

**Figures For  
Environmental Impact Statement For The  
Montanore Project**

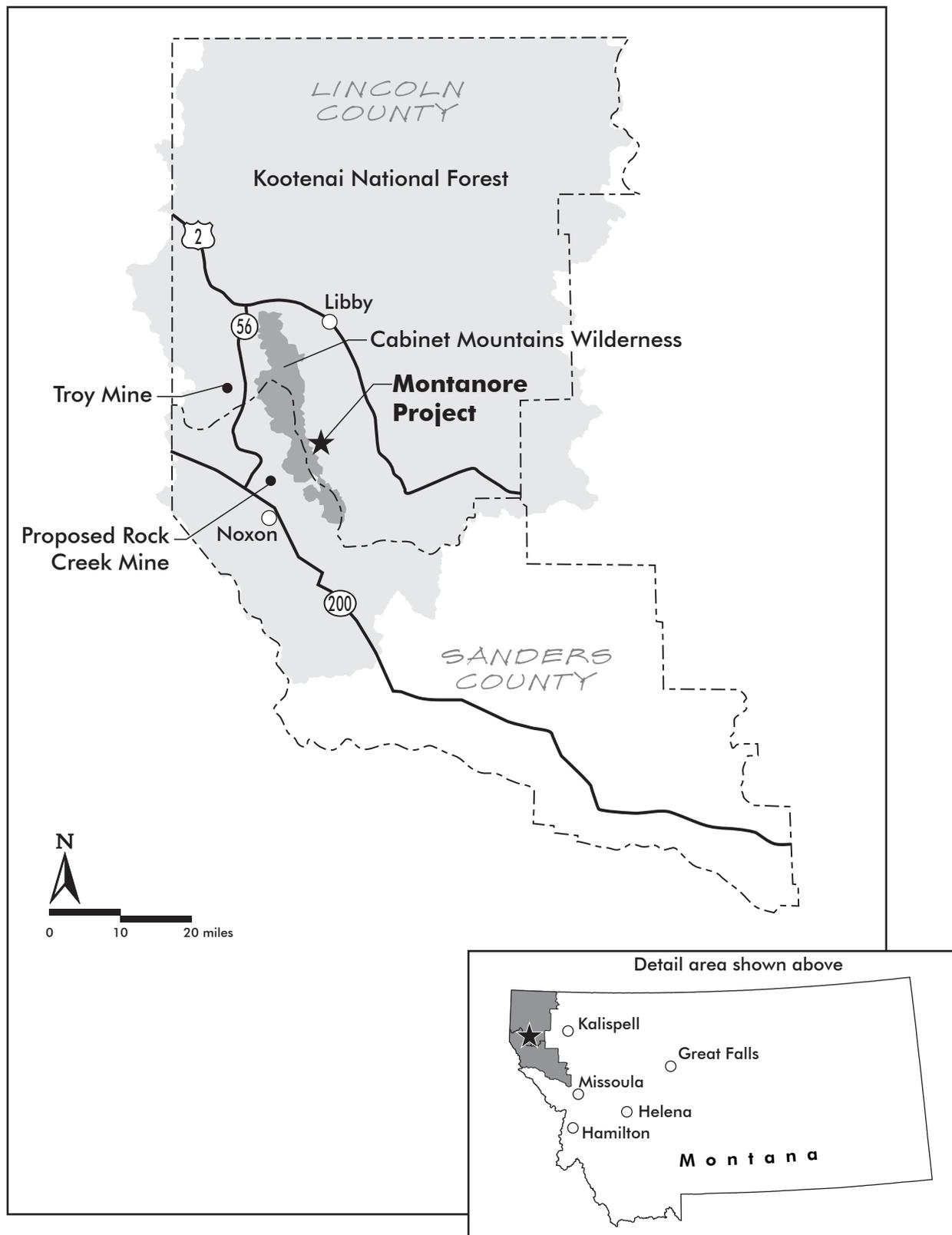


Figure 1. Location Map, Montanore Project, Kootenai National Forest.

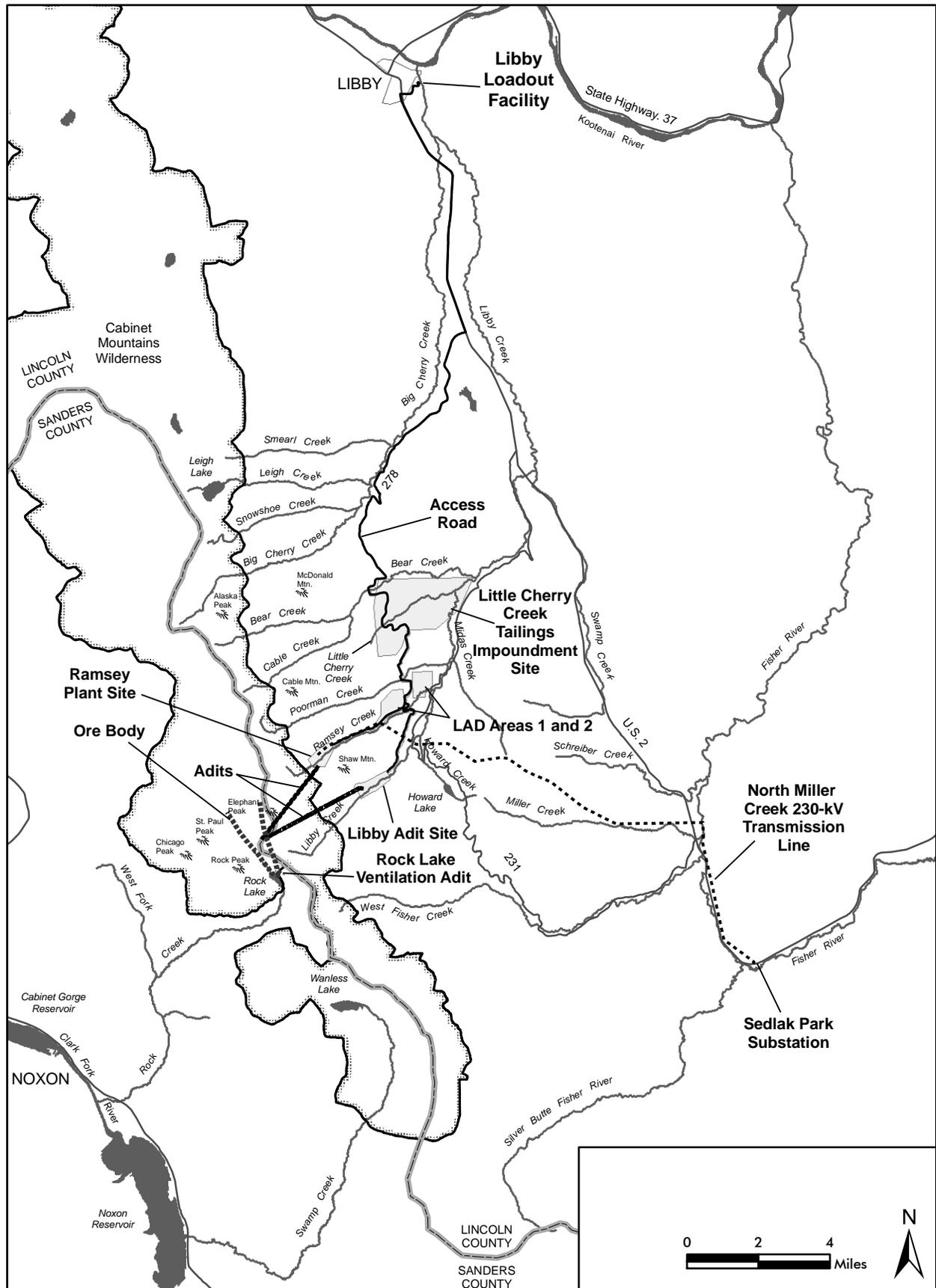


Figure 2. Location of Montanore Project Facilities, Alternative 2

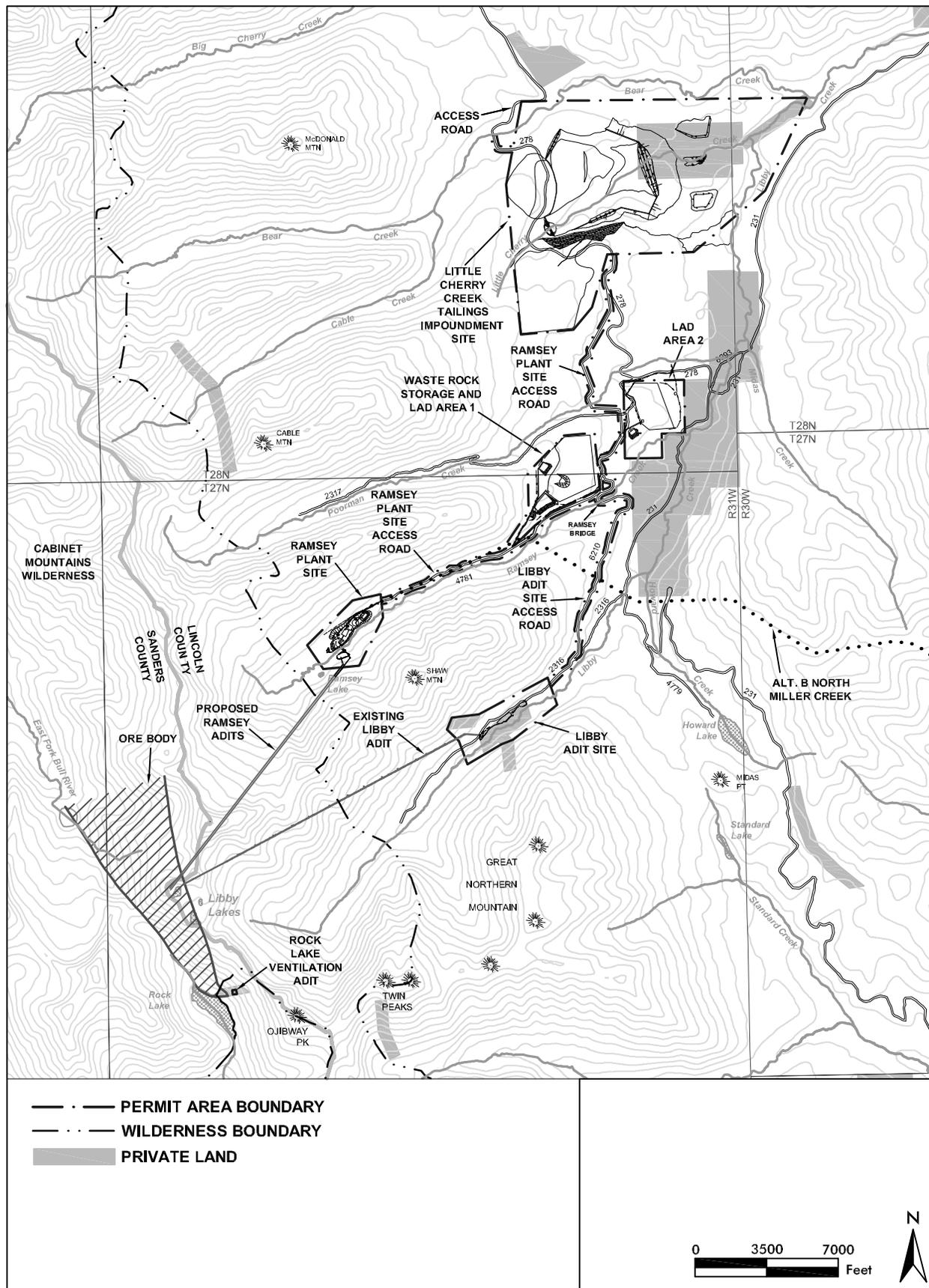


Figure 3. Mine Facilities and Permit Areas, Alternative 2

