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Exhibit 4

Hydrogeology of the Rancho San Marcos Community

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Rancho San Marcos is situated in the southern Espanola Basin, a westward-tilting geologic trough created by crustal extension and down-faulting, into which the Rio Grande and its tributaries have carried sediment. These sediments have been intruded, in places, by upwellings of molten rock (magma). Some of the intrusions have erupted at the surface as volcanoes resulting in lava flows and pyroclastic deposits that are inter-bedded with the basin-fill sediments. Other magma intrusions have cooled and solidified within the basin fill creating embedded stocks, dikes and sills of crystalline volcanic rock. A geologic map of the Rancho San Marcos Community is shown in Figure 1. A southwest-northeast cross section through the Rancho San Marcos Community is shown in Figure 2. While only basin-fill sediments are exposed at the surface in Rancho San Marcos, both inter-bedded and embedded volcanic rocks have been encountered at depth during the drilling of water wells and deep petroleum exploration boreholes. A geophysical gravity survey has further delineated the location and extent of embedded crystalline volcanic rocks.

Groundwater, originating largely from mountain snowpack, seeps into the sediments and volcanic rocks creating the basin-fill aquifer. The regional direction of groundwater flow is generally westward, from higher elevations near the mountains to lower elevations near the Rio Grande (Figure 3). In the Rancho San Marcos area, the direction of groundwater flow appears to be to the west-southwest. Based on records filed with the N.M. State Engineer (Appendix A) water wells in Rancho San Marcos generally hit water at depths of 100 to 200 feet, with an average depth of 164 feet, and are drilled to depths of 250 to 500 feet. Production rates of 20 gallons per minute or greater have been reported by the well drillers.

Groundwater geochemistry of the Santa Fe region is described by McQuillan et al., 2010. Natural mineralization with arsenic, barium, boron, chloride, fluoride, iron, selenium, sulfate, total dissolved solids, and uranium can exceed limits for potable supply in some wells in the region. Examples of naturally high mineralization in the Highway 14 area are given in Table 1. These natural contamination problems are created largely by the occurrence of soluble minerals in volcanic rocks and in rocks that are older than basin fill sediment. Additionally, some wells in the Santa Fe region are contaminated with nitrate originating from septic systems.

At least four wells in Rancho San Marcos have been tested for chemical quality (Table 1). The total dissolved solids (TDS) concentrations range from 174 to 304 mg/L, and are well within the maximum level of 500 mg/L recommended for drinking water. Water produced by one well had

very low calcium indicating that the water has undergone cation exchange, a natural geologic process where minerals such as smectites and zeolites exchange calcium in the water for sodium, a natural softening process. Water with low calcium often contains elevated fluoride, and the Rancho San Marcos well with low calcium contained slightly elevated fluoride. Bicarbonate was the primary anion in all Rancho San Marcos wells tested. Arsenic, barium, nitrate, selenium, and uranium were not detected at concentrations exceeding health standards. These limited test results indicate, with the exception of slightly elevated fluoride in one well, that the overall quality of groundwater in Rancho San Marcos is excellent. Water wells in Rancho San Marcos are completed in basin fill sediment, which generally produce good water, and the limited data available do not indicate contamination from the volcanic rocks that underlie the community.

The region around Rancho San Marcos is undergoing gradual development, which results in increasing withdrawal of groundwater. Additionally, drought conditions decrease the amount aquifer recharge from snowmelt and rainfall. These hydraulic stresses can lower the watertable and result in decreased production from, and in some cases drying up of, water supply wells. These stresses also can lead to water-quality deterioration if mineralized water is pulled into pumping wells either from adjacent areas or from deeper within the aquifer. Given the large lot sizes in Rancho San Marcos, the large distances between wells and septic tanks, and the large distance from the community to any industrial facilities, the potential for anthropogenic (manmade) groundwater contamination is low but not non-existent.

A program to monitor the water levels and chemical quality of well water in Rancho San Marcos is recommended. With training and a modest investment in equipment, this monitoring program could be implemented by the community. Homeowners willing to allow their water wells to be monitored should be identified and wells should be selected for monitoring throughout the community. Measurements for depth-to-water and specific conductance (a measure of TDS) are recommended annually. Water quality sampling for analysis of cations, anions, arsenic, uranium, pH and TDS by a certified laboratory is suggested once every 3 to 5 years.

References

Koning, D.J and A.S. Read. 2010. Geologic Map of the Southern Espanola Basin. New Mexico Bureau of Geology and Mineral Resources, Open File Report 531.

McQuillan, D., B. Linhoff, P. Longmire, M. Rearick, R. Gallegos, K. Torres, S. Wiman, M. Sanchez, and A. King. 2010. Private Domestic Well Testing in the Santa Fe Region. New Mexico Bureau of Geology and Mineral Resources, Open File Report 536.

