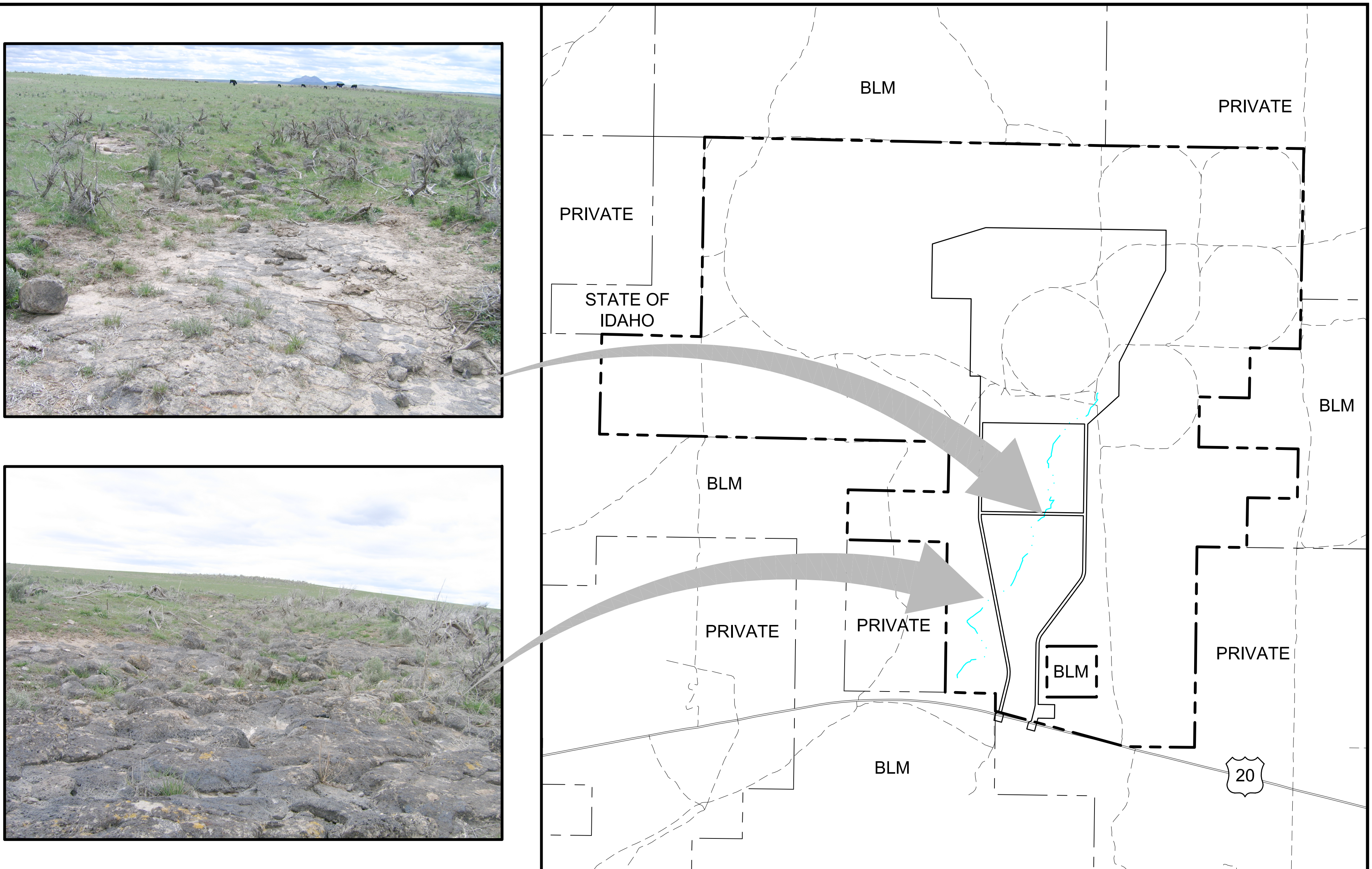
FIGURES



LEGEND:

PROPOSED SITE BOUNDARY

EXISTING ROADS

DRAINAGE FEATURE

SCALE

0 1000 2000 m

SCALE

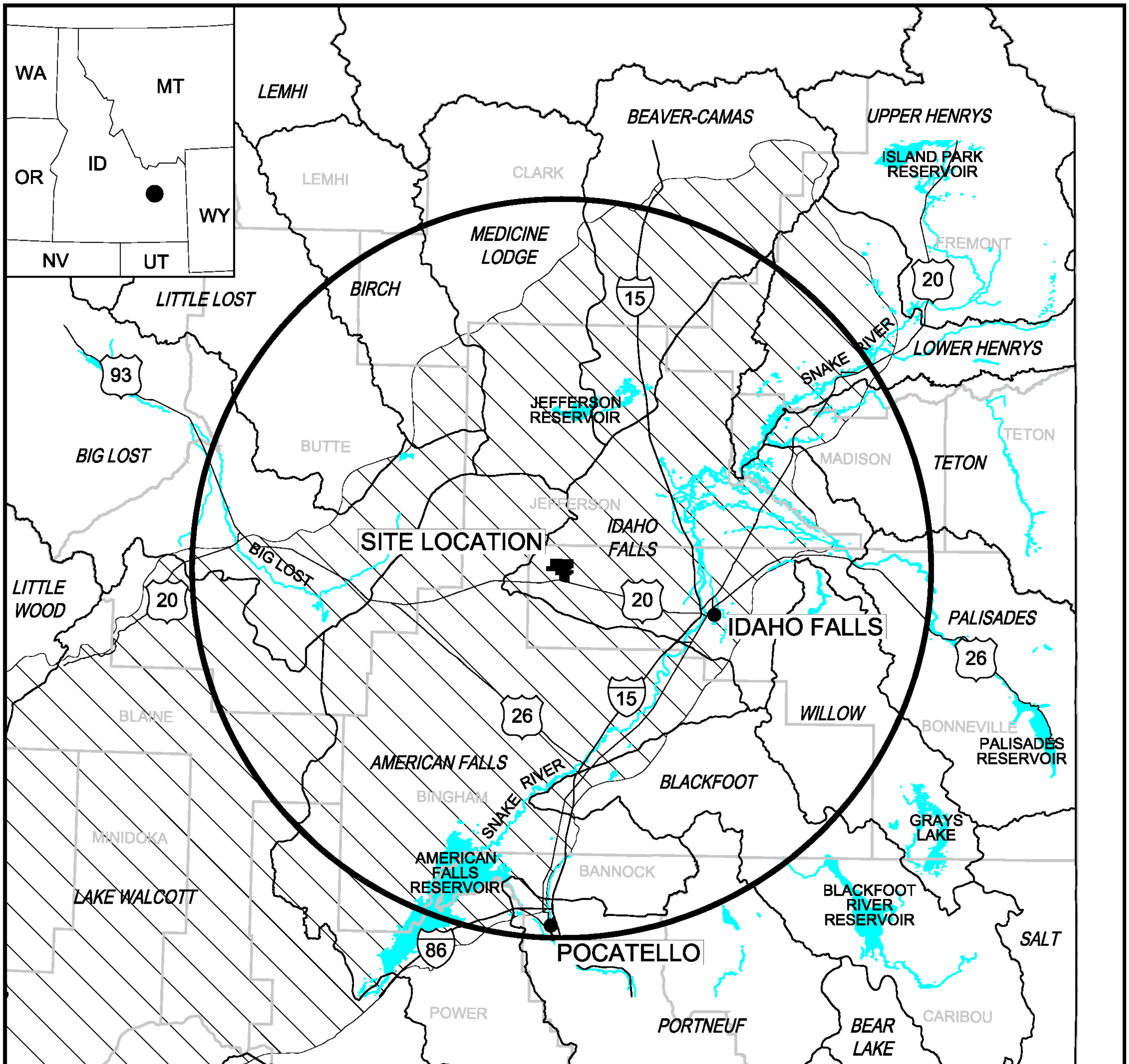
0 4000 8000 ft

N

Figure 3.4-1 **Rev. 0**

Drainage Feature and Location

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



LEGEND:

