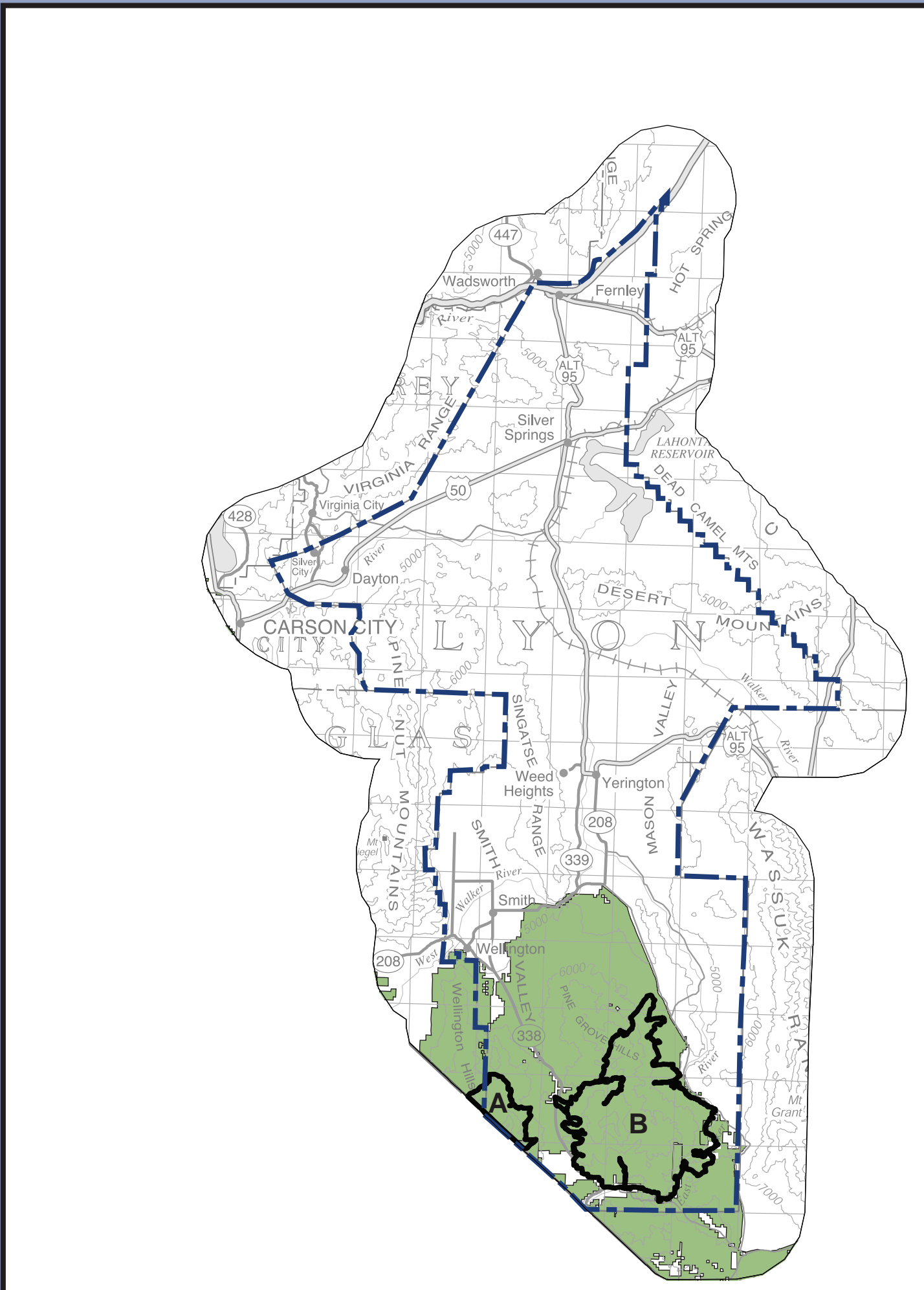
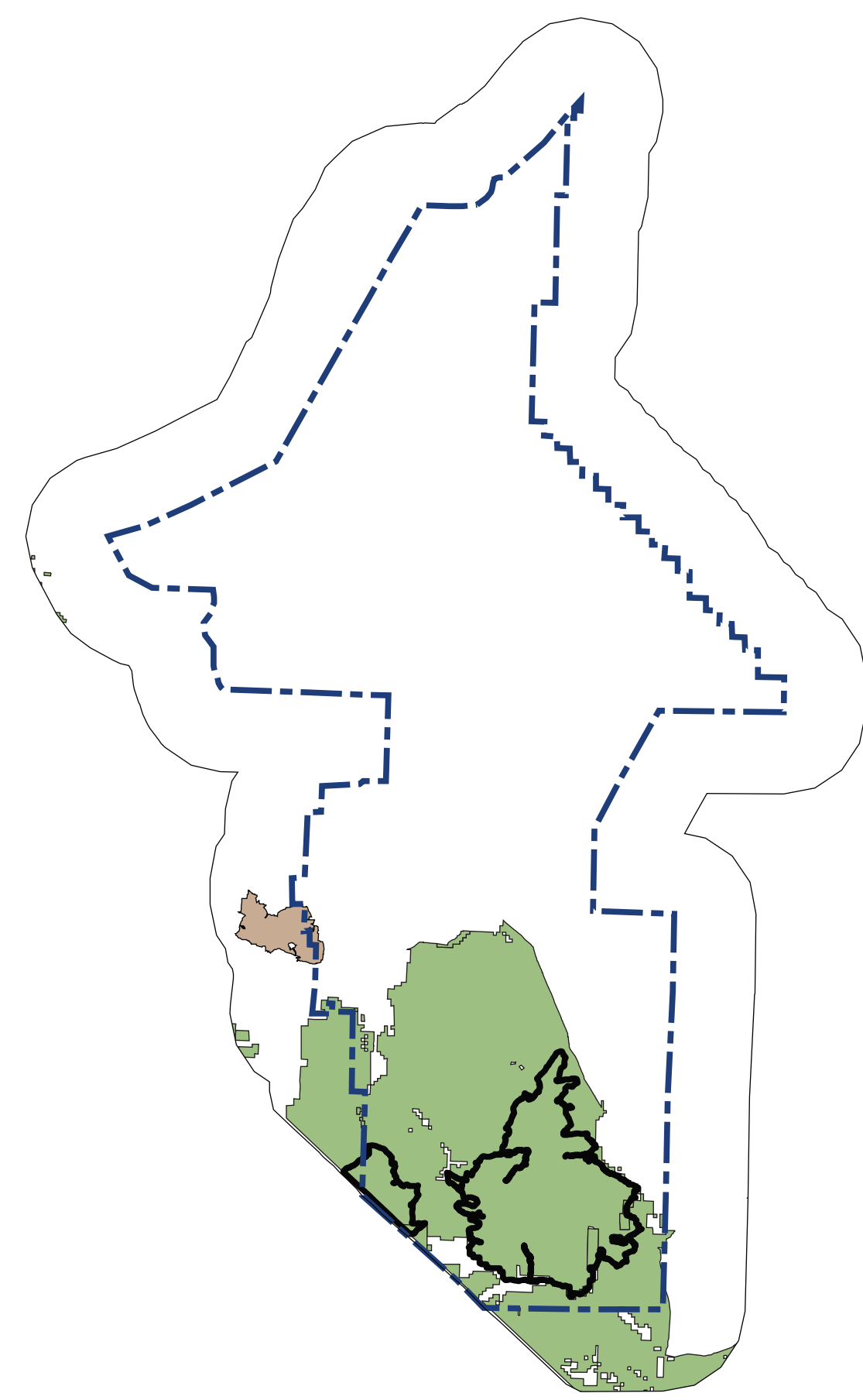


MINERAL- AND ENERGY-RESOURCE POTENTIAL FOR LYON COUNTY, NEVADA

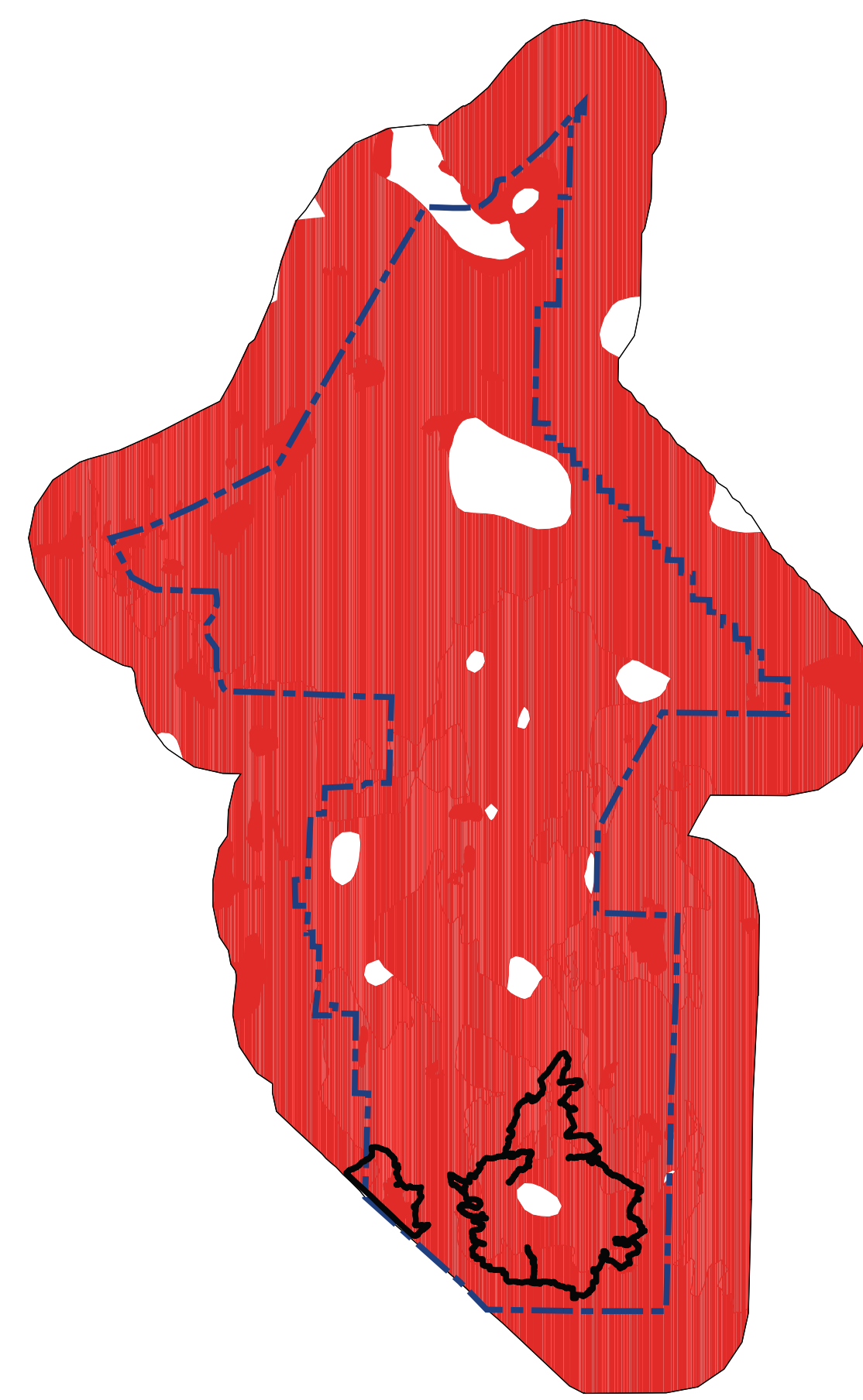
This poster illustrates areas of mineral- and energy-resource potential as determined in assessments made by the U.S. Geological Survey (USGS), the Nevada Bureau of Mines and Geology (NBMG), and others. Maps 3, 4, and 5 are from USGS assessments of favorable tracts for three broad types of metallic ore deposits, and Map 6 is a composite of these three maps. Map 7 is from an NBMG assessment of metallic and non-metallic mineral resources. Map 8 is an NBMG evaluation of geothermal resource potential. Map 9 is from an NBMG assessment of potential for discovery of petroleum resources. Maps 10, 11, and 12 illustrate potential for wind, biomass, and solar energy use. Map 13 illustrates private land parcels overlain by federal lands that the U.S. Bureau of Land Management (BLM) considers suitable for disposal. The table indicates which resources are likely to occur in each of the areas suggested for land withdrawal. This poster is available in PDF format at www.nbm.unr.edu under online documents, Open-File Report 06-7. This information is provided by the Nevada Bureau of Mines and Geology (Jonathan G. Price, Larry J. Garside, Ronald H. Hess, Lisa Shevenell, John Muntean) and the Nevada Division of Minerals (Christy Morris, Alan Coyner) to assist in factoring mineral- and energy-resource potential into decisions regarding land withdrawals and future economic development.