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Exhibit 5

FEMA Flood Maps

Special Flood Hazard Area (SFHA)

An area having special flood, mudflow or flood-related erosion hazards and shown on a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V. The SFHA is the area where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. For the purpose of determining Community Rating System (CRS) premium discounts, all AR and A99 zones are treated as non-SFHAs.

National Flood Insurance Program Requirements

- 59.1 - Definition of Lowest Floor
- 60.3 - Floodplain Management Criteria

Last updated July 7, 2020

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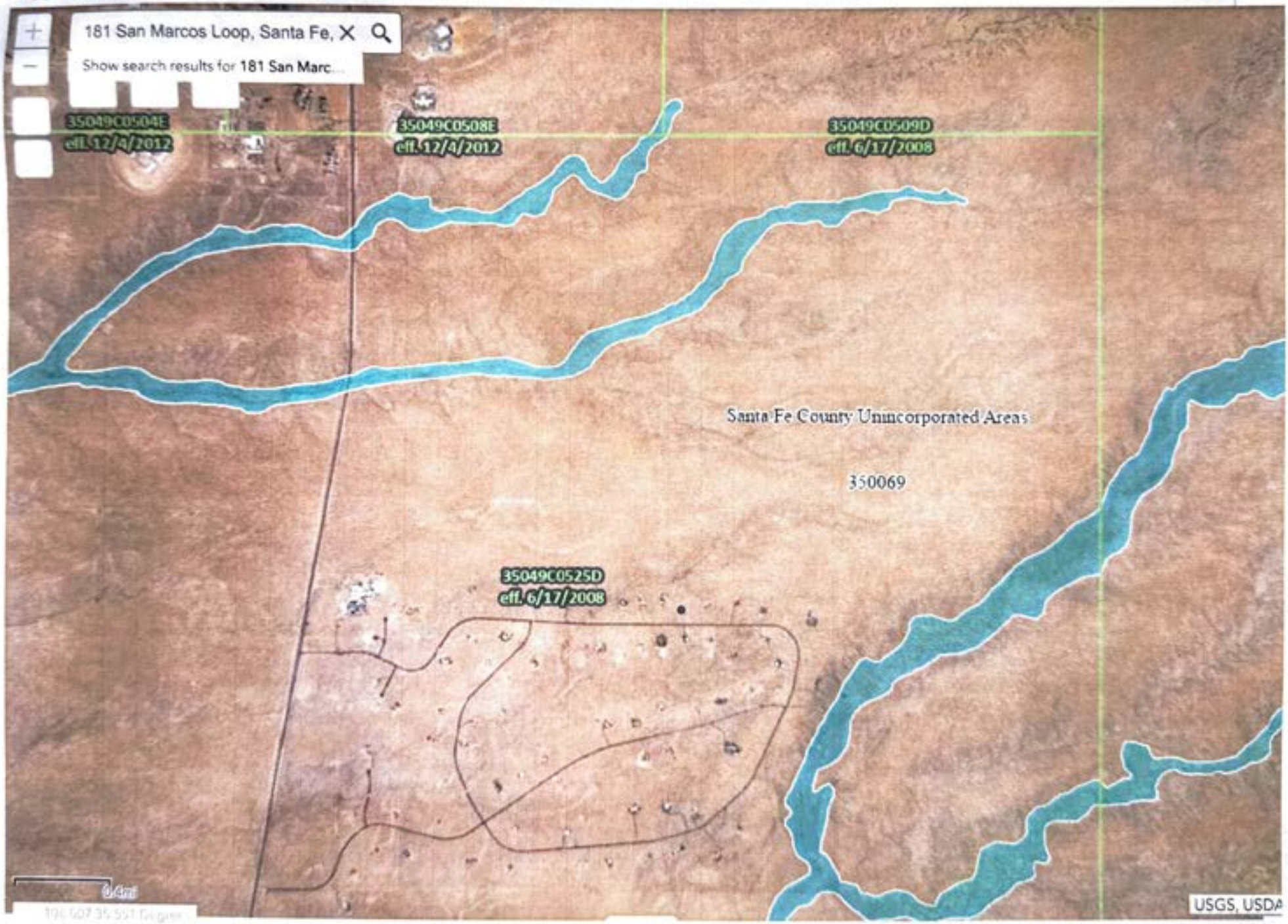
FEMA's National Flood Hazard Layer (NFHL) Viewer
with Web AppBuilder for ArcGIS
181 San Marcos Loop, Santa Fe,
Show search results for 181 San Marc...
35049C0504E
eff. 12/4/2012
35049C0508E
eff. 12/4/2012
35049C0509D
eff. 6/17/2008
