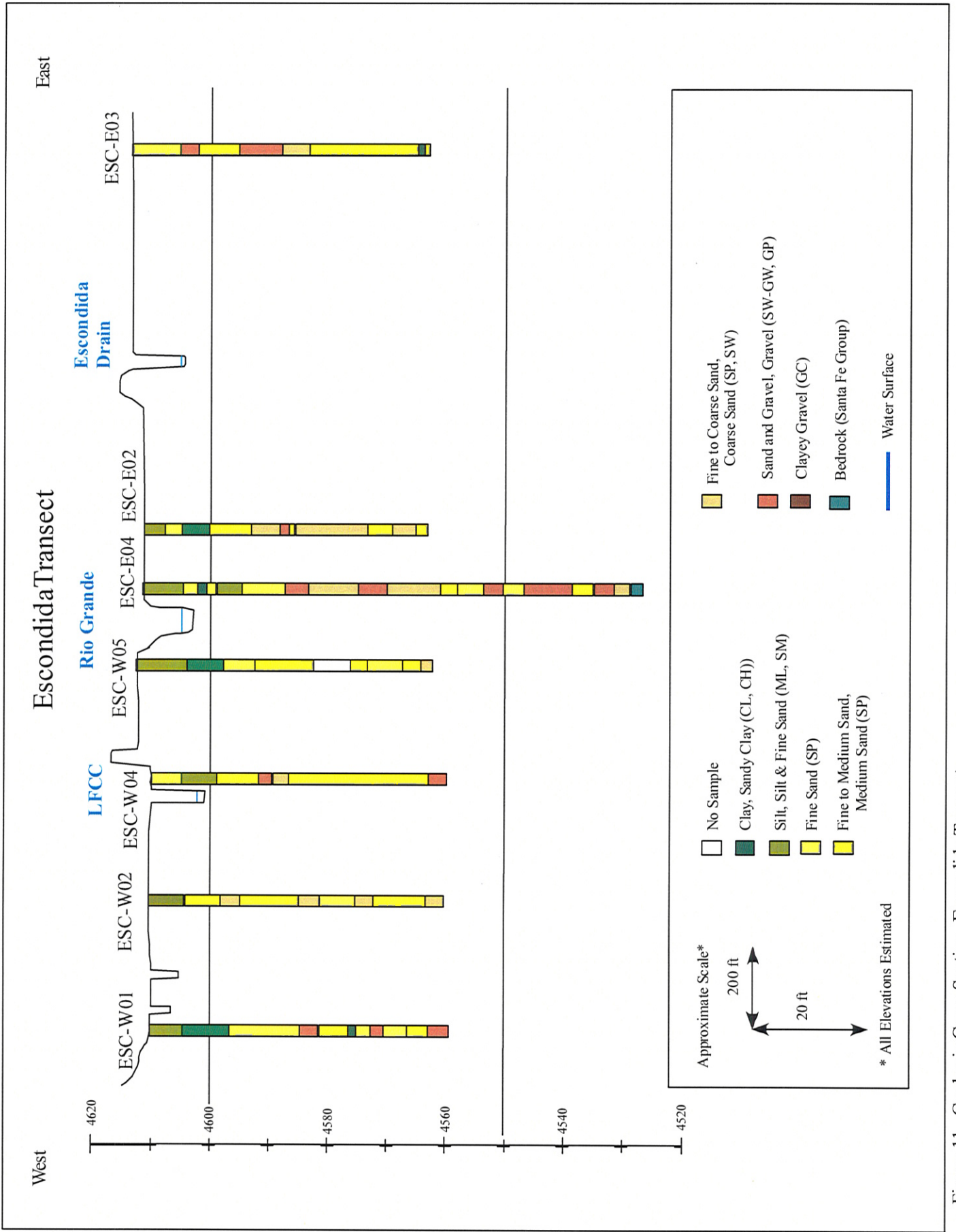


Figure 11. Geologic Cross Section, Escondida Transect