80 km (50 mi) RADIUS

SNAKE RIVER PLAIN AQUIFER

LEMHI HYDROLOGIC UNIT CODE (HUC)

SCALE

0 30 60 km

SCALE

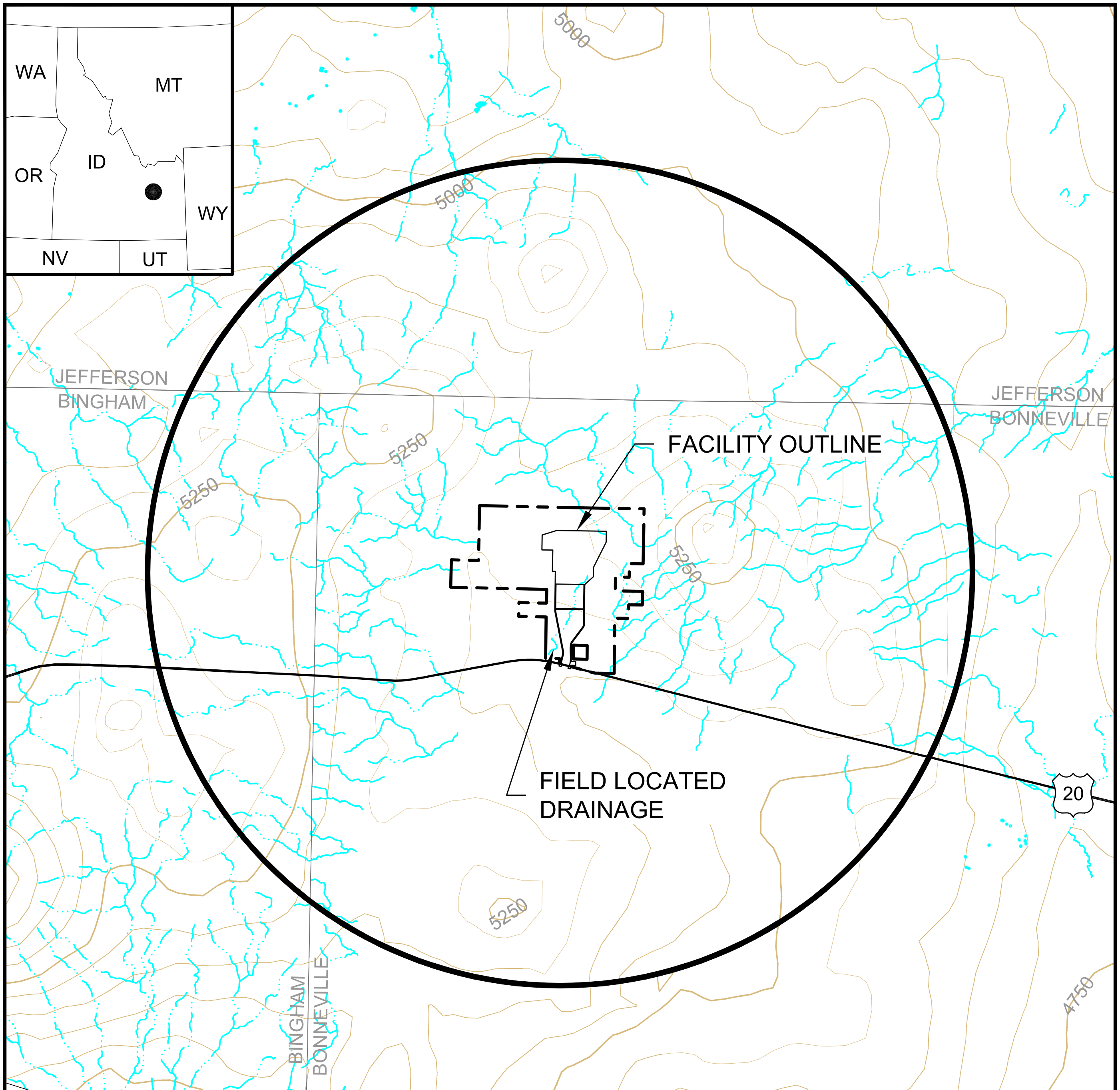
0 20 40 mi

N

Figure 3.4-2 **Rev. 0**

Regional Hydrologic Features
Within 80 km (50 mi)

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



LEGEND:

5250 — APPROXIMATE EXISTING GROUND SURFACE CONTOUR AND ELEVATION, ft

PROPOSED SITE BOUNDARY

8 km (5 mi) RADIUS

DRAINAGE

SCALE

0 4 8 km

SCALE

0 2 4 mi

N

NOTE:

1. GROUND SURFACE CONTOUR ELEVATIONS ARE SHOWN IN FEET. METRIC CONVERSION IS 1 m = 3.281 ft

Figure 3.4-3 **Rev. 0**

Local Hydrologic Features Within 8 km (5 mi)

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT

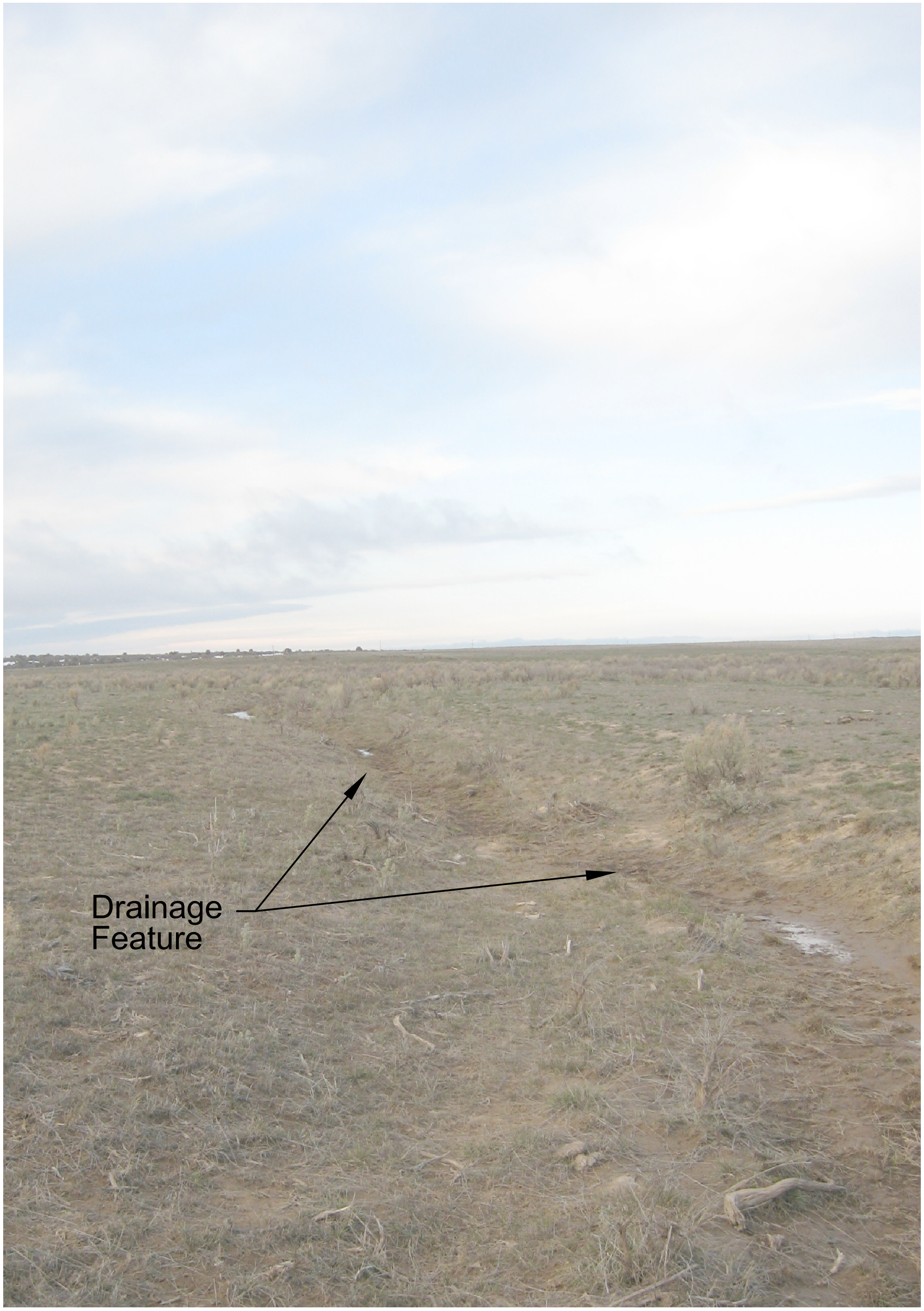


Figure 3.4-4 **Rev. 0**

Photo of Small Drainage Feature

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT

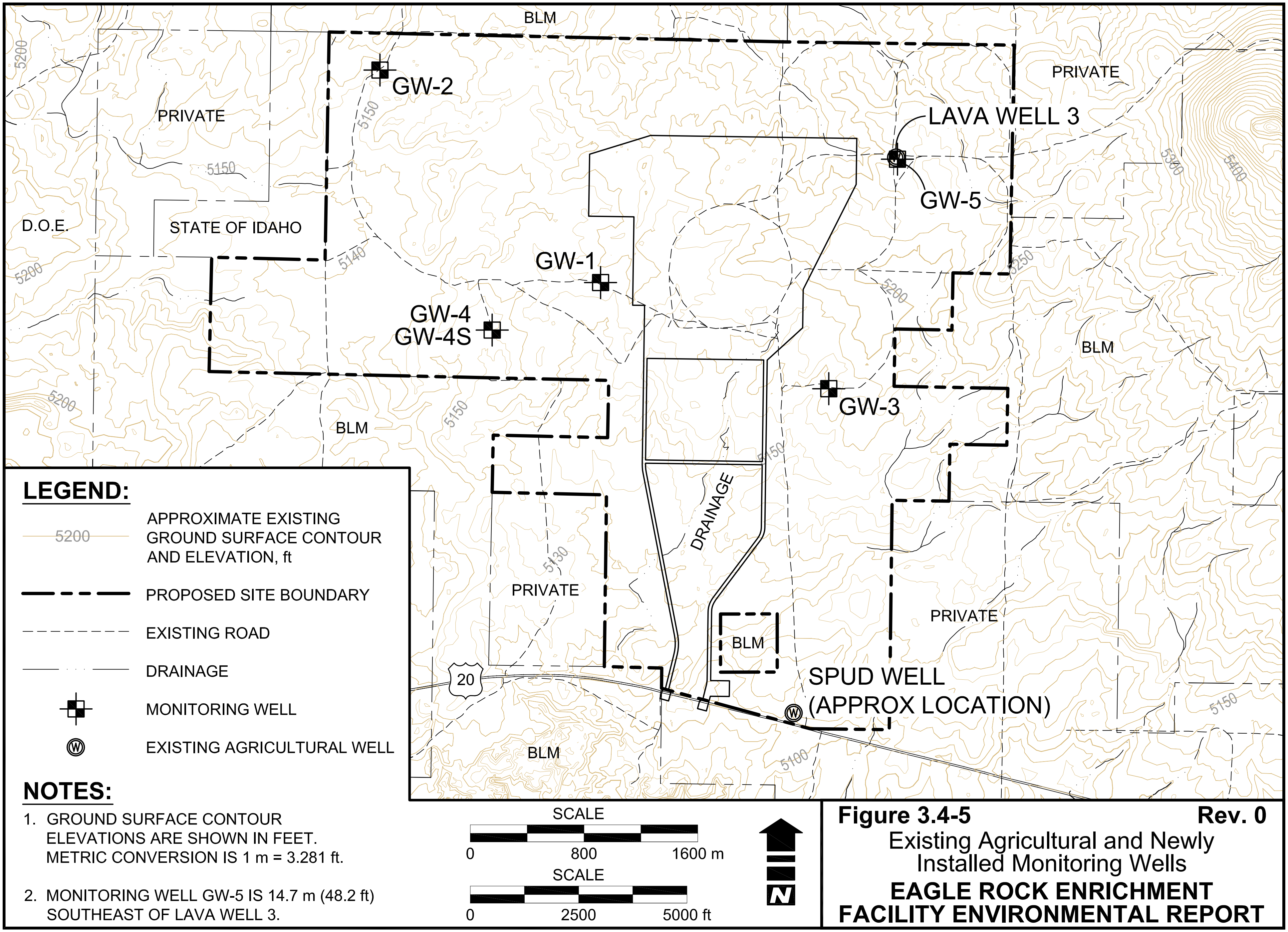
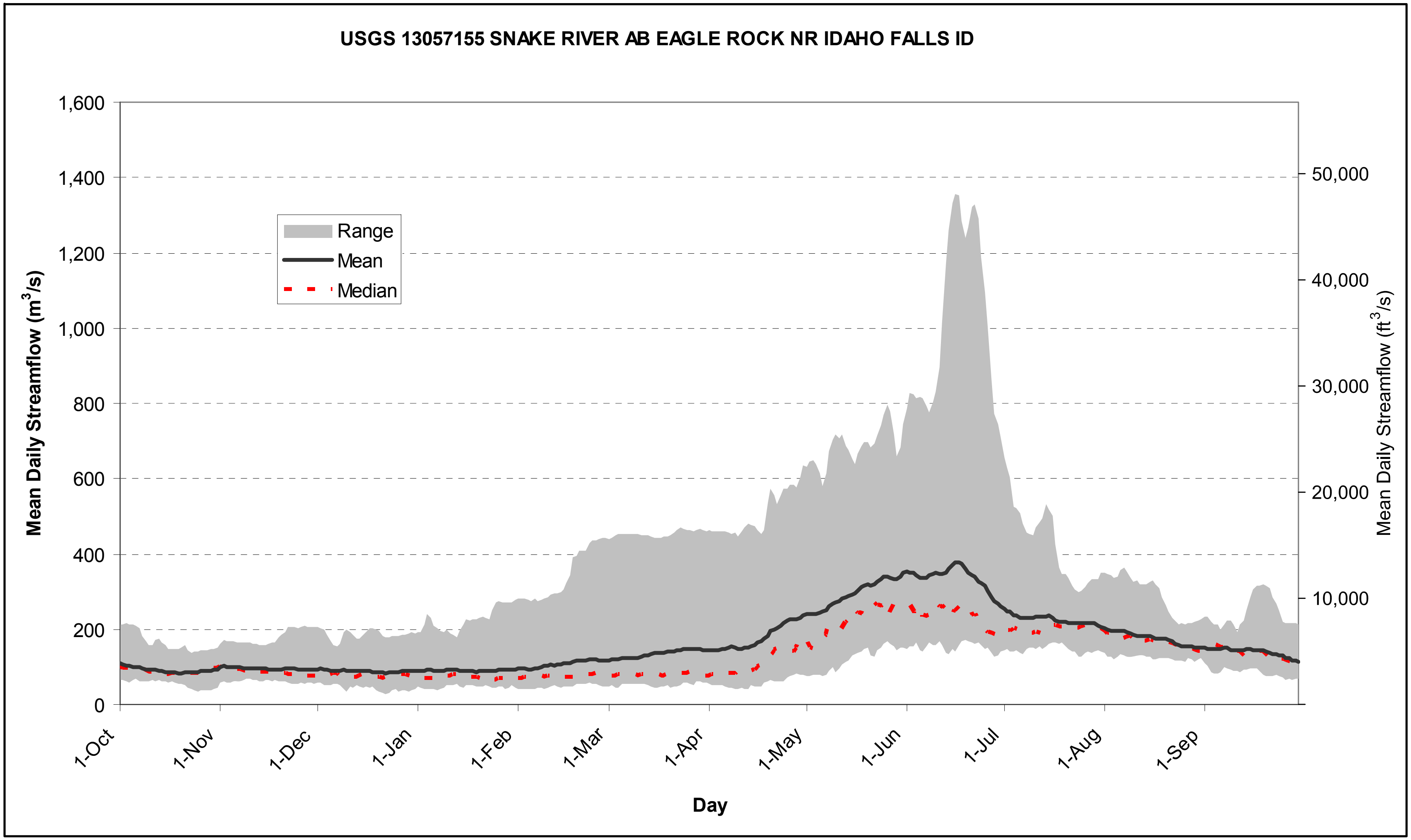


Figure 3.4-5 **Rev. 0**

Existing Agricultural and Newly Installed Monitoring Wells

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT

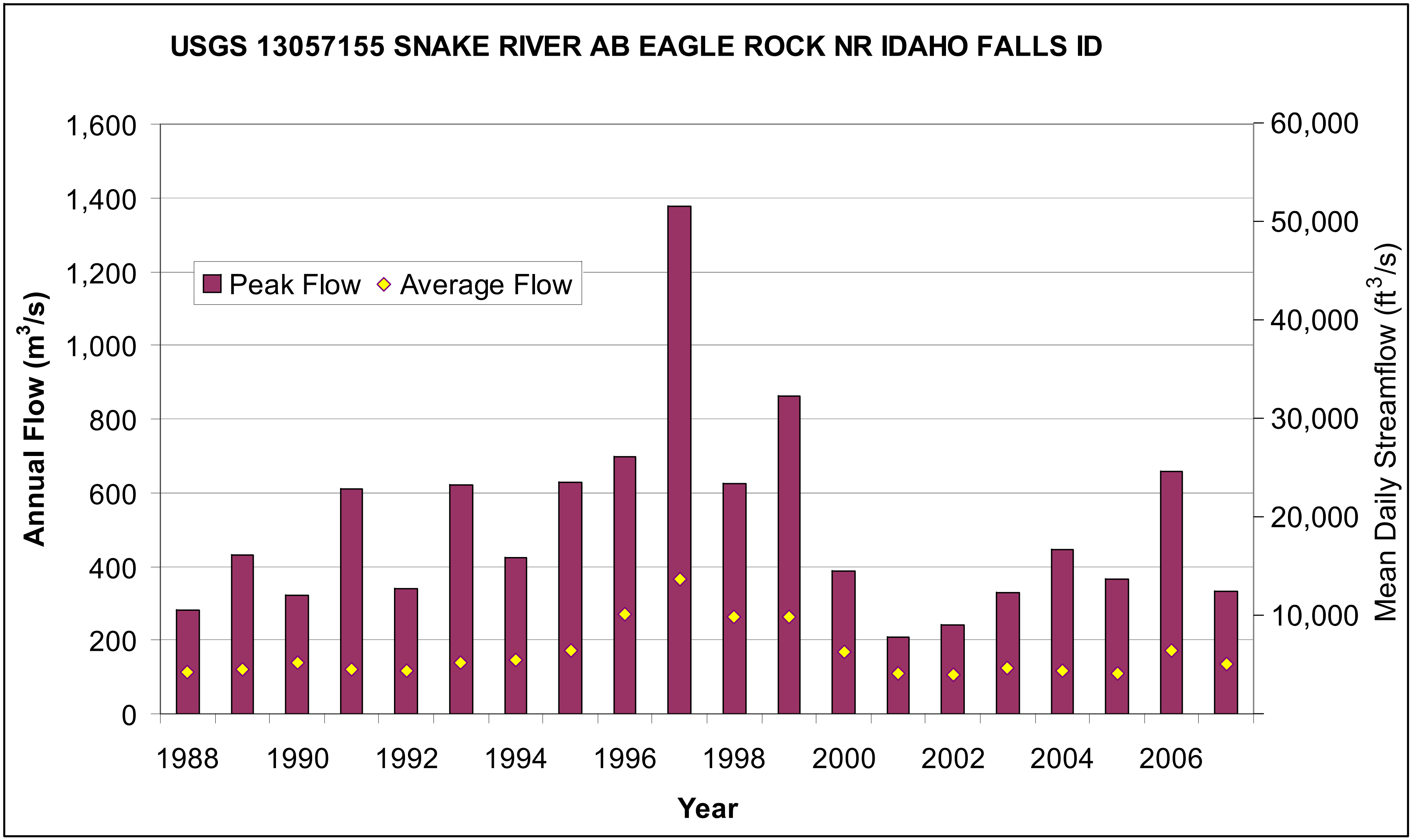


DATA SOURCE: USGS, 2008

Figure 3.4-6 **Rev. 0**

Snake River above Eagle Rock near Idaho Falls Hydrograph

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT

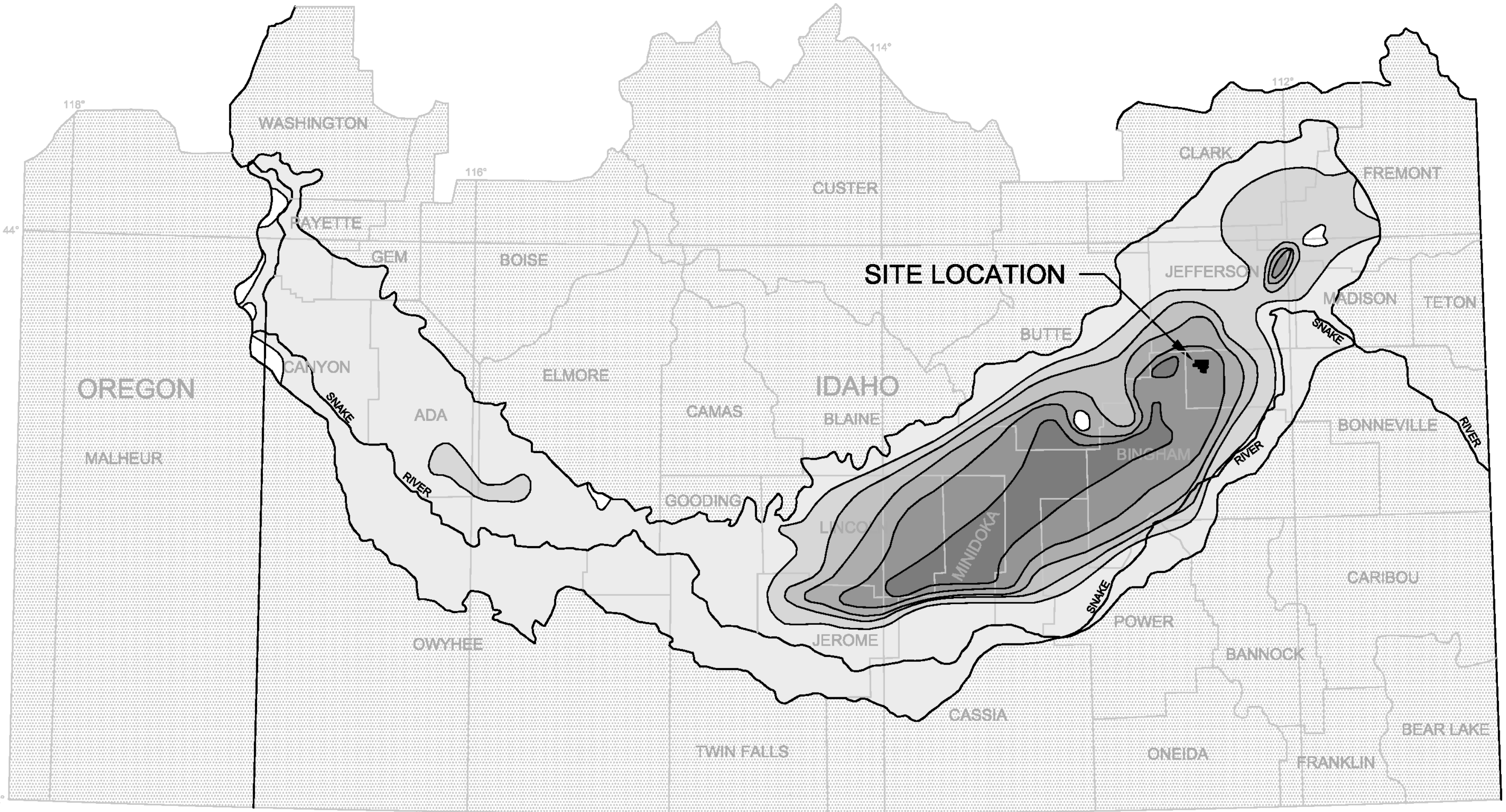


DATA SOURCE: USGS, 2008

Figure 3.4-7 **Rev. 0**

Annual Flows in the Snake River

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



BASE MODIFIED FROM U.S. GEOLOGICAL SURVEY DIGITAL DATA, 1:2,000,000, 1972

NOTE: ADAPTED FROM WHITEHEAD (WHITEHEAD, 1994).

LEGEND

SATURATED THICKNESS OF PLIOCENE AND YOUNGER BASALTIC ROCK

- 152 m (500')
- 305 m (1,000')
- 457 m (1,500')
- 610 m (2,000')
- 762 m (2,500')
- ABSENT

NOTE: CONVERSIONS FROM ENGLISH TO METRIC UNITS ARE APPROXIMATIONS DUE TO ROUNDING.

SCALE
0 60 120 km

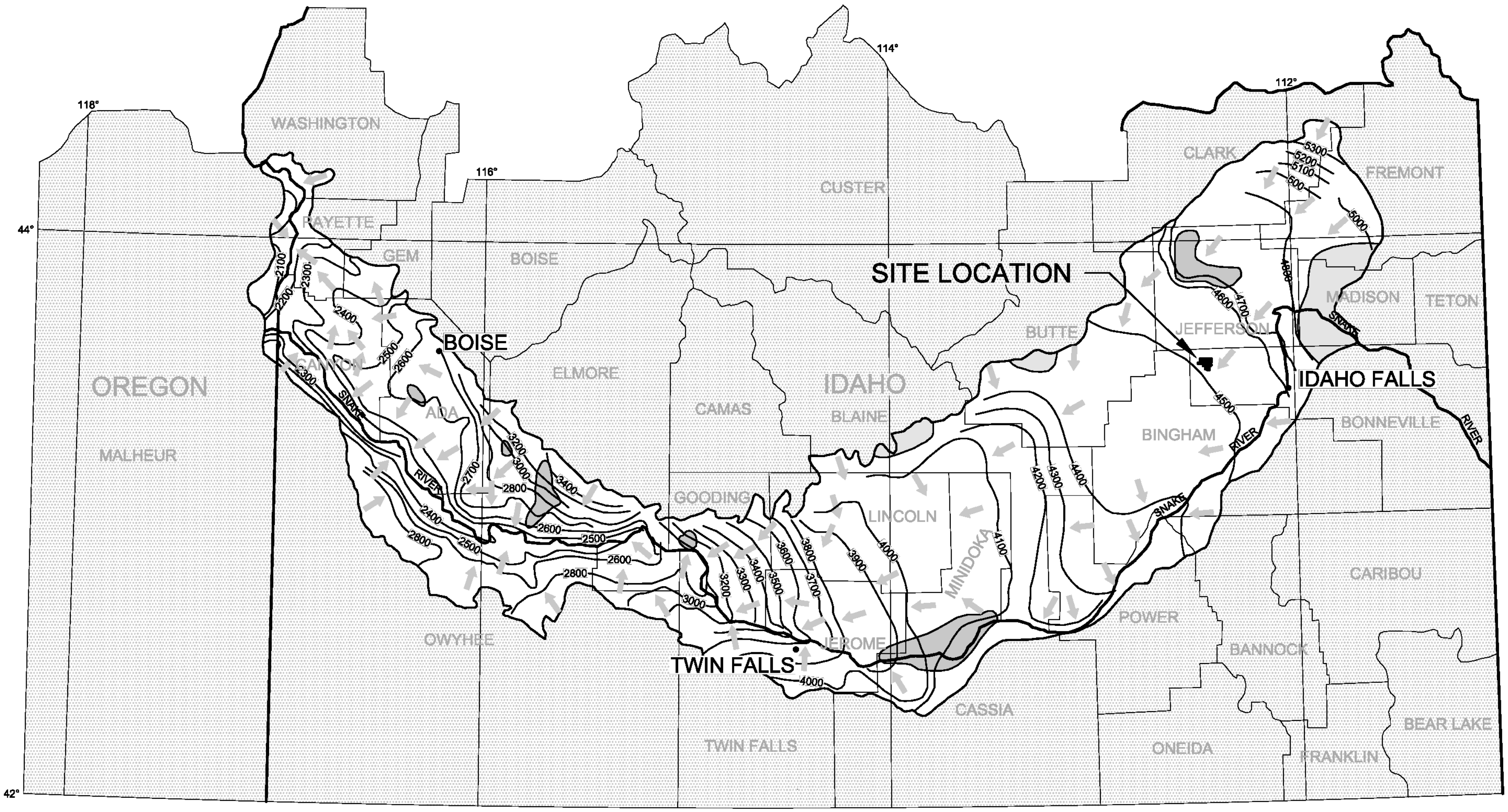
SCALE
0 40 80 mi

N

Figure 3.4-8 **Rev. 0**

Saturated Thickness of Pliocene and Younger Basaltic Rocks in the ESRP Aquifer

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



BASE MODIFIED FROM U.S. GEOLOGICAL SURVEY DIGITAL DATA, 1:2,000,000, 1972

NOTE: ADAPTED FROM WHITEHEAD (WHITEHEAD, 1994).

LEGEND

AREA WHERE LOCAL AQUIFER OR PERCHED WATER BODIES OVERLIE REGIONAL AQUIFER SYSTEM

WATER TABLE CONTOUR - SHOWS ALTITUDE OF REGIONAL WATER TABLE DURING SPRING 1980. CONTOUR INTERVAL, IN FEET, IS VARIABLE. DATUM IS SEA LEVEL.

DIRECTION OF GROUNDWATER MOVEMENT

NOTE:

1. WATER CONTOUR ELEVATIONS ARE SHOWN IN FEET. METRIC CONVERSION IS 1 m = 3.281 ft

SCALE 0 60 120 km

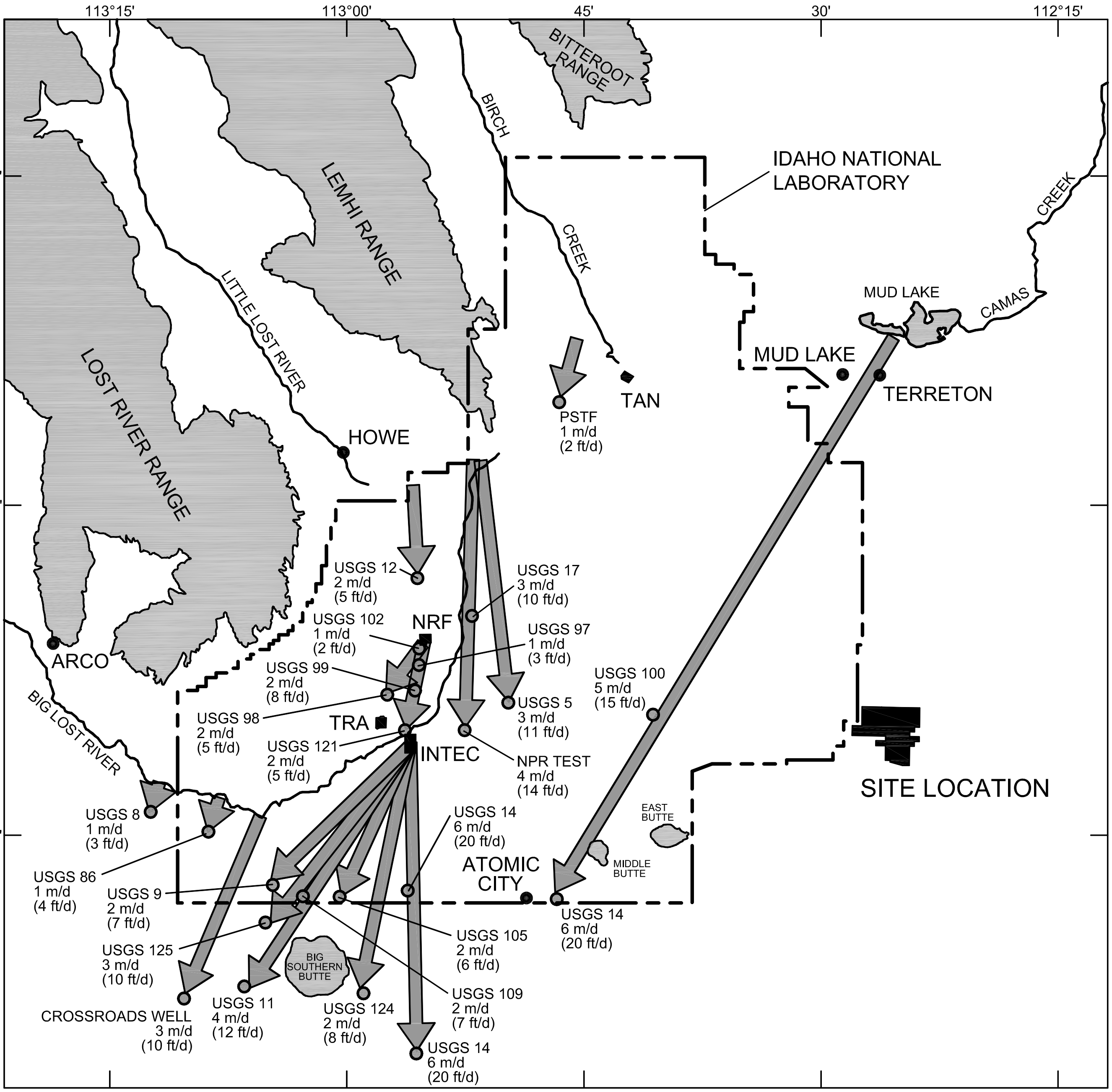
SCALE 0 40 80 mi

N

Figure 3.4-9 **Rev. 0**

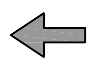
Groundwater Elevations and General Direction of Groundwater Movement in the SRP Aquifer

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



Base from U.S. Geological Survey digital data, 1:24,000 and 1:100,000 Universal Transverse Mercator projection, Zone 12 Datum is North American Datum of 1927

LEGEND:



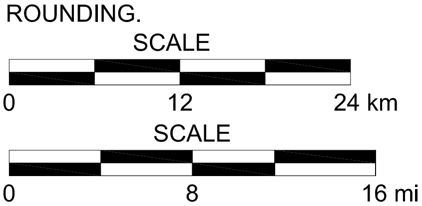
GROUNDWATER FLOW DIRECTION BASED ON LOCATION OF WELL SAMPLED AND INTERPRETED SOURCE OF GROUNDWATER

USGS 5
3 m/d
(11 ft/d)

WELL IN THE USGS WATER LEVEL MONITORING NETWORK AND IDENTIFIER WITH CALCULATED GROUNDWATER FLOW VELOCITY

NOTES:

1. GROUNDWATER VELOCITIES ARE BASED ON CHLORIDE-36 AND TRITIUM DATA AT IDAHO NATIONAL LABORATORY (ACKERMAN, 2006).
2. ADAPTED FROM ACKERMAN, 2006.
3. CONVERSIONS FROM ENGLISH TO METRIC UNITS ARE APPROXIMATIONS DUE TO ROUNDING.



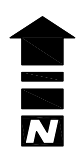
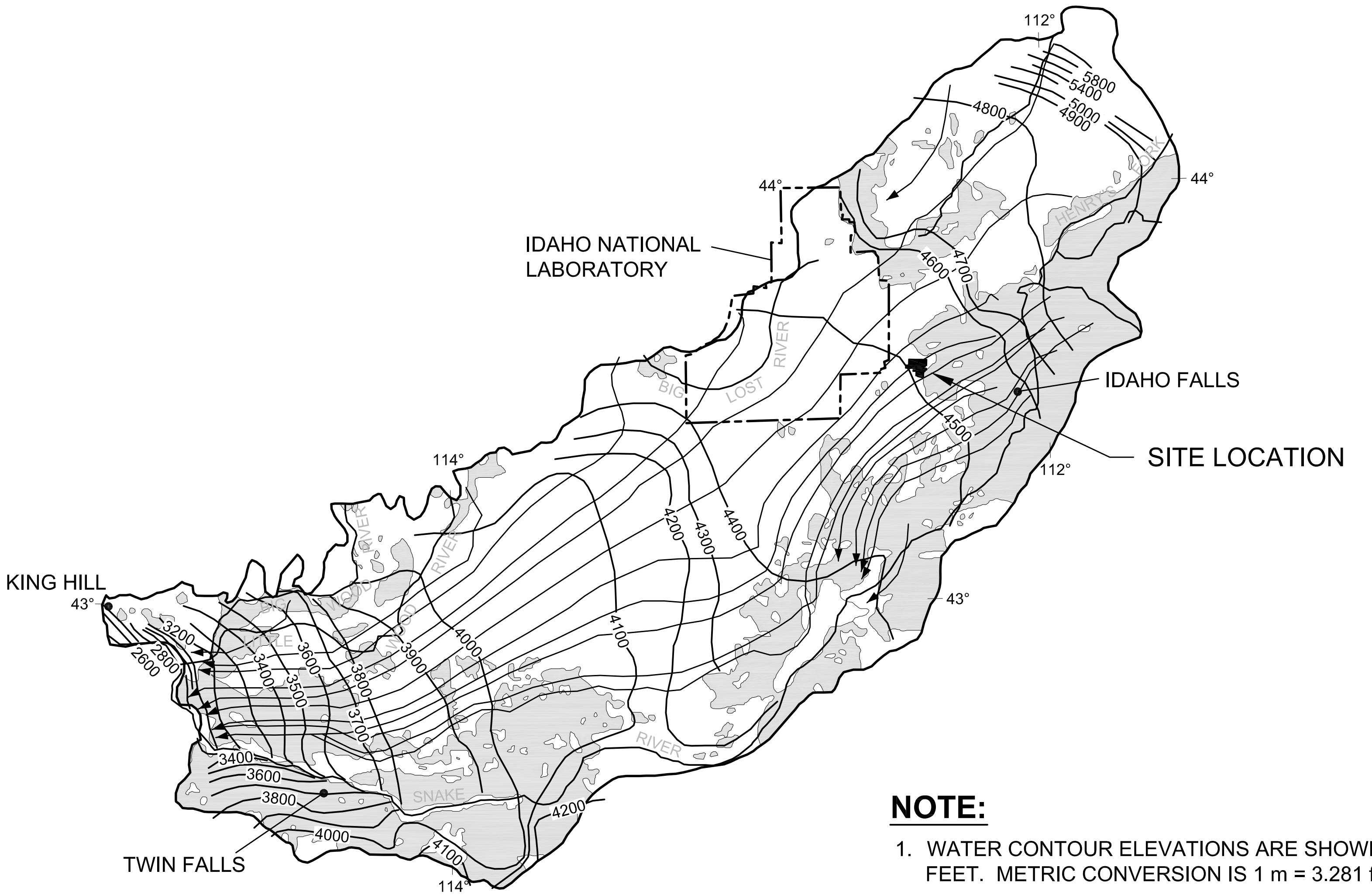


Figure 3.4-10 **Rev. 0**

Groundwater Velocities in the ESRP

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



NOTE:

1. WATER CONTOUR ELEVATIONS ARE SHOWN IN FEET. METRIC CONVERSION IS 1 m = 3.281 ft

SCALE

0 40 80 km

SCALE

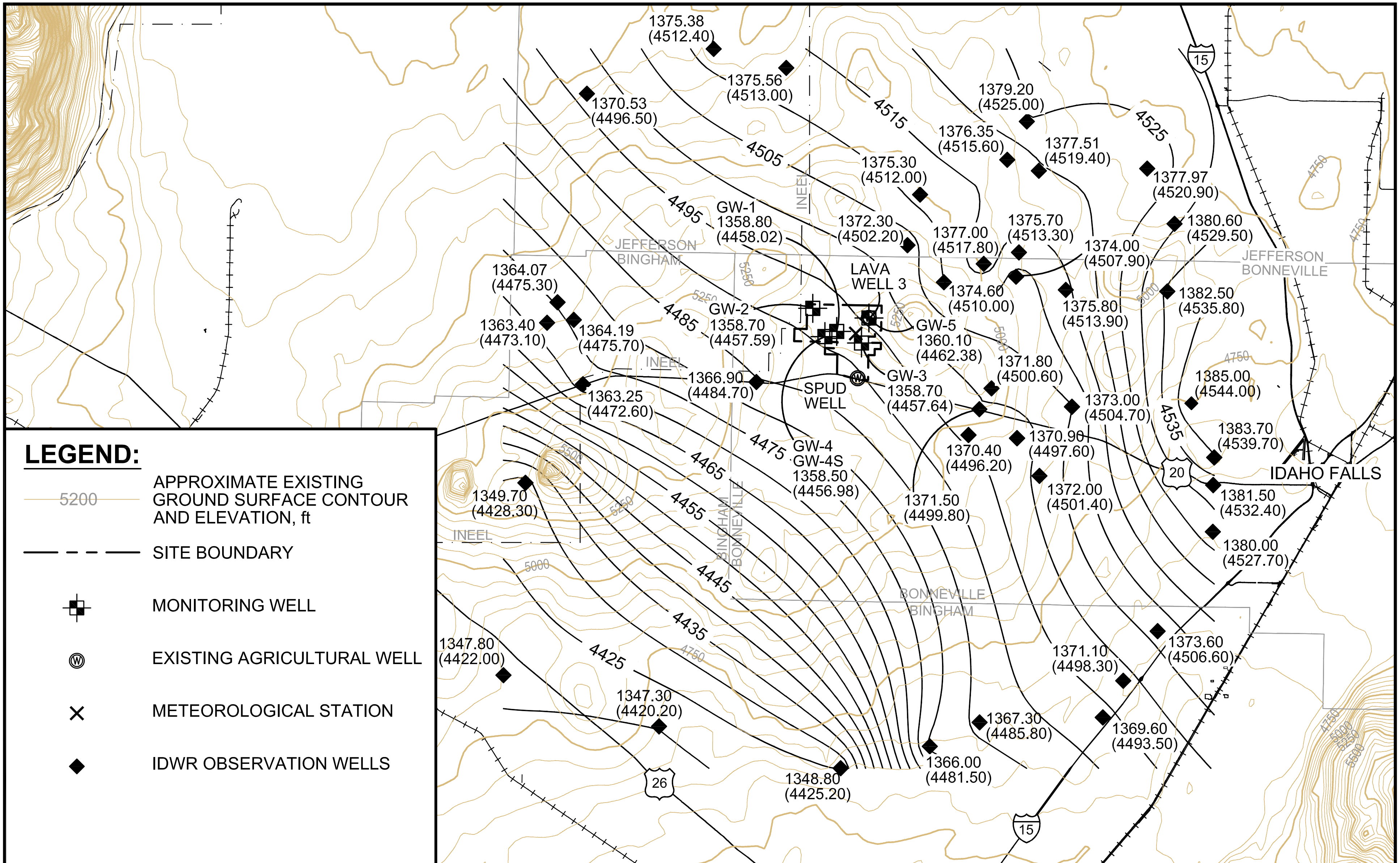
0 25 50 mi

N

Figure 3.4-11 **Rev. 0**

Water Elevations and Flow Directions in the ESRP Aquifer

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



LEGEND:

5200 — APPROXIMATE EXISTING GROUND SURFACE CONTOUR AND ELEVATION, ft

SITE BOUNDARY

MONITORING WELL

EXISTING AGRICULTURAL WELL

METEOROLOGICAL STATION

IDWR OBSERVATION WELLS

NOTES:

1. MONITORING WELL GW-5 IS 14.7 m (48.2 FT) SOUTHEAST OF LAVA WELL 3.
2. GROUND SURFACE AND GROUNDWATER CONTOUR ELEVATIONS ARE SHOWN IN FEET. METRIC CONVERSION IS 1 m = 3.281 ft.

SCALE

0 8 16 km

SCALE

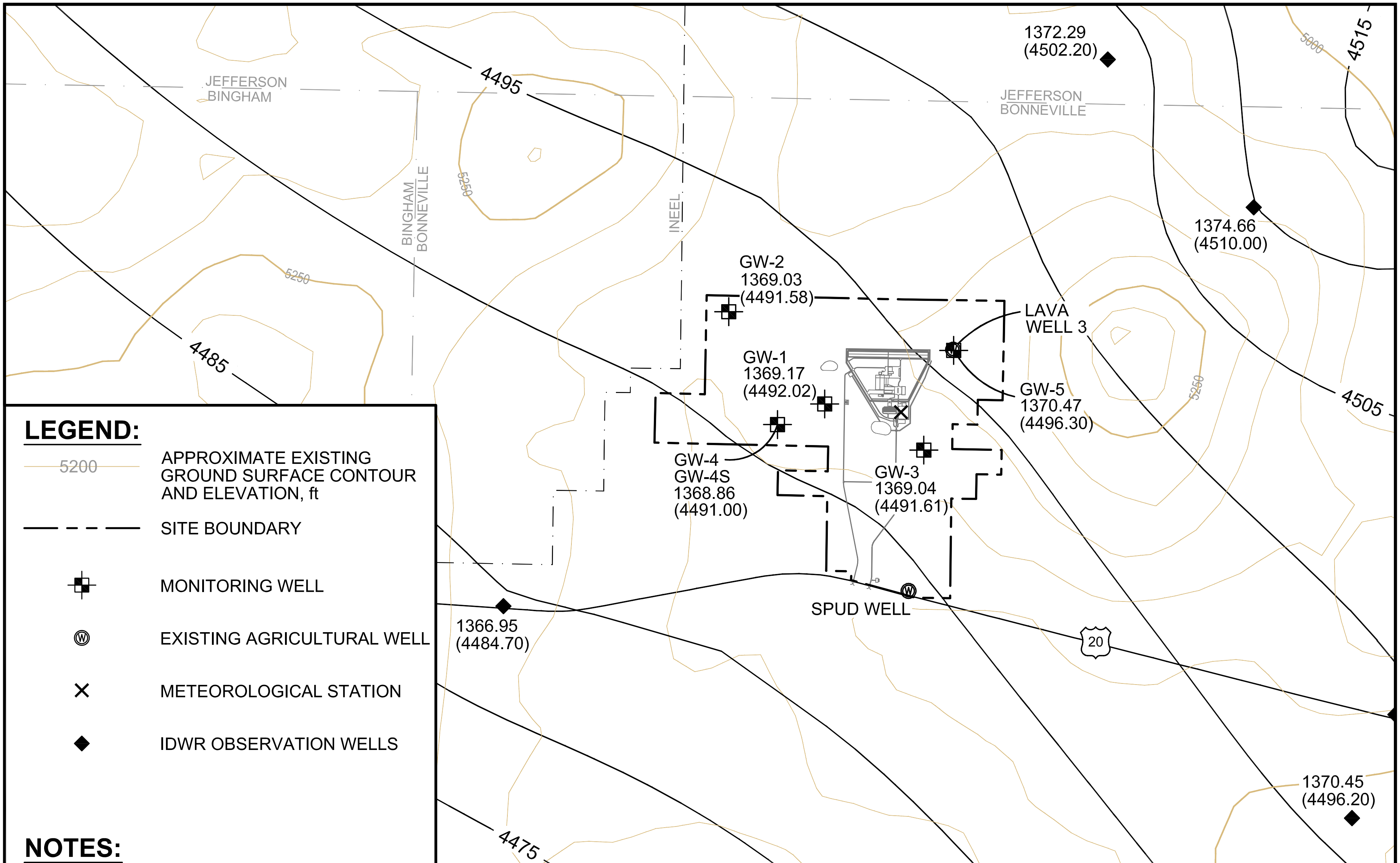
0 5 10 mi

N

Figure 3.4-12 **Rev. 0**

Regional Groundwater Potentiometric Surface Map

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



LEGEND:

5200 — APPROXIMATE EXISTING GROUND SURFACE CONTOUR AND ELEVATION, ft

SITE BOUNDARY

MONITORING WELL

EXISTING AGRICULTURAL WELL

METEOROLOGICAL STATION

IDWR OBSERVATION WELLS

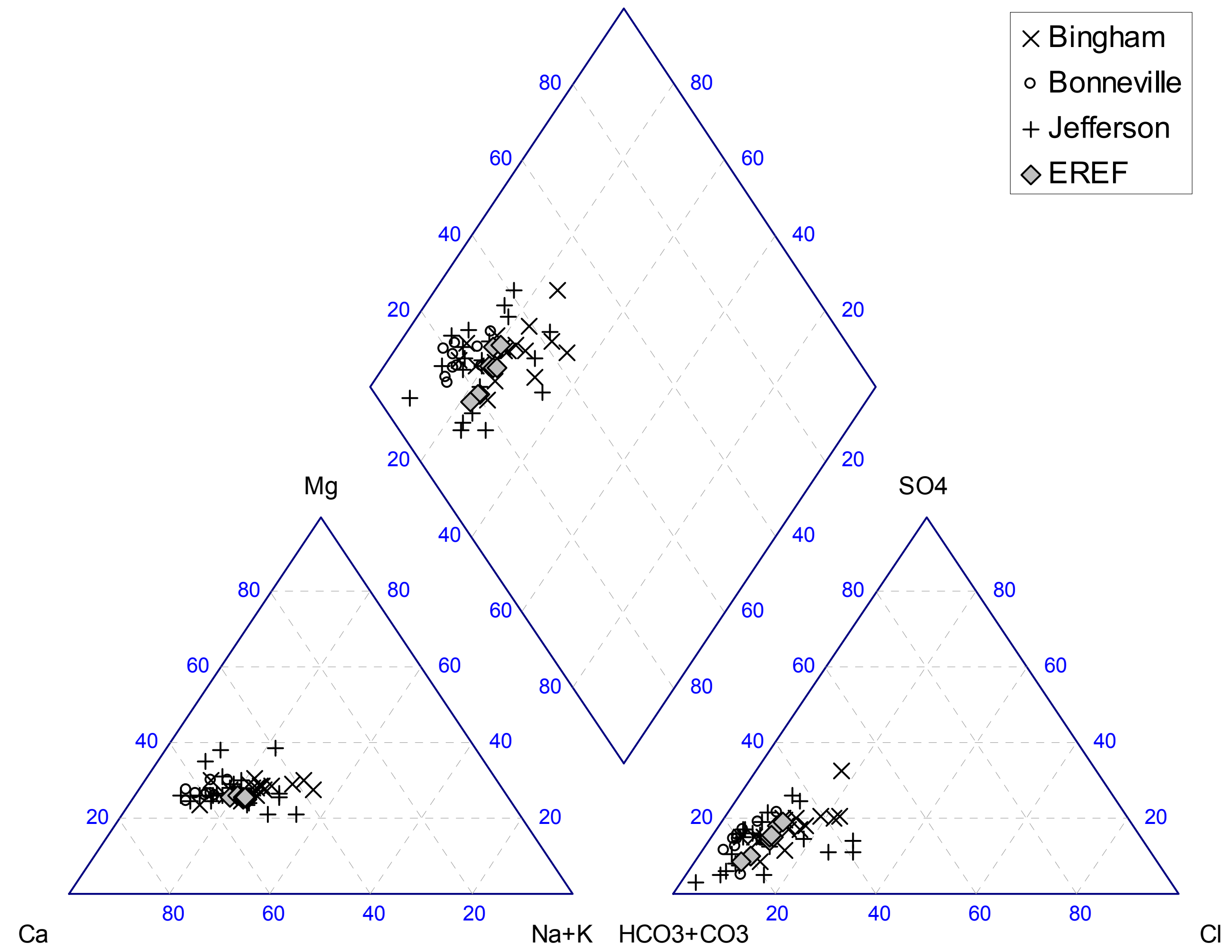
NOTES:

1. GROUND SURFACE AND GROUNDWATER CONTOUR ELEVATIONS ARE SHOWN IN FEET. METRIC CONVERSION IS 1 m = 3.281 ft.
2. MONITORING WELL GW-5 IS 14.7 m (48.2 ft) SOUTHEAST OF LAVA WELL 3.

Figure 3.4-13 **Rev. 0**

Site Groundwater
Potentiometric Surface Map

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT



NOTE: DIAGRAM BASED ON DATA FROM WELLS IN BINGHAM, BONNEVILLE, AND JEFFERSON COUNTIES REPORTED BY WOOD (WOOD, 1988) AND SITE SPECIFIC DATA.

Figure 3.4-14 **Rev. 0**

Piper Diagram Showing Major Elemental Compositions of Groundwater in the ESRP Aquifer

EAGLE ROCK ENRICHMENT FACILITY ENVIRONMENTAL REPORT