Santa Fe County Unincorporated Areas
350069
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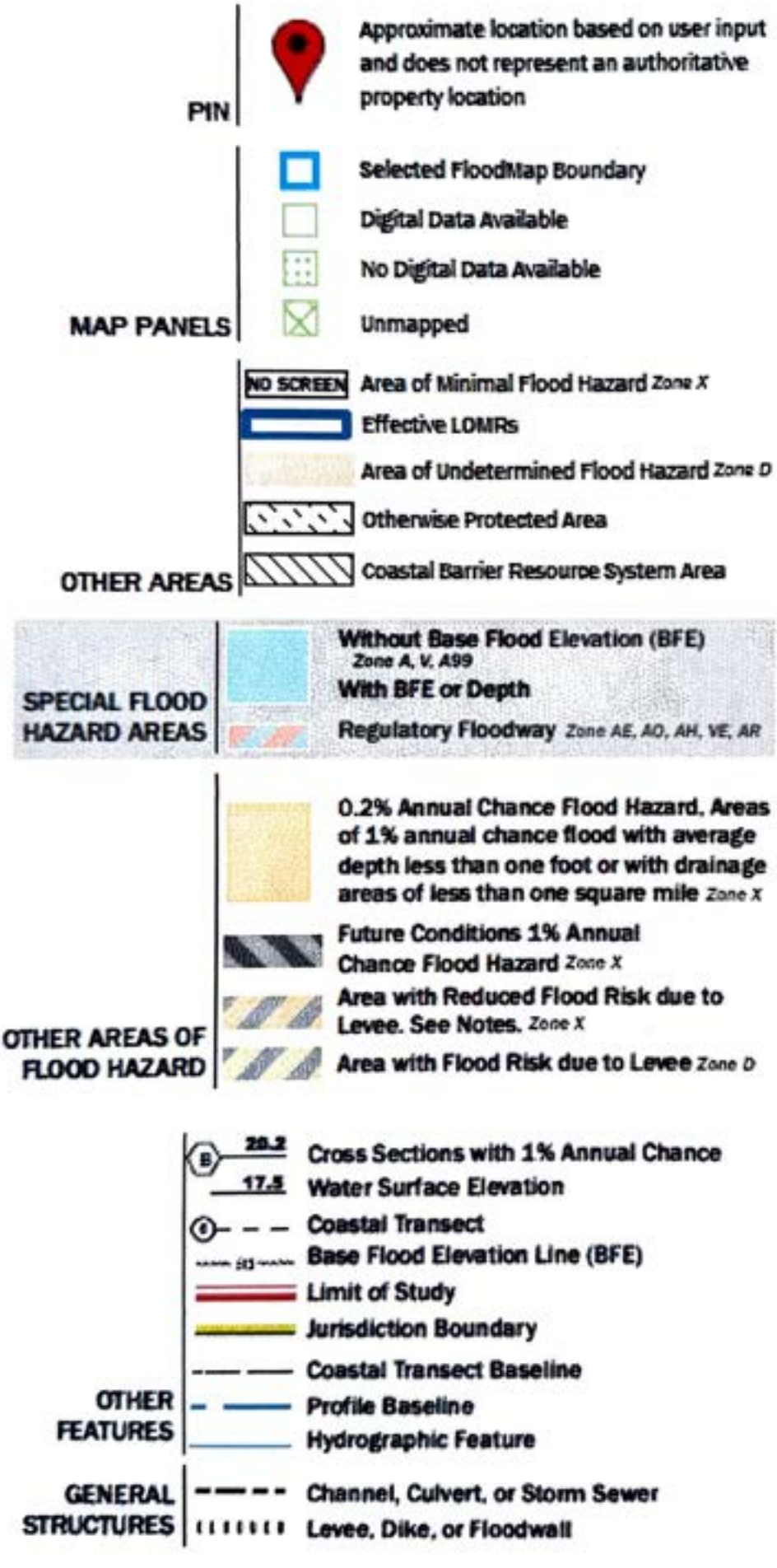
eff. 6/17/2008
0.4mi
USGS, USDA

FEMA's National Flood Hazard Layer (NFHL) Viewer

0.4mi


PIN
Approximate location based on user input and does not represent an authoritative property location
MAP PANELS
Selected FloodMap Boundary
Digital Data Available
No Digital Data Available
Unmapped
OTHER AREAS
NO SCREEN
Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D
Otherwise Protected Area
Coastal Barrier Resource System Area
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth
Regulatory Floodway Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee. See Notes. Zone X
Area with Flood Risk due to Levee Zone D
OTHER FEATURES
Cross Sections with 1% Annual Chance
Water Surface Elevation
Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature
GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall