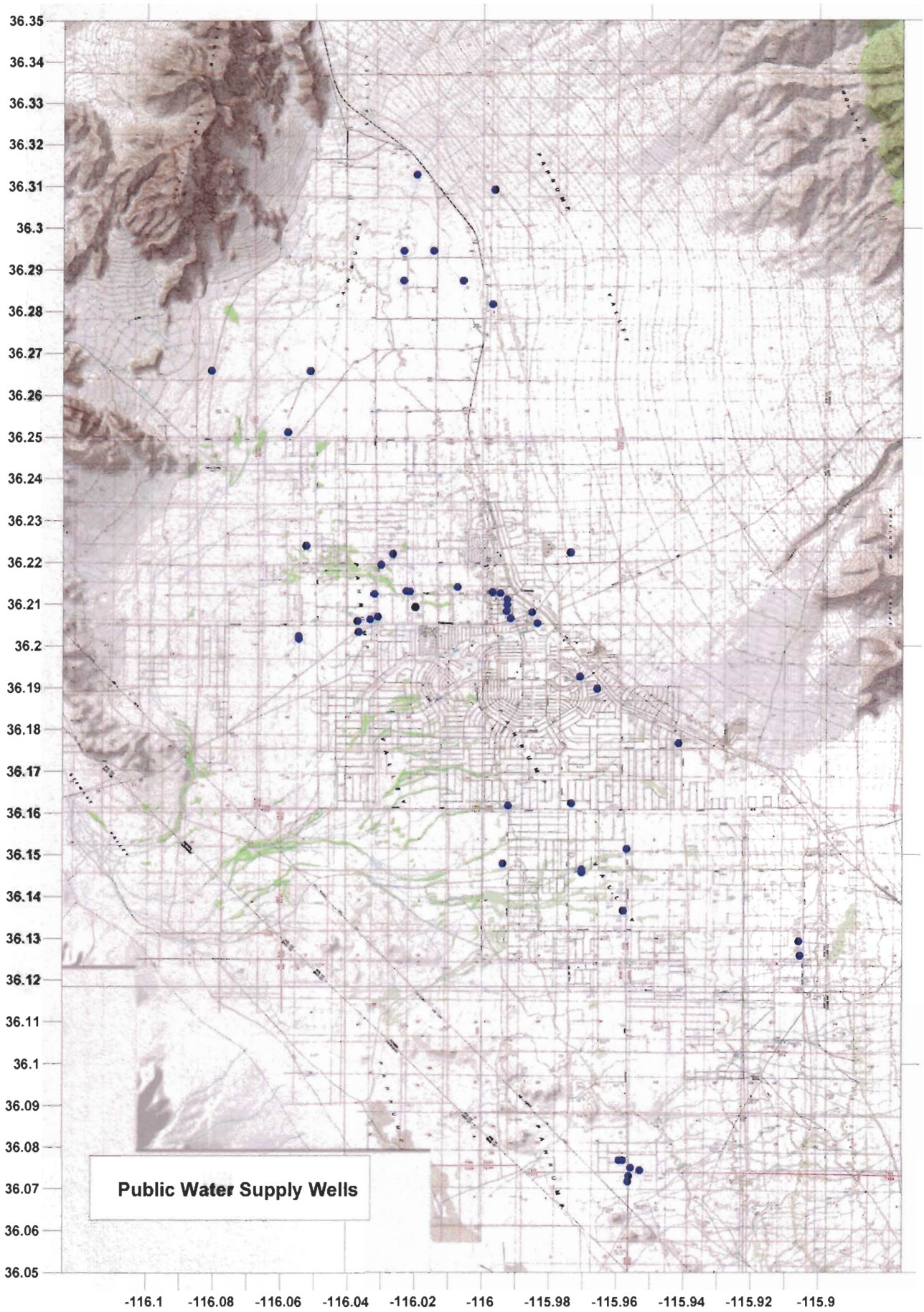
Public Water Supply Wells
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-115.98
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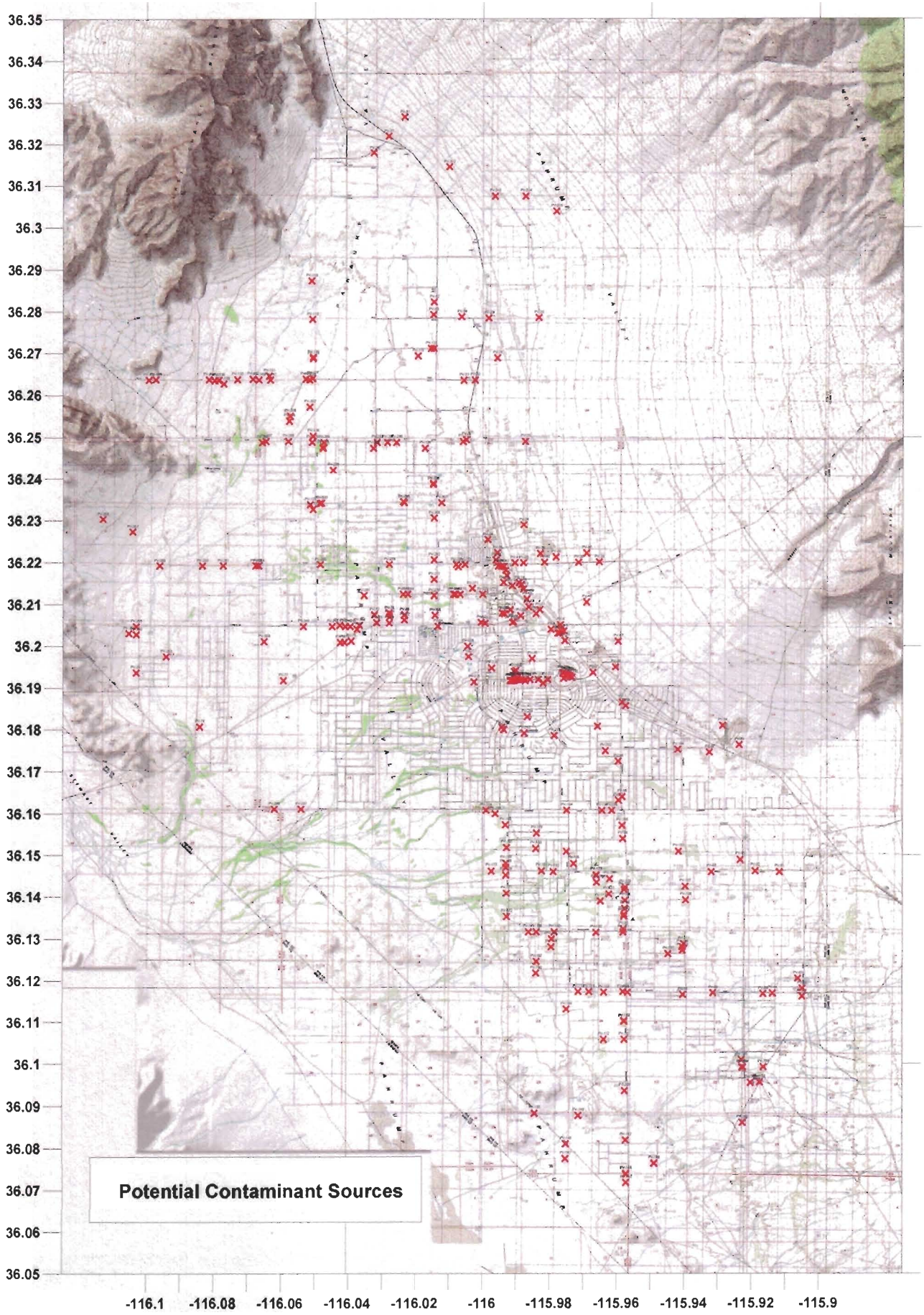
Potential Contaminant Sources
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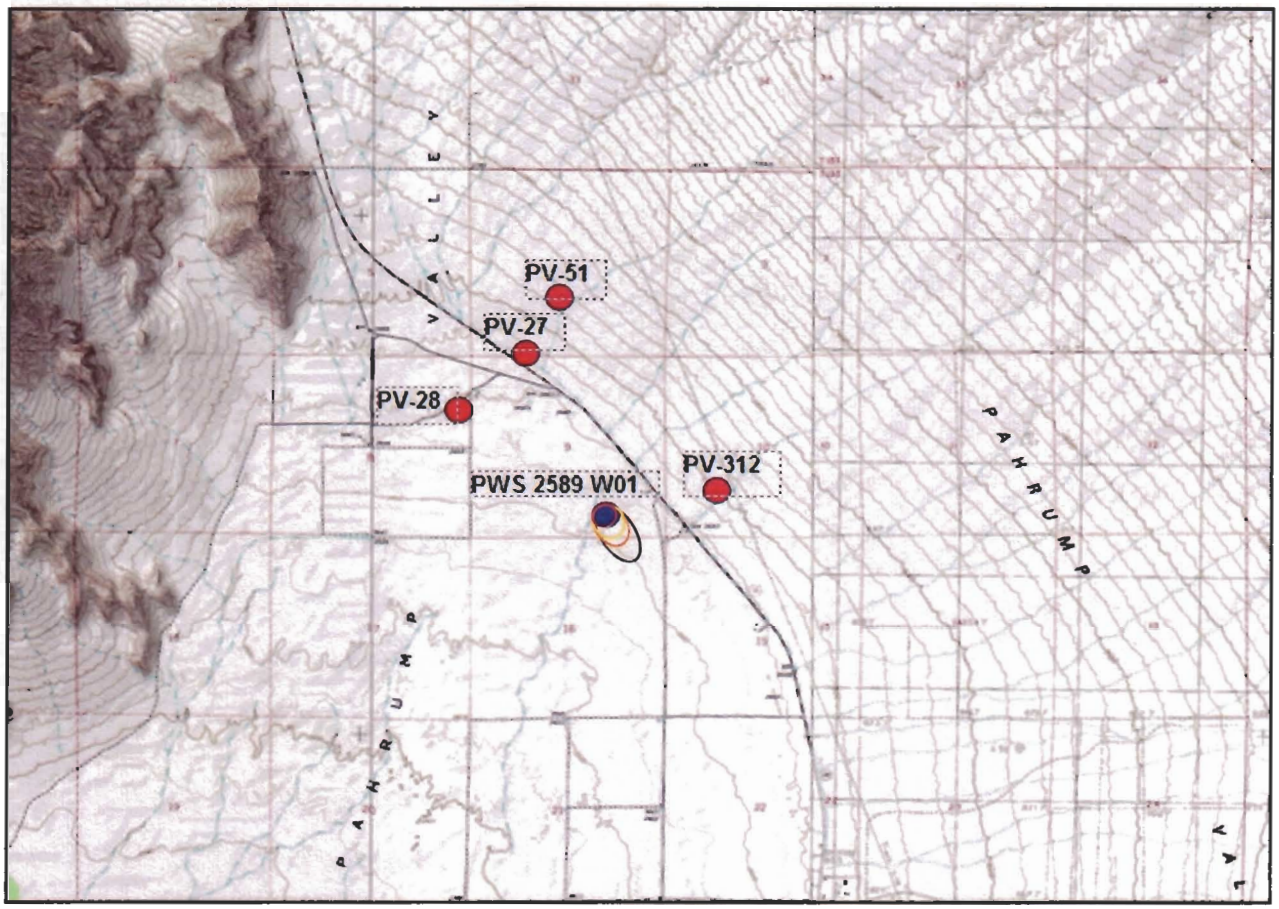


PAHRUMP VALLEY WELL HEAD PROTECTION PROGRAM - POTENTIAL CONTAMINANT SOURCE SURVEY RESULTS

ID No.	Potential Source Name	CODE	RISK	LAT	LONG	Comment
PV-27	Animal Care Center	29	D-low	36.32187079	116.0280512	Microbiological
PV-28	Lou Lou's Rockworld	49	A,C-high	36.31785610	116.0324771	VOC, IOC
PV-51	N. Highway 160 Sand and Gravel	49	A,C-high	36.32649880	116.0232954	VOC, IOC
PV-312	Utilities Inc. Storage Tank	55	A,B,C,D	36.31444444	115.0100000	VOC,SOC,IOC,MICROBIOLOGICAL

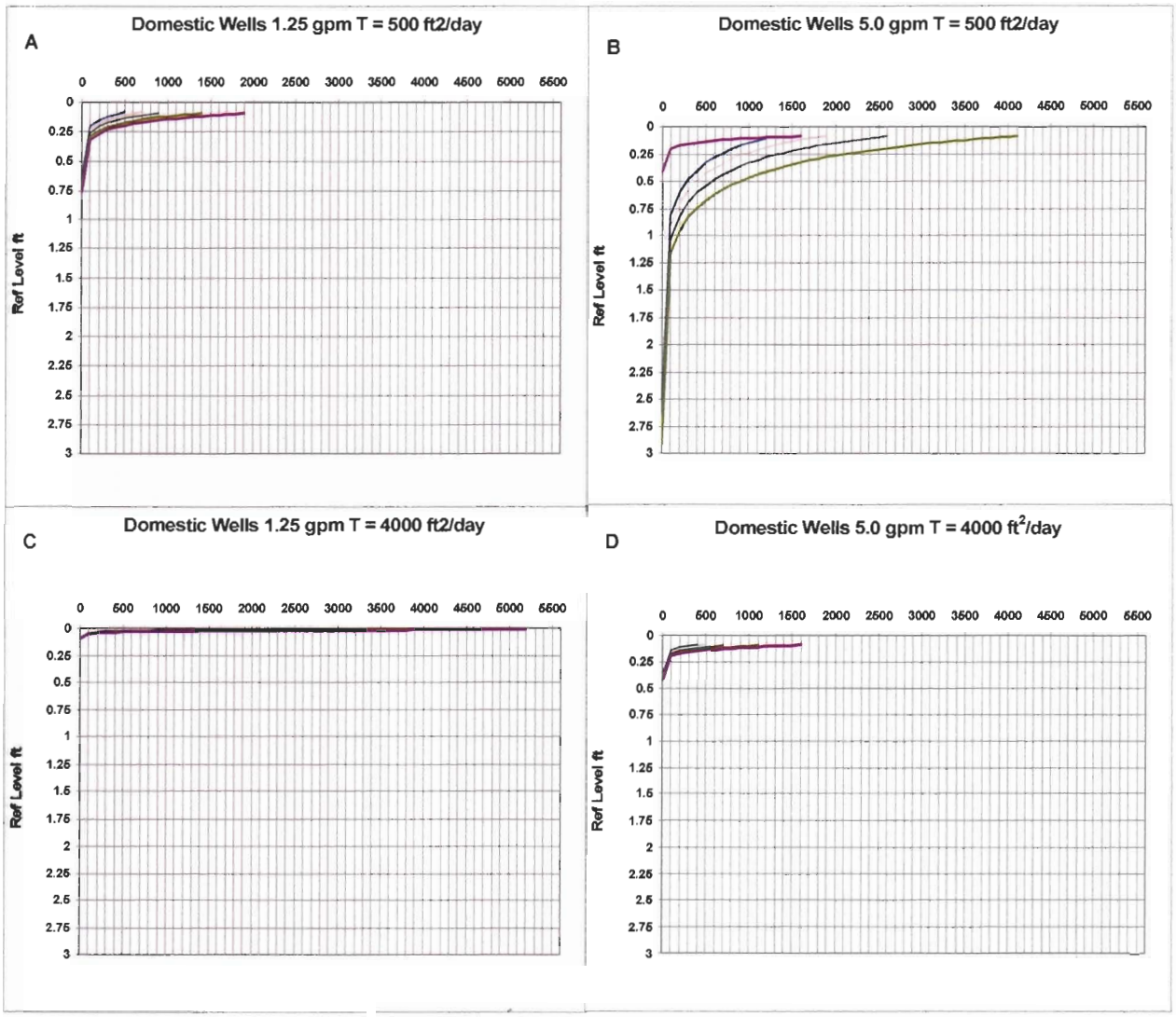
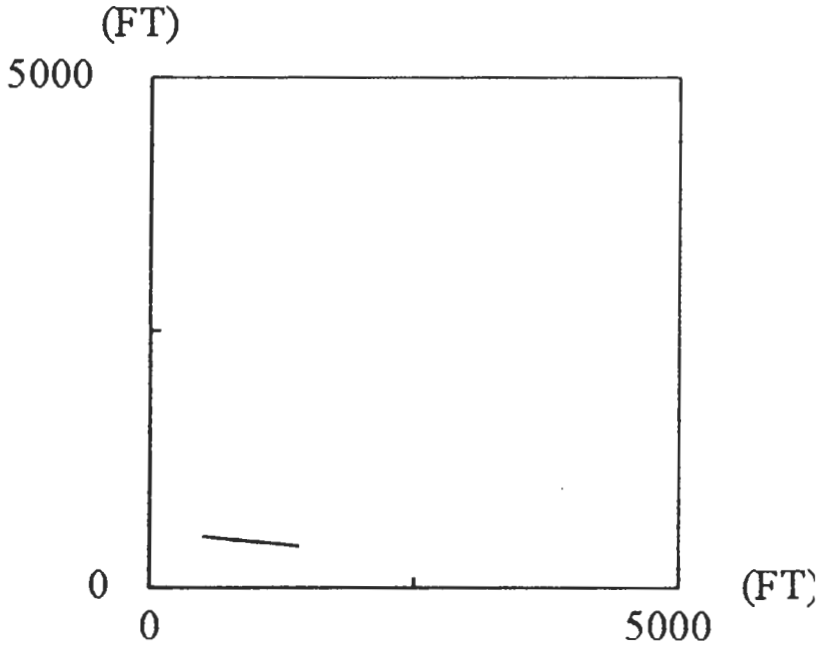


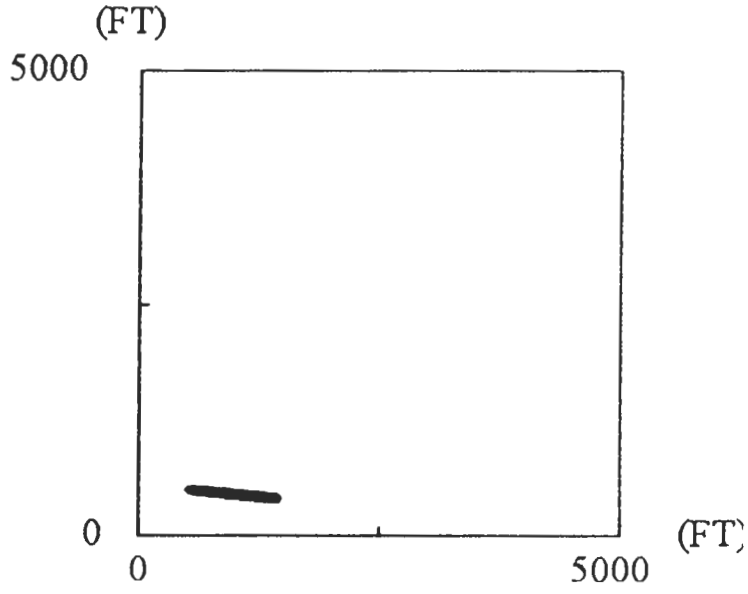
Figure _. Distance-Drawdown charts for domestic wells in Pahrump Valley.

These charts show the amount of drawdown that will occur at various distances from a domestic water well in Pahrump Valley. Charts A through D show the drawdown expected to result from continuously pumping a well for 180 days and for 1,2,5, and ten years. The typical domestic well pumps on a one-acre lot pumps 2.02 acre feet per year or 1800 gallons per day, equivalent to continuous pumping at a rate of 1.25 gallons per minute (gpm). Charts A and C show the distance drawdown relationships for two different values of transmissivity at a pumping rate of 1.25 pgm. (Transmissivity is the rate at which groundwater flows through an aquifer.) These tranmissivity values bracket the range of conditions expected in Pahrump. Chart B and D are for 5 gpm pumping rates.

As shown, the drawdown of a domestic well is negligible, less than one foot of drawdown at a distance of 100 ft from the pumping well. Even under the extreme assumption of continuous pumping for long time intervals, the effects are limited to the vicinity of the pumping well. In reality, domestic wells cycle on and off and seldom run continuously for more than a few hours. This analysis is based upon the Theis non-equilibrium equation which has a number of assumptions that are listed in Appendix _.



PVDOM1 – 5 GPM 10 YEARS T = 5,000 FT^2/DAY



PVDOM2 – 25 GPM 10 YEARS T=5,000 FT^2/DAY