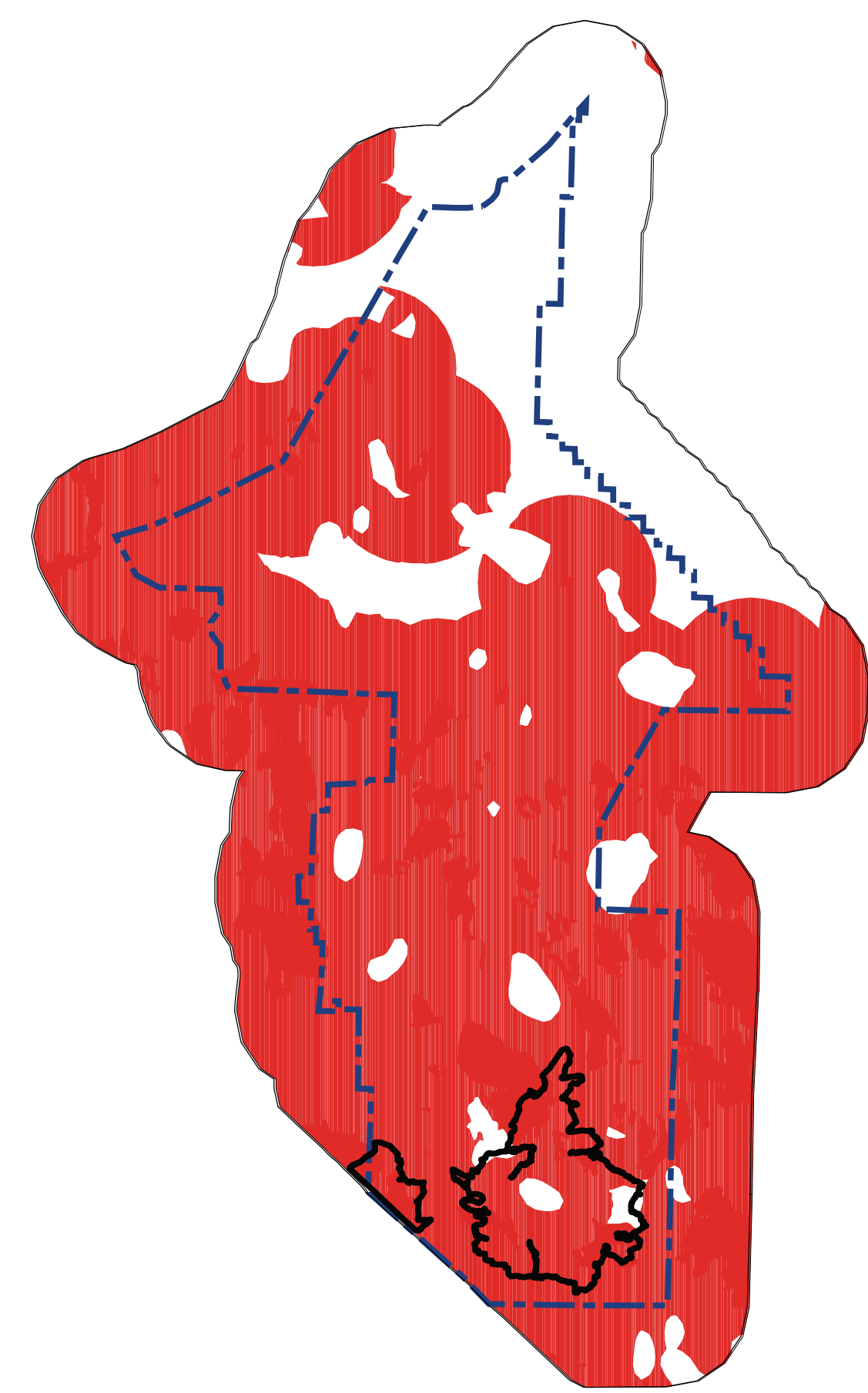
Map 1. Location map showing U.S. Forest Service land (green) and Nevada Wilderness Coalition proposed wilderness areas (black outlines).



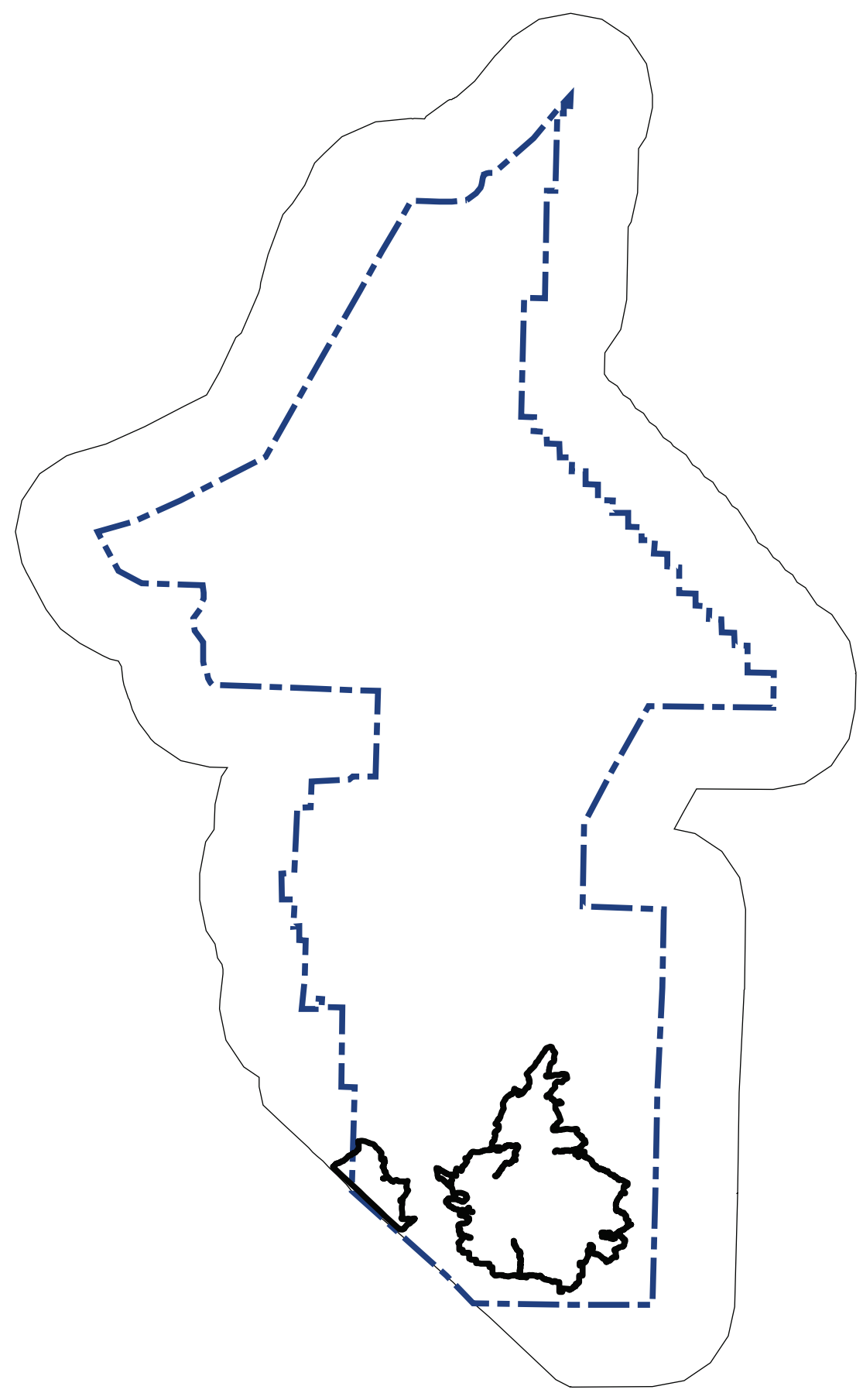
Map 2. U.S. Forest Service areas (green), BLM Wilderness Study Area (brown), and Nevada Wilderness Coalition proposed wilderness areas (black outlines).



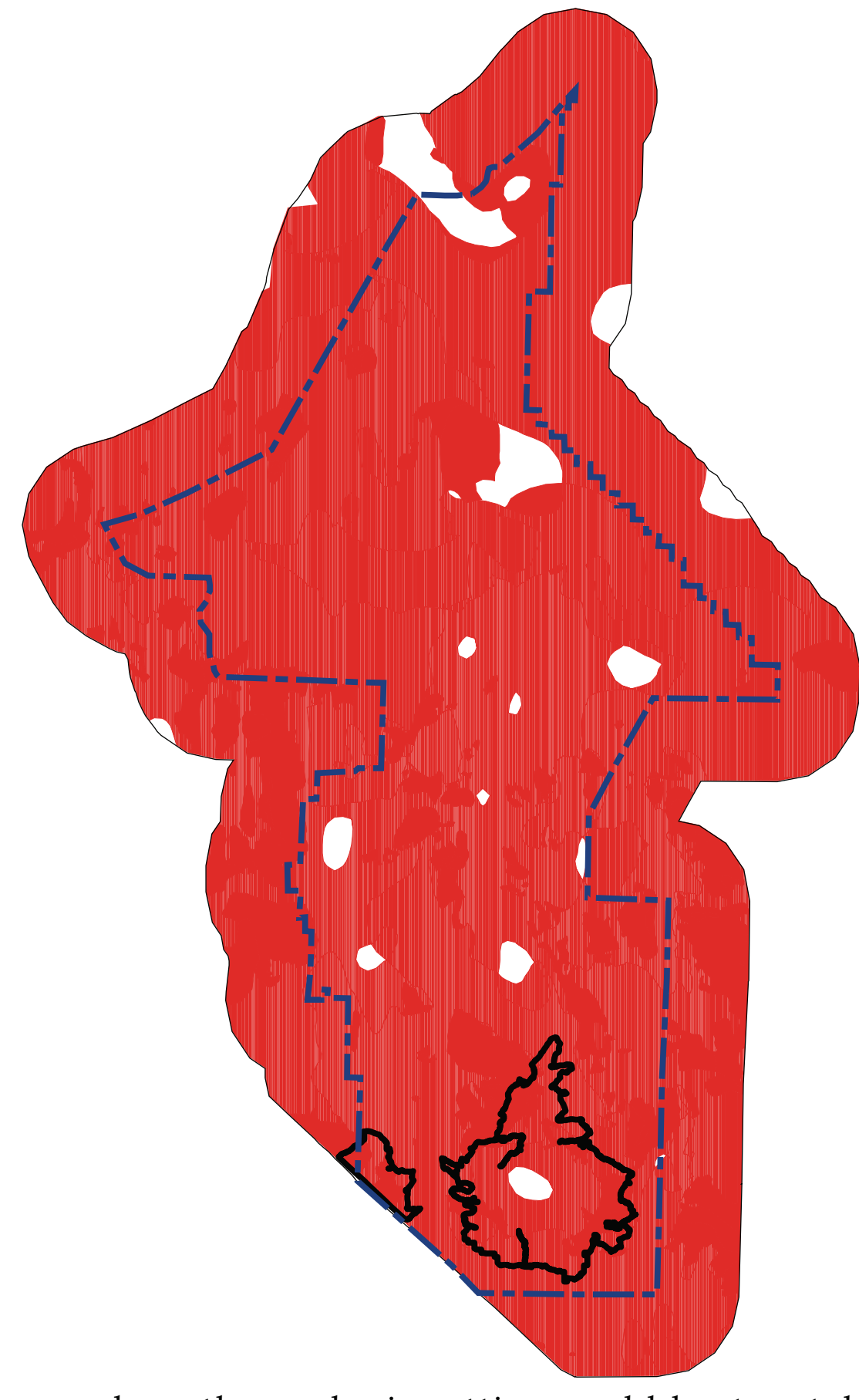
Map 3. Areas where the geologic setting could host epithermal deposits (red).



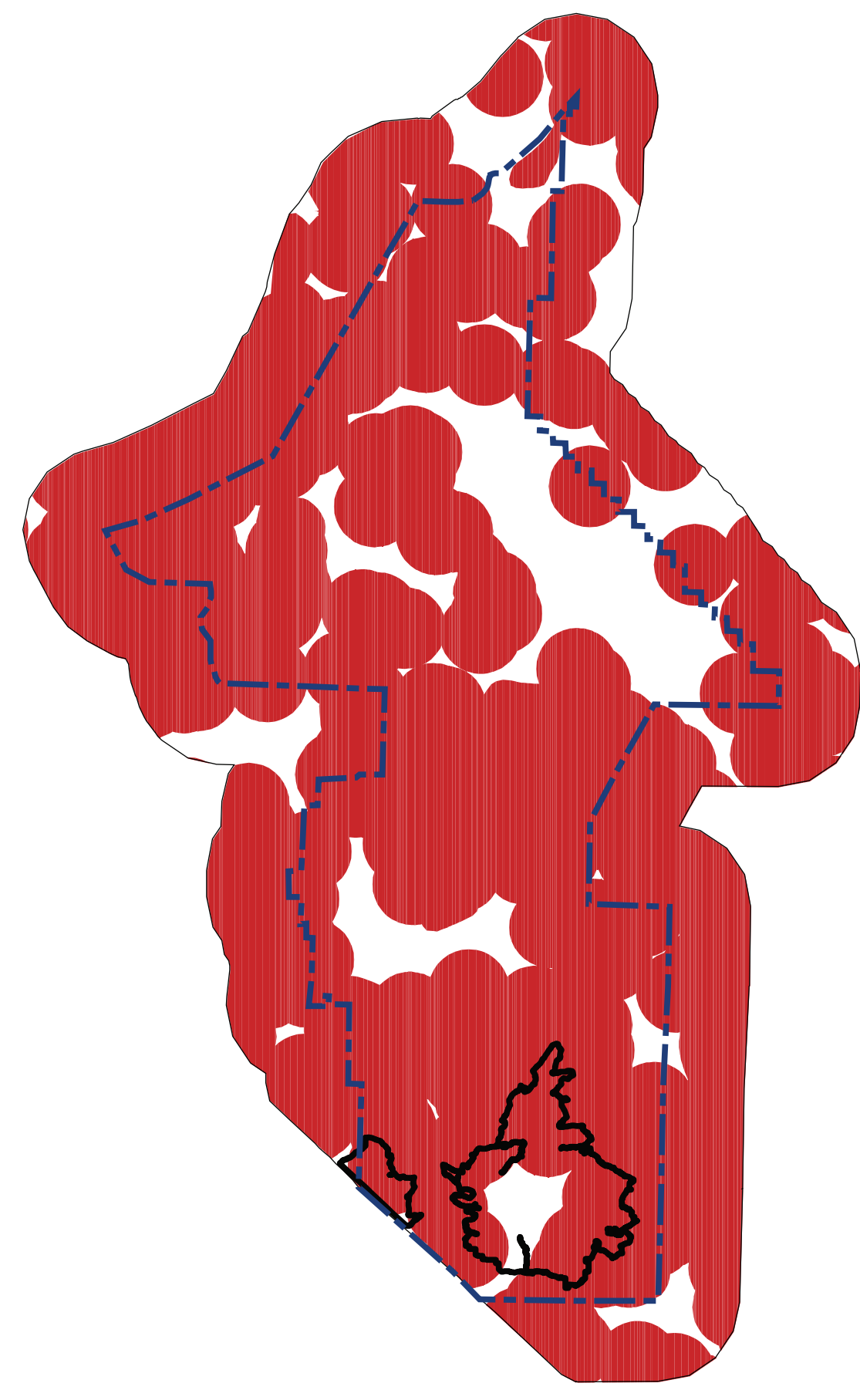
Map 4. Areas where the geologic setting could host pluton-related deposits (red).



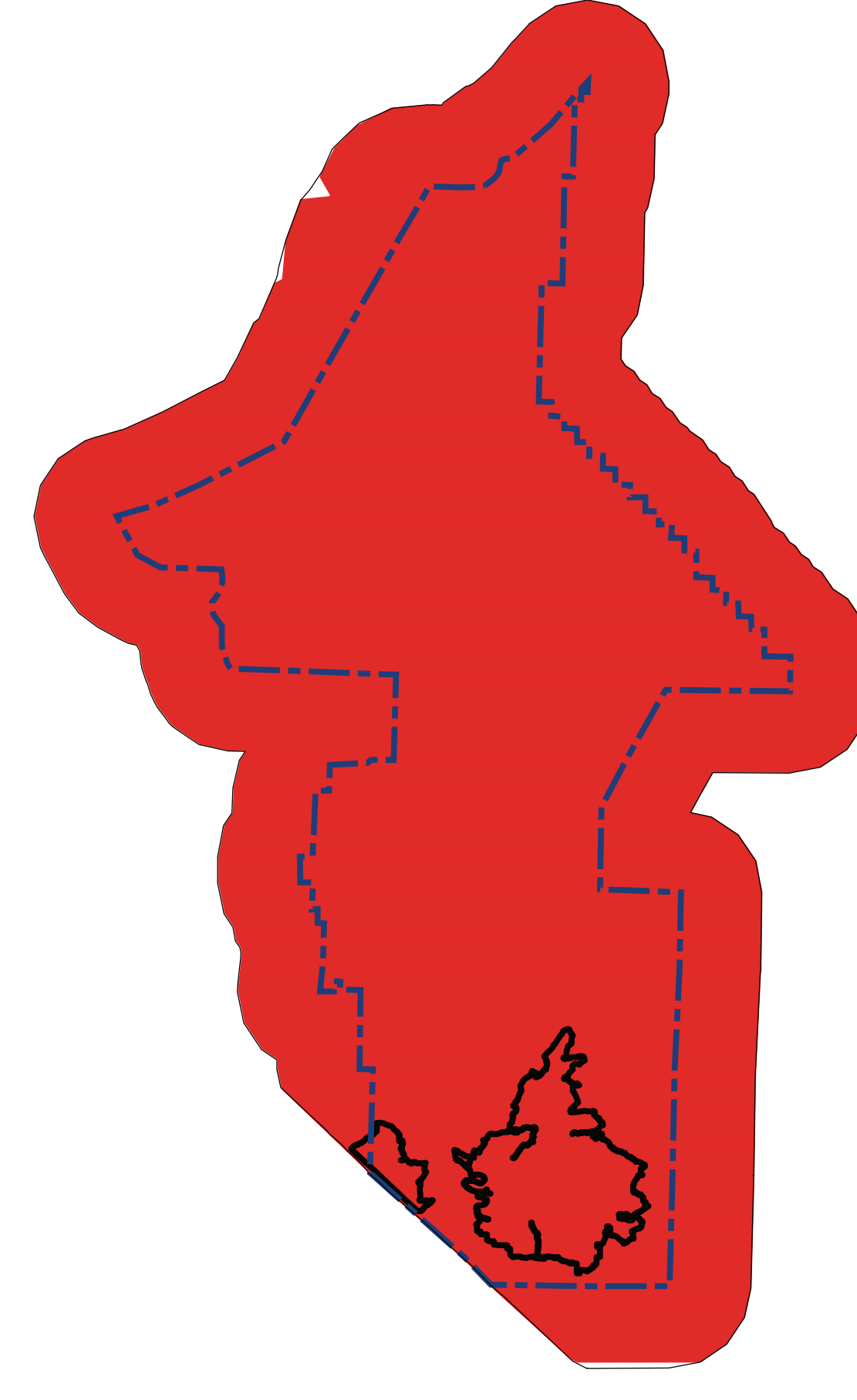
Map 5. No areas on this map have the geologic setting that could host deposit types not related to plutonic activity, according to the USGS.



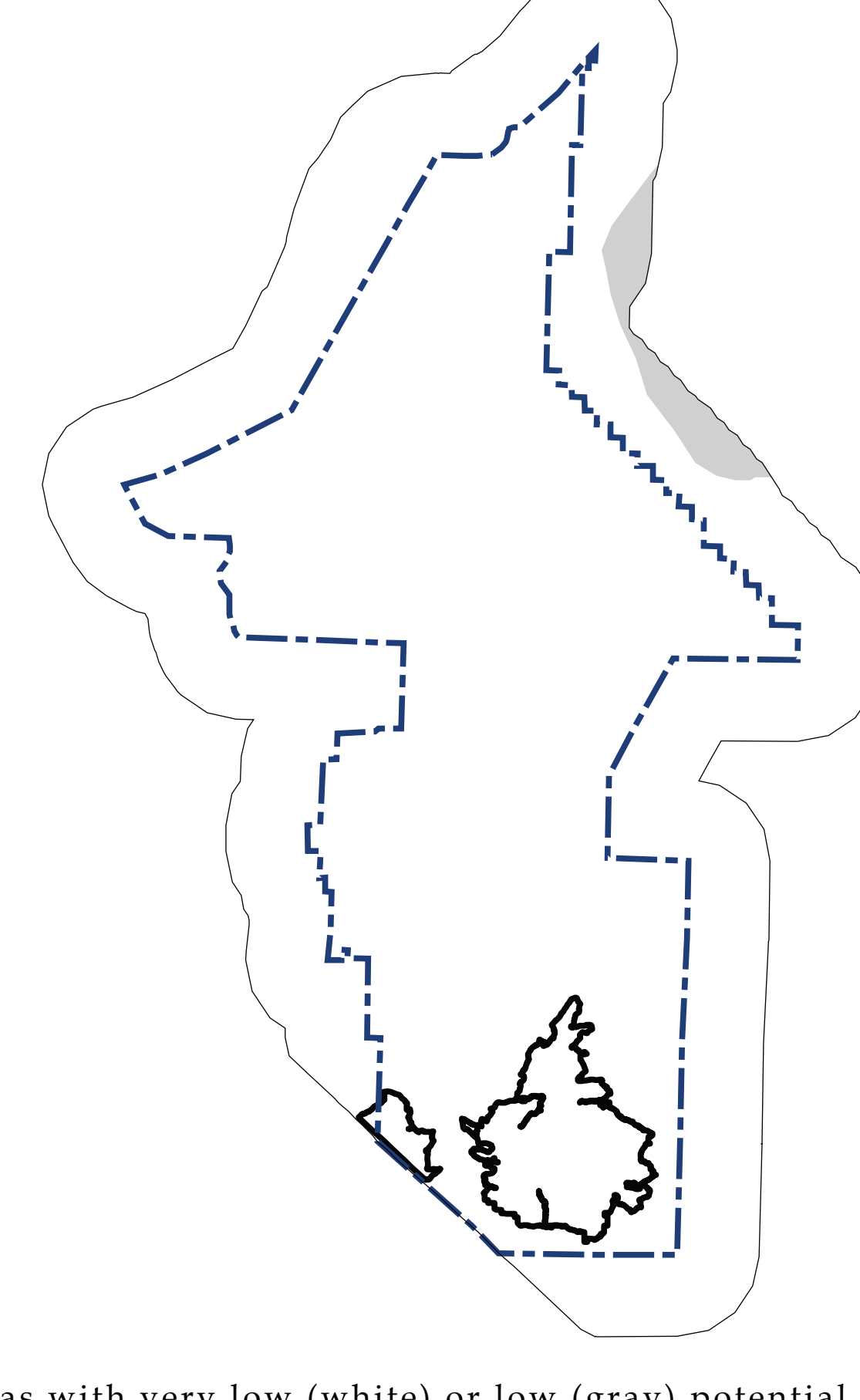
Map 6. Areas where the geologic setting could host metal-bearing mineral resources, derived by combining Maps 3, 4, and 5.



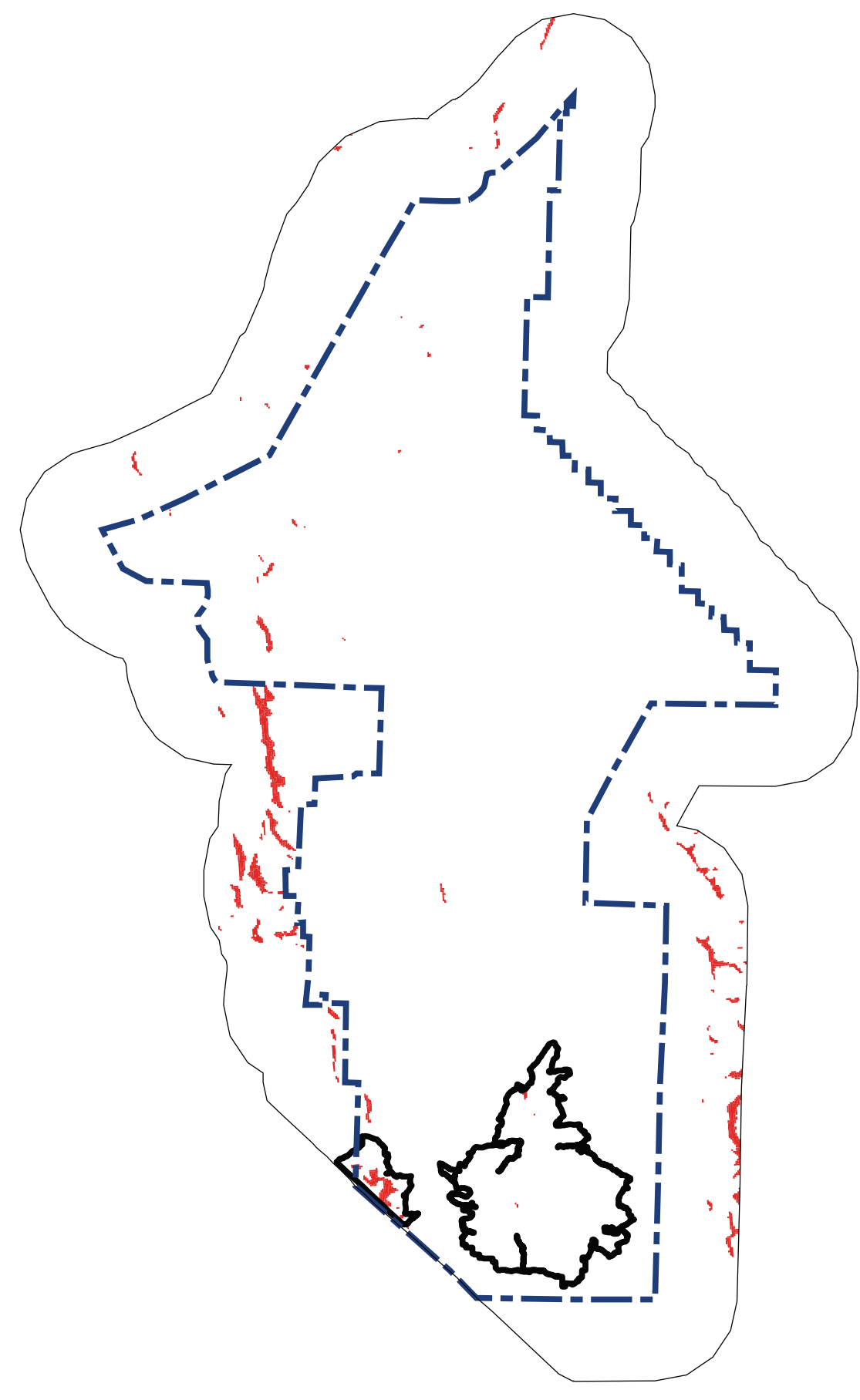
Map 7. NBMG assessment of areas likely to experience mineral-resource development (red).



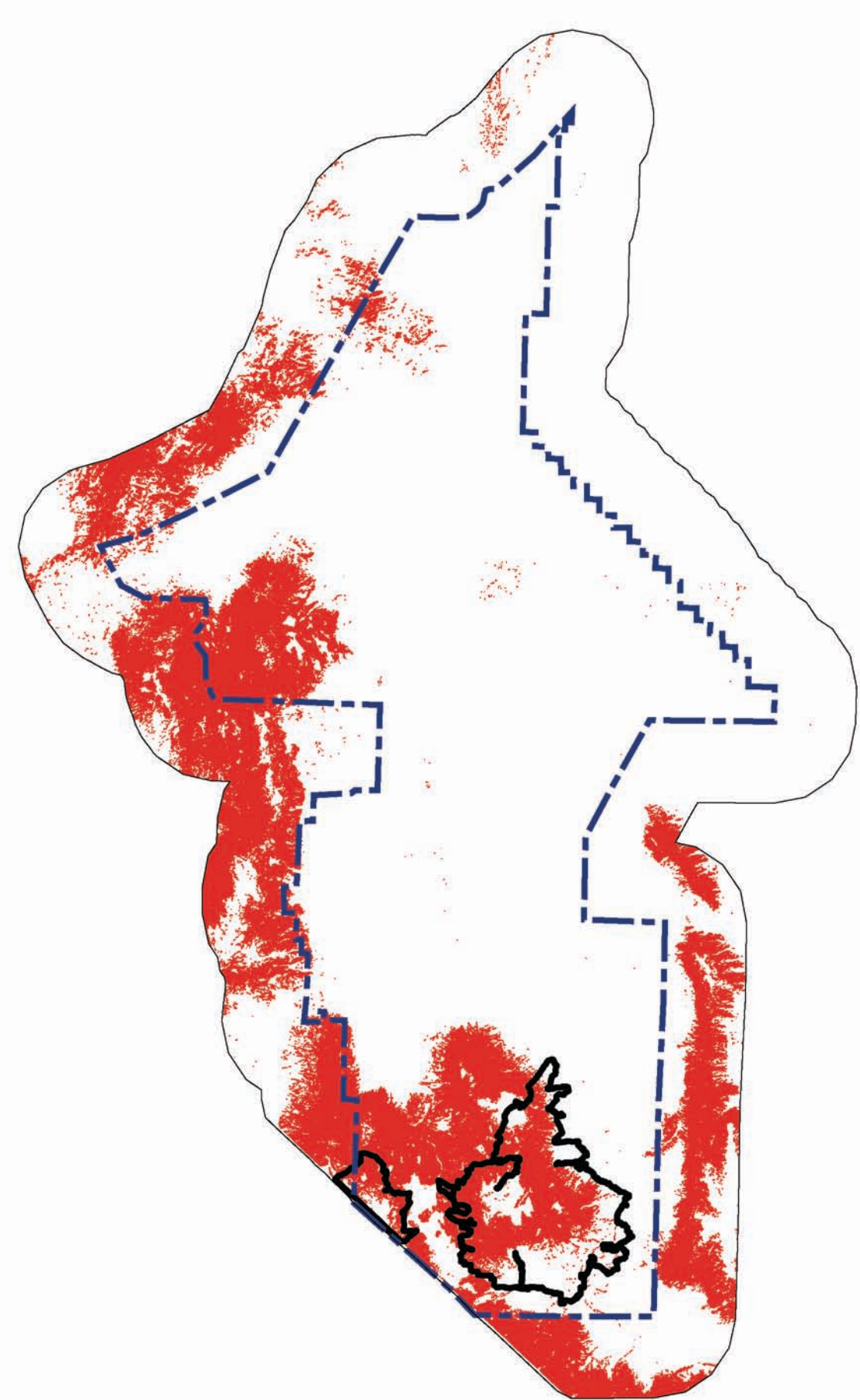
Map 8. NBMG assessment of areas of greatest potential for geothermal development (red).



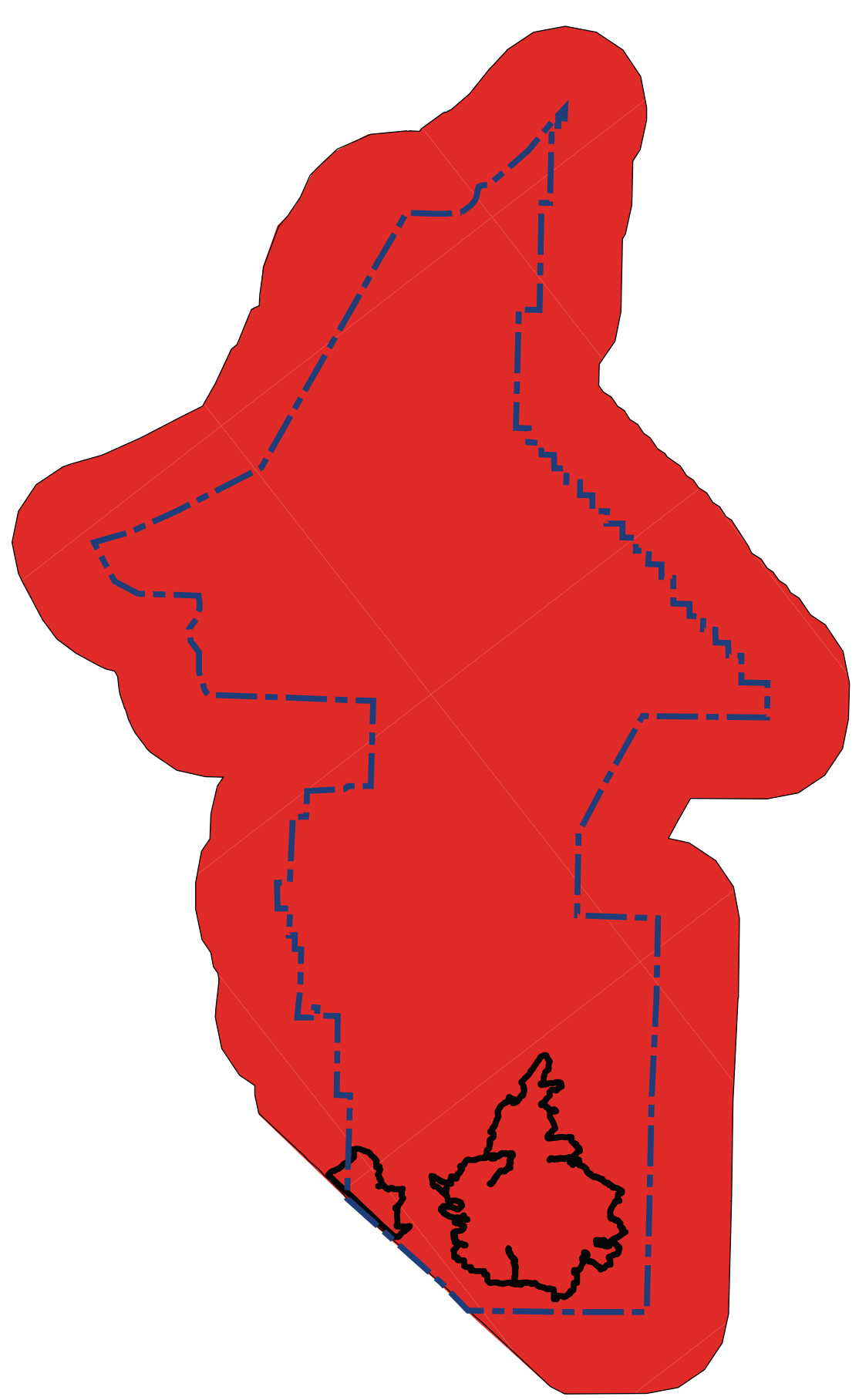
Map 9. Areas with very low (white) or low (gray) potential for petroleum. (No areas on this map have medium or high potential.)



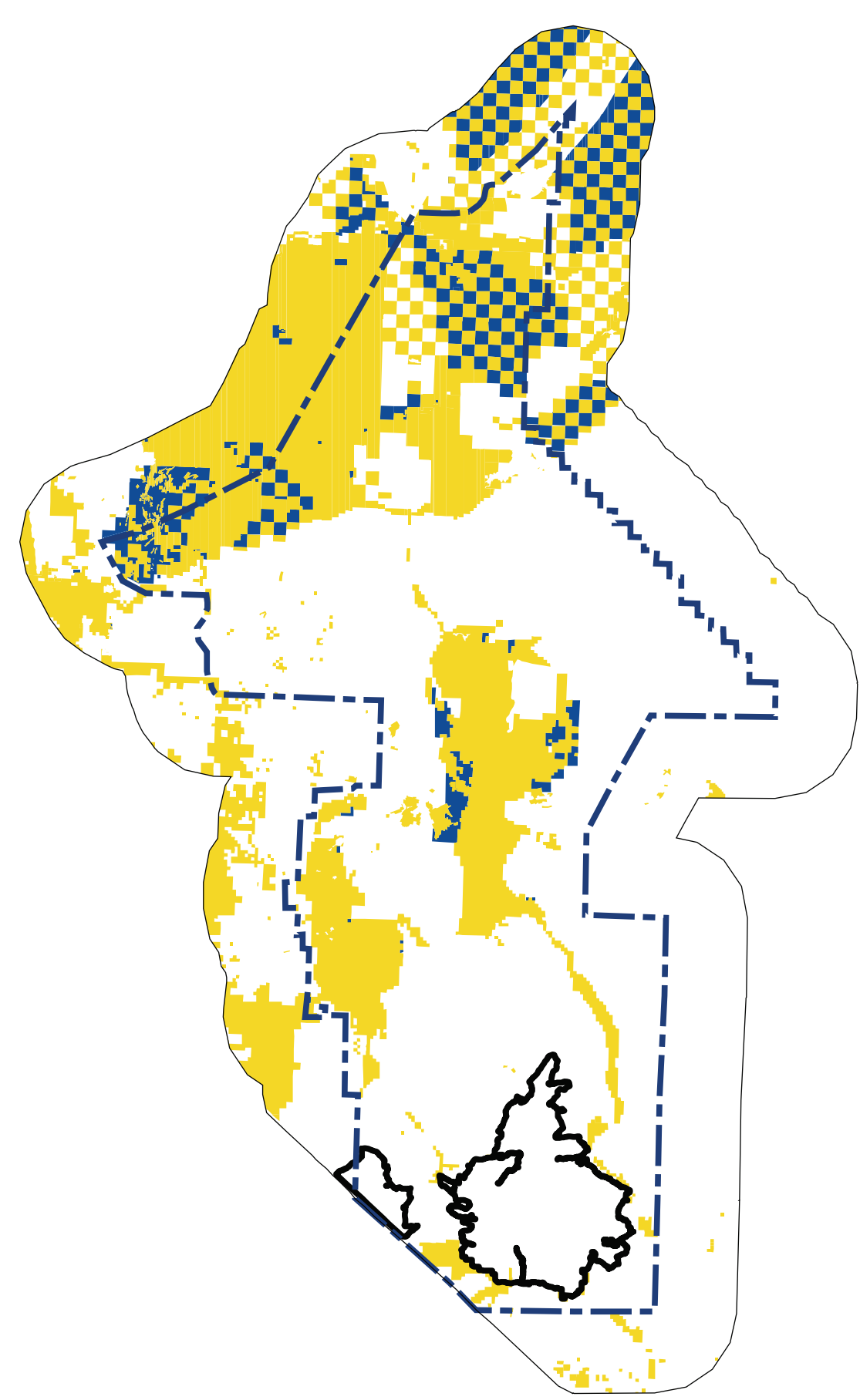
Map 10. U.S. Department of Energy assessment of areas favorable for wind-energy development (red).



Map 11. Areas with potential for pinyon-juniper biomass fuel (red).



Map 12. Lyon County exceeds the average annual solar energy incidence of the conterminous United States.



Map 13. Existing private land (yellow) and BLM land suitable for disposal (blue).

Table 1. Areas favorable for mineral and energy resources within proposed wilderness areas.

Area (See Map 1)	Mineral					Geothermal	Oil		Wind		Biomass	Solar
	Map 3	Map 4	Map 5	Map 6	Map 7		Map 8	Map 9	Map 10	Map 11		
A The Sisters	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Very Low	Yes	Yes	Yes	Yes
B Bald Mountain	Yes	Yes		Yes	Yes	Yes	Very Low	Small Area		Yes	Yes	Yes

References and additional information

Map 3. Cox, D.P., Ludington, S., Berger, R.R., Moring, B.C., Sherlock, M.G., Singer, D.A., and Tingler, J.V. 1998. Tracts Permissive for Epithermal Deposits, Plate 12-2, in: An Analysis of Nevada's Metal-Bearing Mineral Resources. Nevada Bureau of Mines and Geology Open-File Report 96-2, <http://consnick.nbm.unr.edu/pub/don/0602/index.htm>. This GIS data layer is available with NBMG Report 51 (www.nbm.unr.edu/don/51.zip), Figure 13.

Map 4. Cox, D.P., Ludington, S., Berger, R.R., Moring, B.C., Sherlock, M.G., Singer, D.A., and Tingler, J.V. 1998. Tracts Permissive for Pluton-Related Deposits, Plate 12-1, in: An Analysis of Nevada's Metal-Bearing Mineral Resources. Nevada Bureau of Mines and Geology Open-File Report 96-2, <http://consnick.nbm.unr.edu/pub/don/0602/index.htm>. This GIS data layer is available with NBMG Report 51 (www.nbm.unr.edu/don/51.zip), Figure 13.

Map 5. Cox, D.P., Ludington, S., Berger, R.R., Moring, B.C., Sherlock, M.G., Singer, D.A., and Tingler, J.V. 1998. Tracts Permissive for Deposit Types not Directly Related to Plutonic Activity, Plate 12-3, in: An Analysis of Nevada's Metal-Bearing Mineral Resources. Nevada Bureau of Mines and Geology Open-File Report 96-2, <http://consnick.nbm.unr.edu/pub/don/0602/index.htm>. This GIS data layer is available in NBMG Report 51 (www.nbm.unr.edu/don/51.zip), Figure 14.

Map 6. Price, J.G., Hess, R.H., Fitch, S., Faulds, J.E., Garside, L.J., Shevenell, L., and Warren, S. 2005. Preliminary assessment of the potential for carbon dioxide disposal by sequestration in geological settings in Nevada. Nevada Bureau of Mines and Geology Report 51, 35 p. (www.nbm.unr.edu/don/51.zip), Figure 10.

Map 7. Crookbaugh, M., Johnson, R., Koenner, C., Blackwell, D., Copley, G., Sawatzky, D., Blewett, G., Pincha, A., Richards, M., Helm-Clark, C., Shevenell, L., Rains, G., Johnson, C., Miner, T., and Boyd, T. 2005. Geothermal potential map of the Great Basin, western United States. Nevada Bureau of Mines and Geology Map 151 (www.nbm.unr.edu/don/05151/05151plate.pdf). While high-temperature geothermal activity is possible in all parts of the State of Nevada, not all are favorable for resource development. Map 8 shows areas that are considered at least marginally favorable for geothermal resource development in Lyon County. GIS data can be found at www.nbm.unr.edu/geothermal.

Map 8. Garside, L.J., Hess, R.H., Fleming, K.L., Weiner, B.S. 1988. Oil and gas developments in Nevada. Nevada Bureau of Mines and Geology Bulletin 104, 136 p. (www.nbm.unr.edu/don/0104.htm), Figure 3.

Map 10. U.S. Department of Energy, National Renewable Energy Laboratory. http://www.nrel.gov/gis/windswattinger/maps_template.asp?swattinger. This map shows areas assessed as good (Class 4) to superb (Class 7) for wind power generation at an elevation of 50 meters above the ground.

Map 11. Kepner, W., Ramsey, D., Lowry, J., and others. 2005. Southwest Regional GAP Analysis Project Final Report. Remote Sensing GIS Laboratory, College of Natural Resources, Utah State University, 2005. www.cnr.gov/cnd/land-use/geospatial/papers/regions_gis_gap_2005.htm. This map, derived from a landcover map prepared for the U.S. Environmental Protection Agency as part of the Southwest ReCAP project, shows areas of pinyon-juniper woodlands in Nevada.

Map 12. U.S. Department of Energy, National Renewable Energy Laboratory. <http://www.nrel.gov/gis/solar.html#collector>. The average annual solar energy incidence throughout Lyon County exceeds 5.13 kilowatt-hours per square meter per day, the mean value for the conterminous United States.

Map 13. U.S. Bureau of Land Management. 2005. www.blm.gov/gis/geospatial_data.htm. This map shows privately owned lands (plotted from my_landowner1103.zip) and those lands administered by the Bureau of Land Management that have been identified as suitable to be considered for disposal (plotted from my_disposal_20050505.zip), which include some that may no longer be available. This map is intended to be used for reference only, not for determination of land ownership.

NEVADA BUREAU OF MINES AND GEOLOGY
UNIVERSITY OF NEVADA SCHOOL OF ENGINEERING AND TECHNOLOGY
The information displayed on this poster should be considered preliminary. It has not been thoroughly edited or checked for accuracy.
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