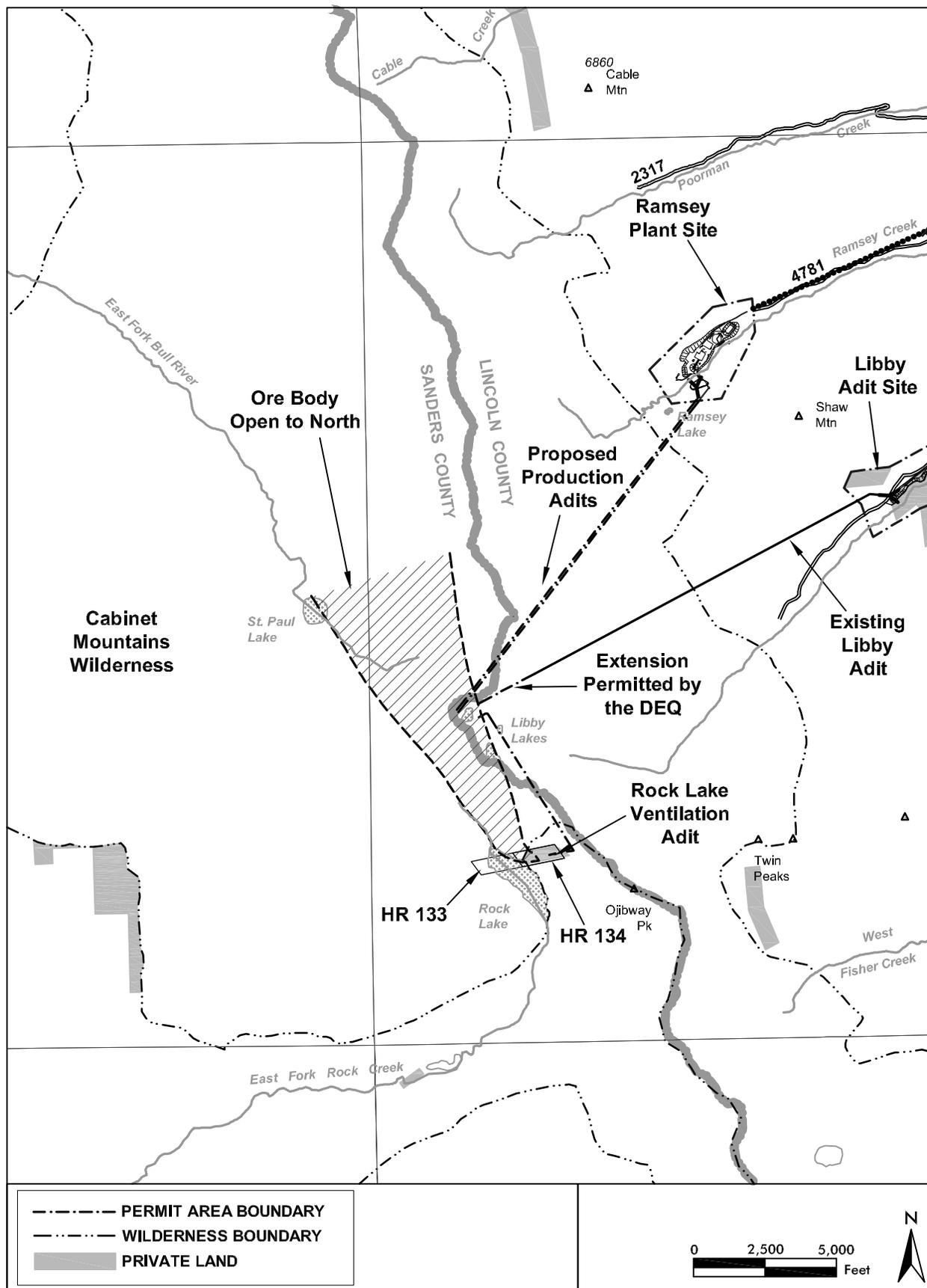


Figure 4. Existing Libby Adit and Proposed Ramsey Adits, Alternative 2

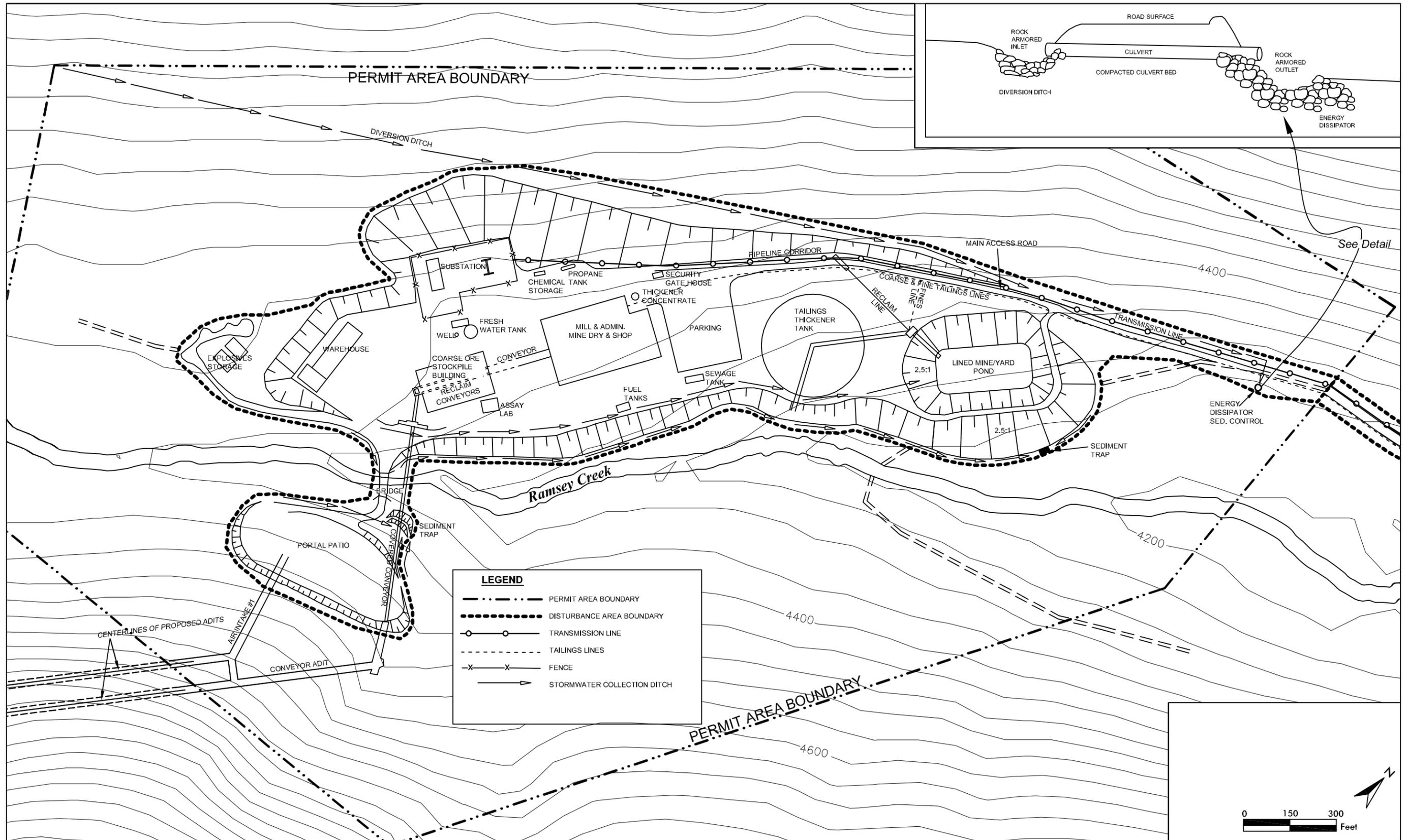


Figure 5. Ramsey Plant Site, Alternative 2

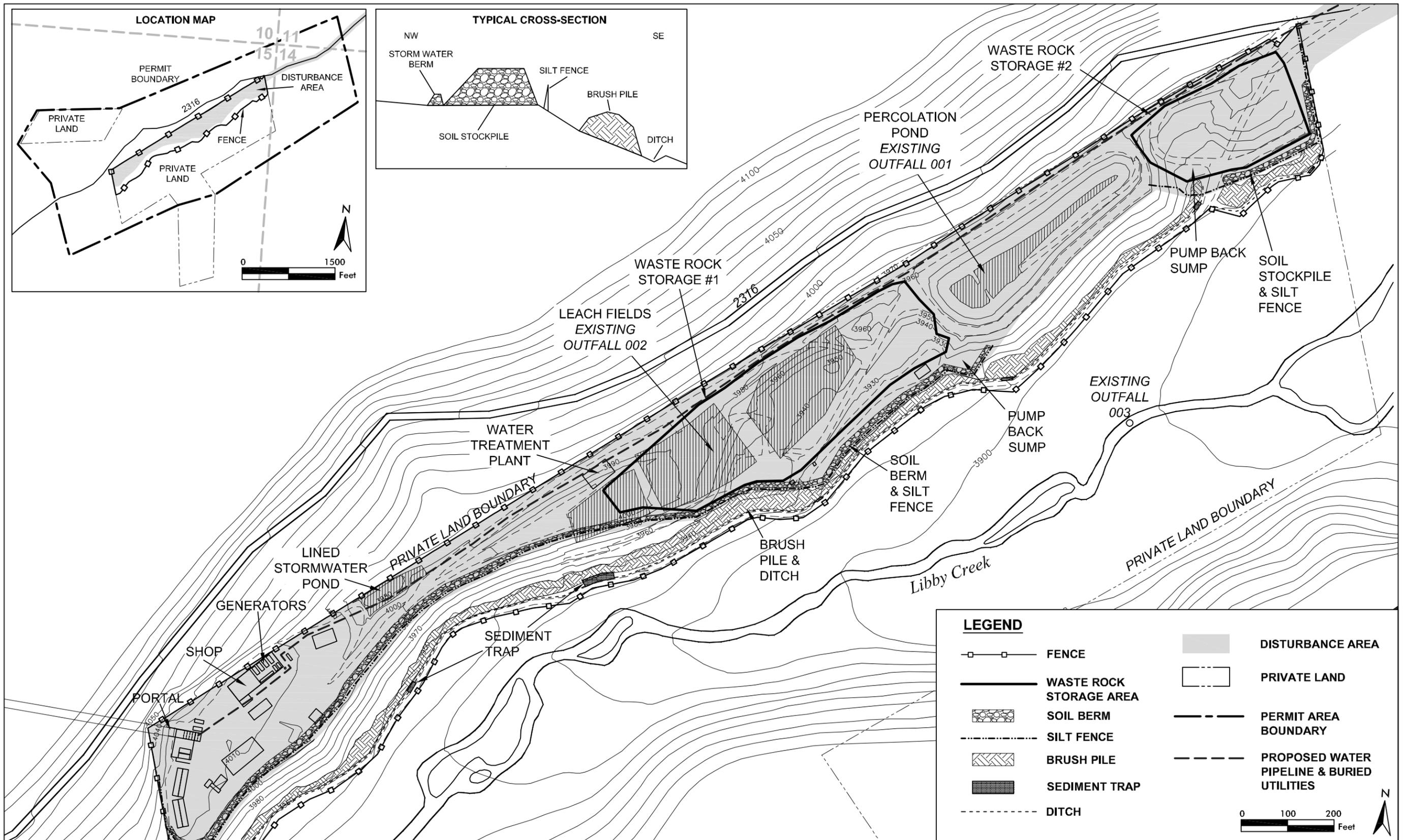


Figure 6. Existing and Proposed Libby Adit Site

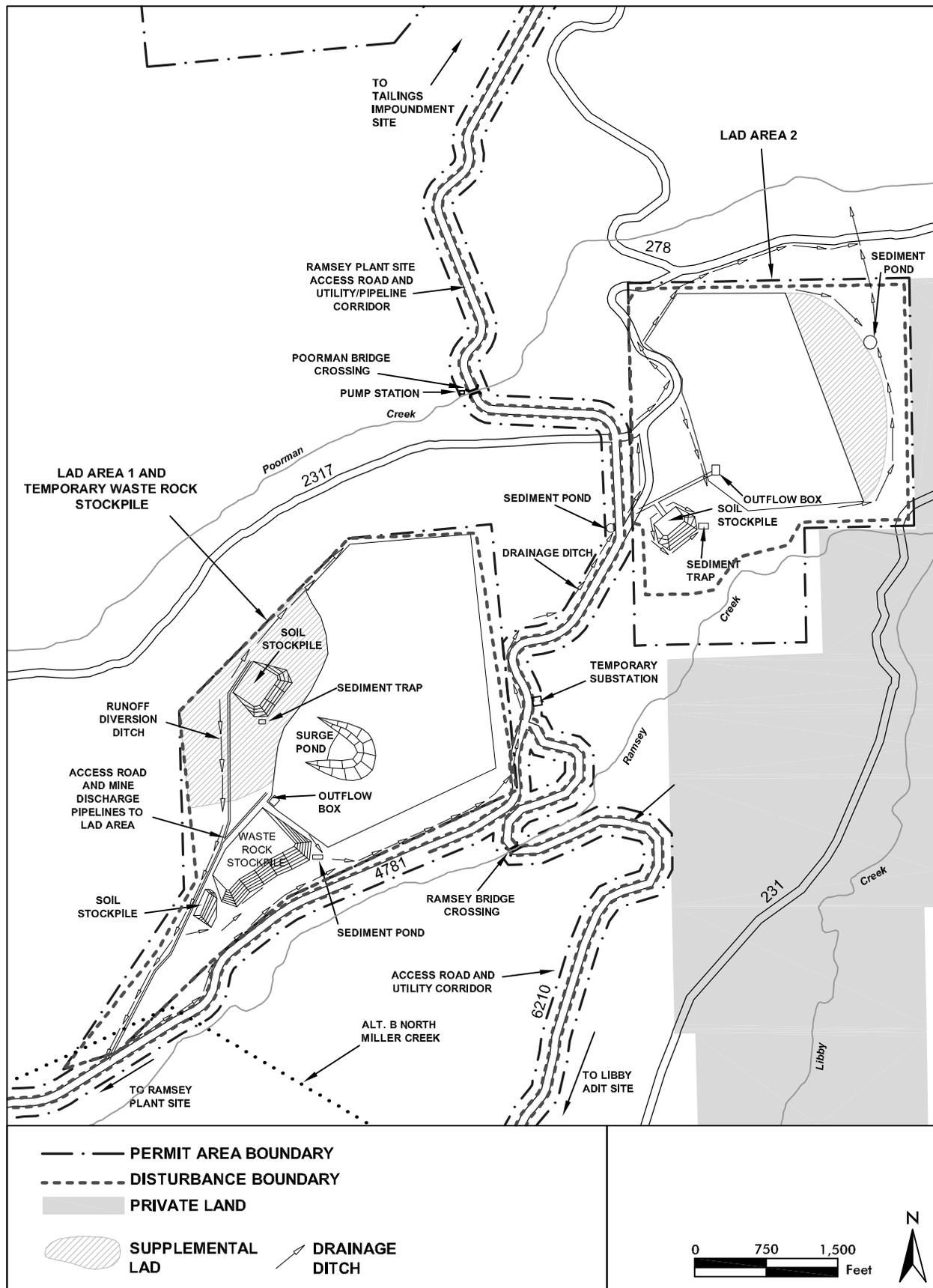


Figure 7. LAD Areas 1 and 2 and Waste Rock Stockpile, Alternative 2

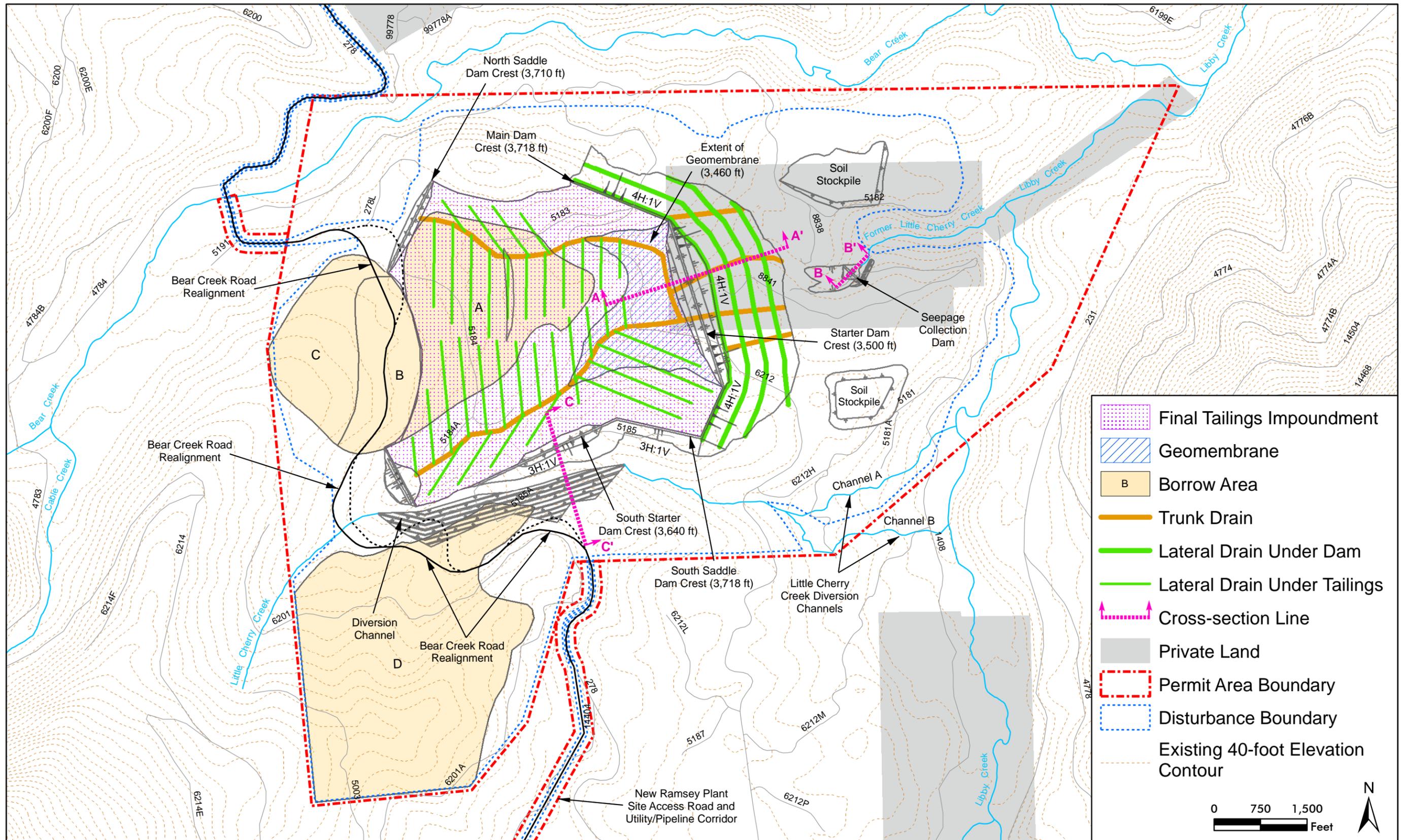


Figure 8. Little Cherry Creek Tailings Impoundment Site, Alternative 2

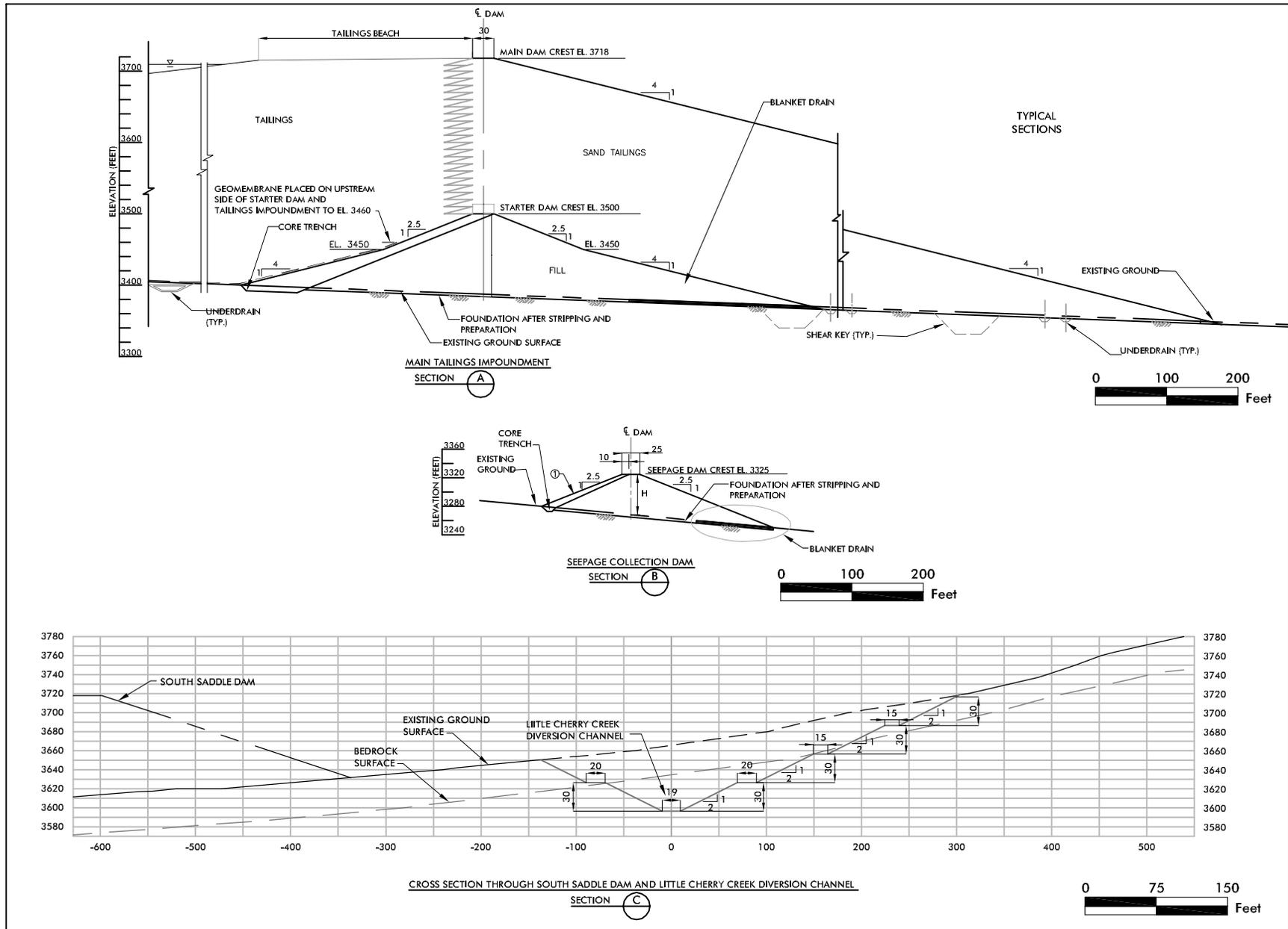


Figure 9. Little Cherry Creek Tailings Impoundment Cross Sections

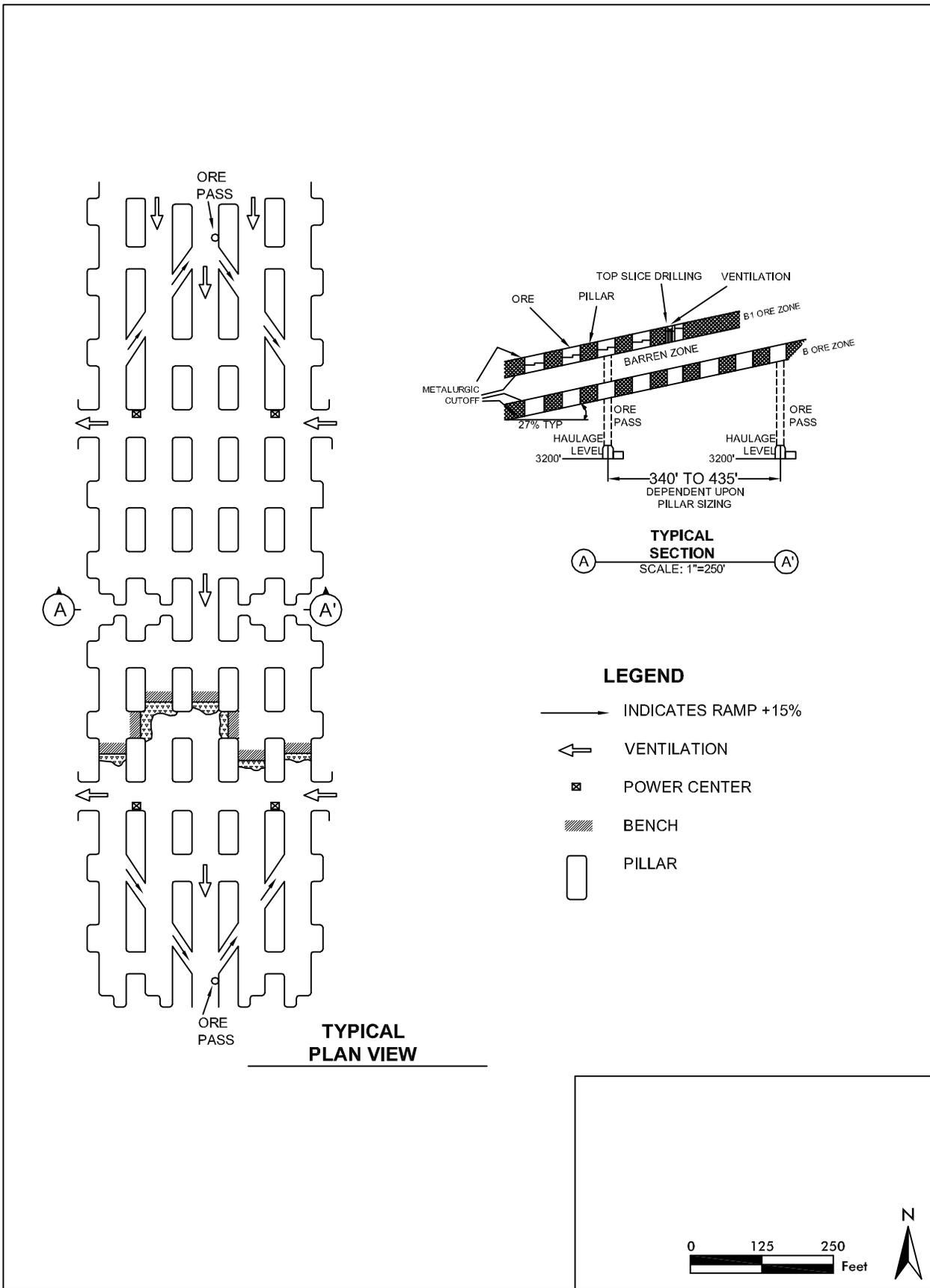


Figure 10. Room-and-Pillar Mining

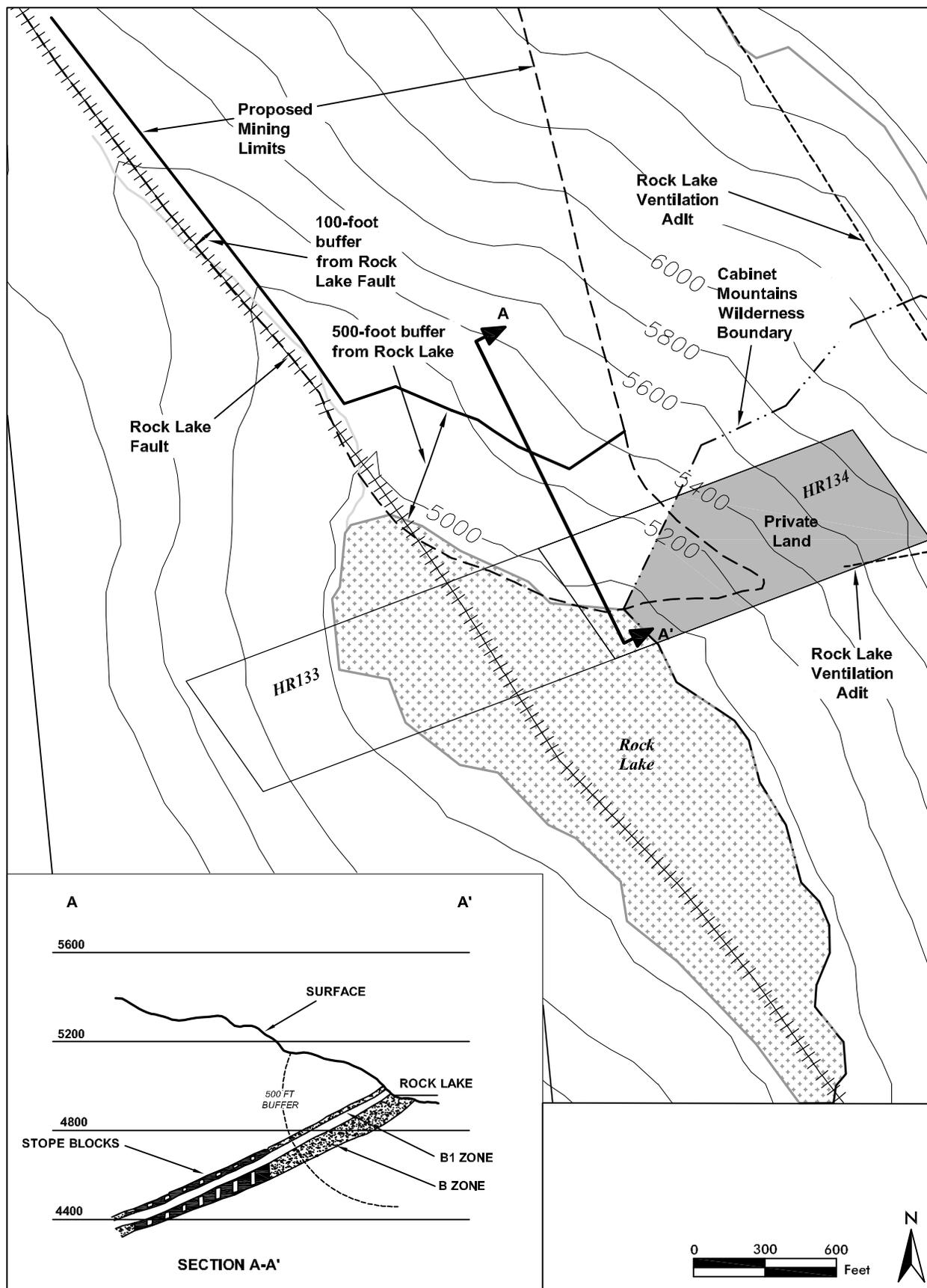


Figure 11. Relationship of the Ore Body to Rock Lake

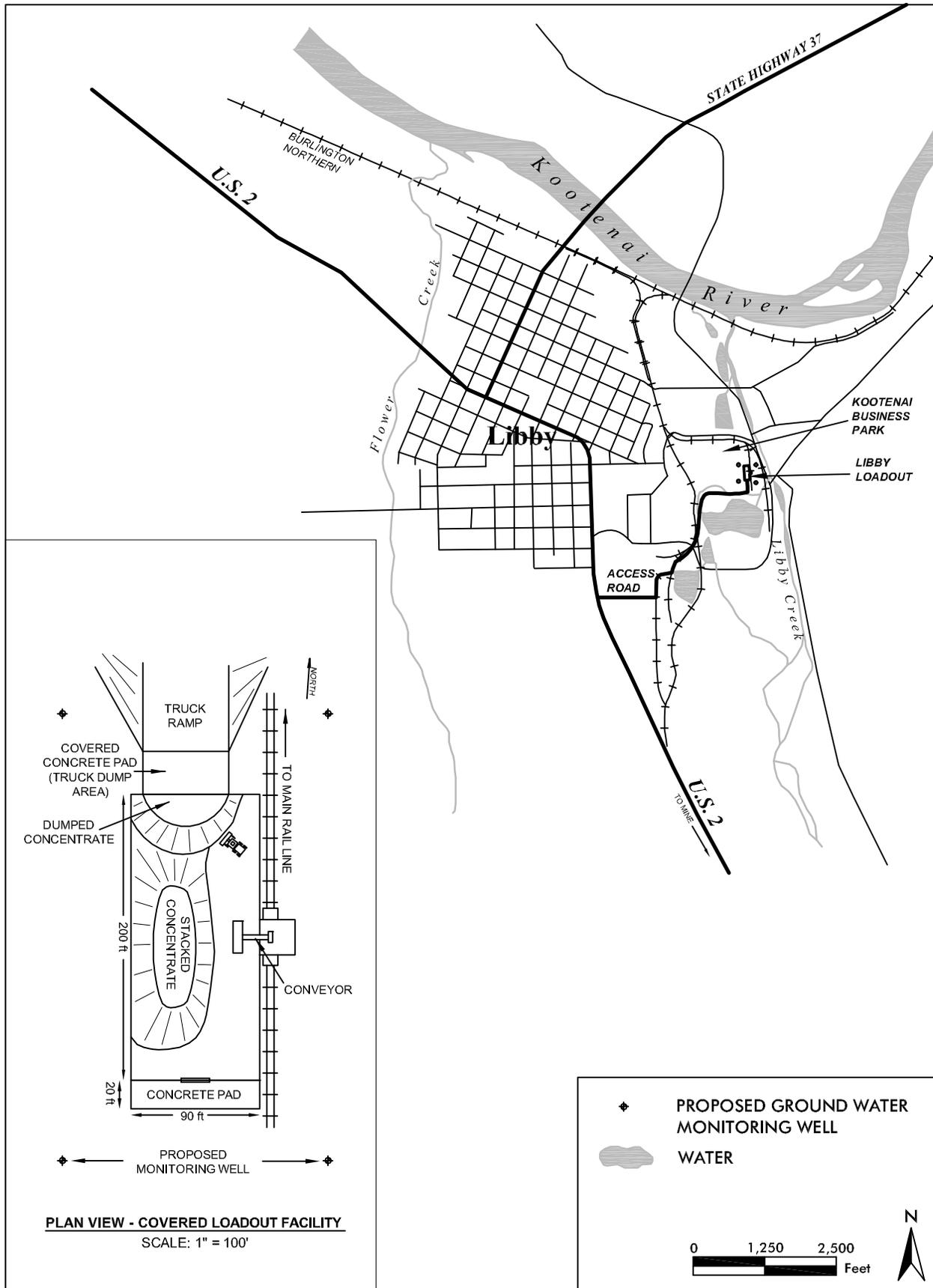


Figure 12. Libby Loadout

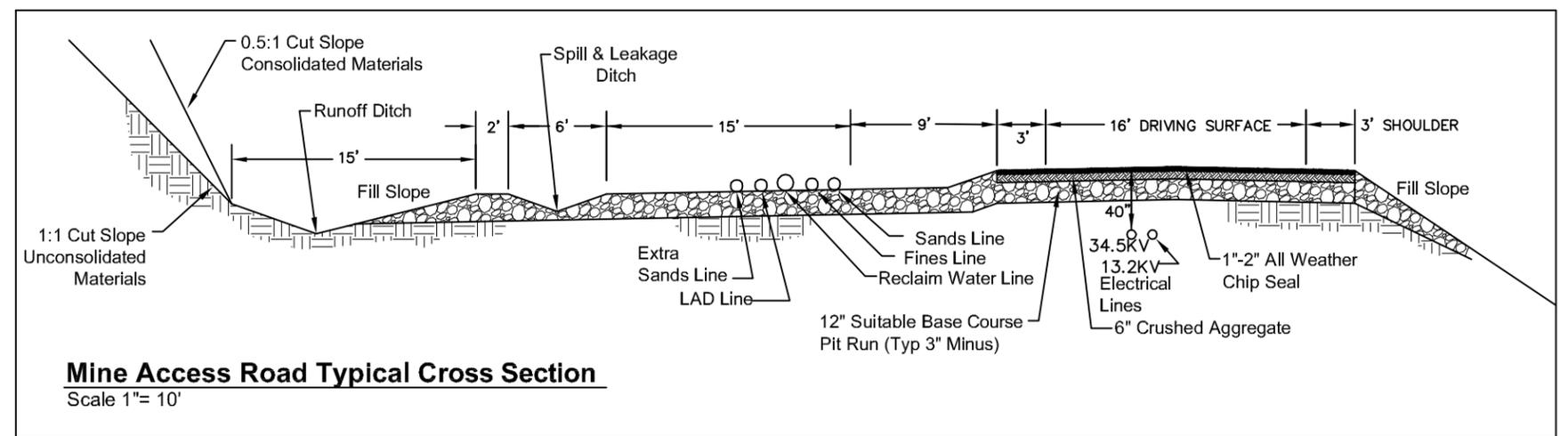
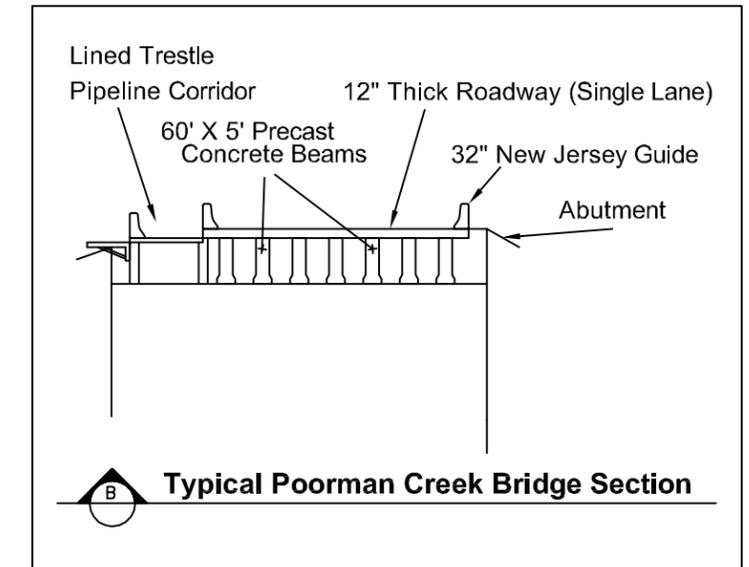
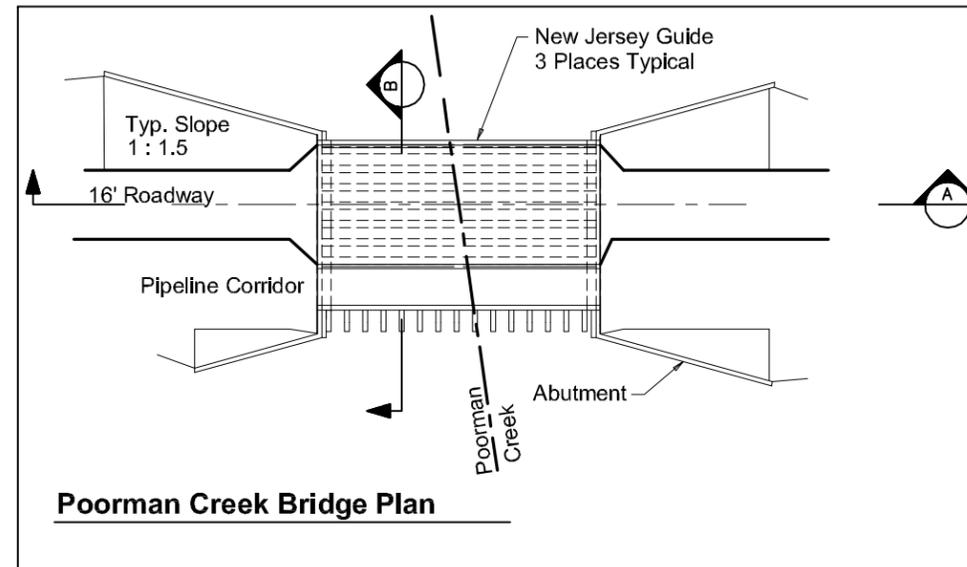
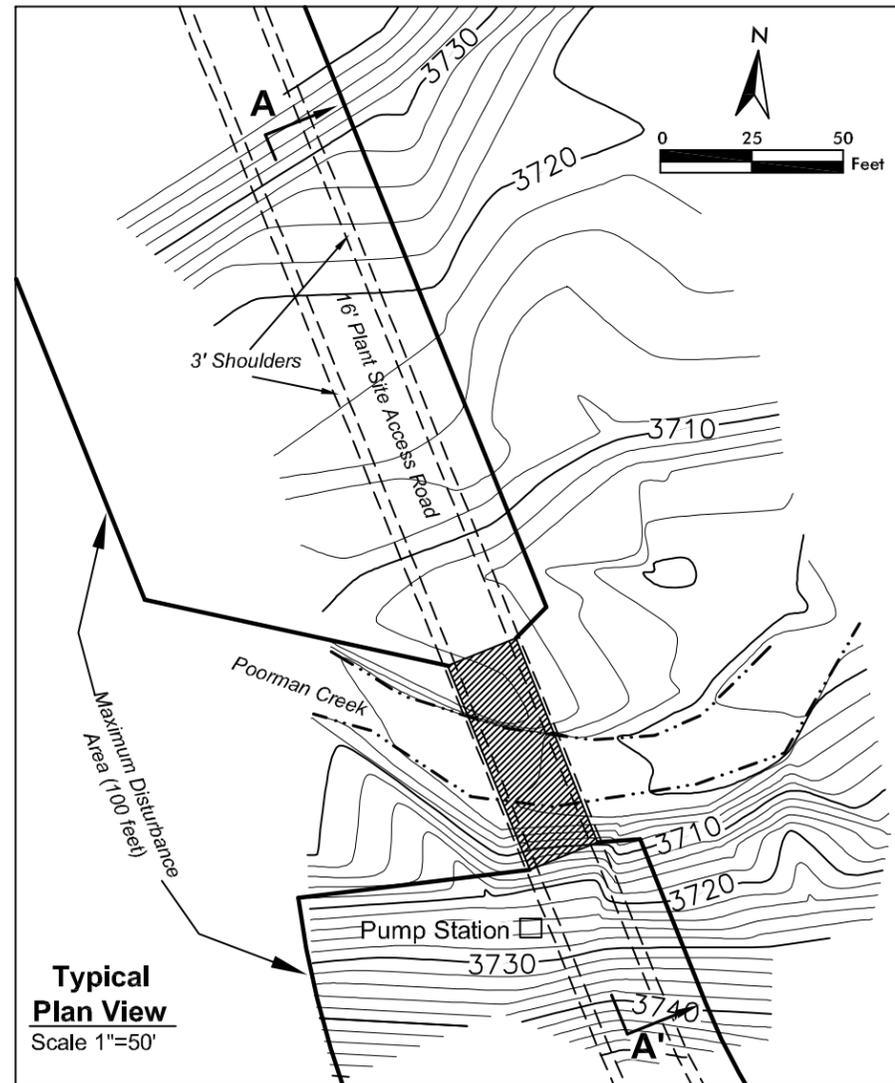
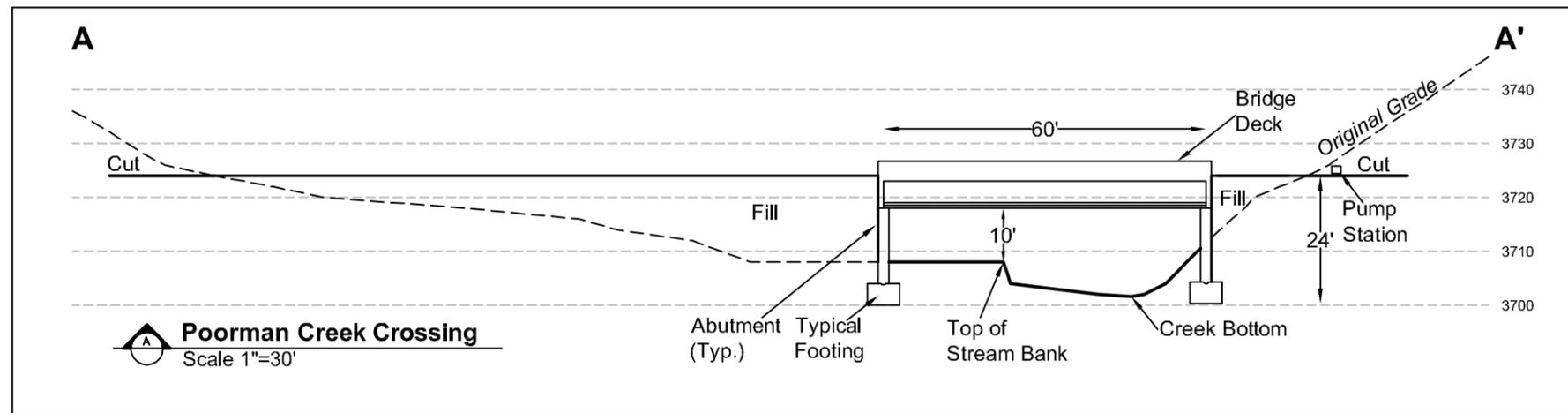


Figure 13. Details of Tailings Pipelines, Utility, and Access Road Corridor, Alternative 2

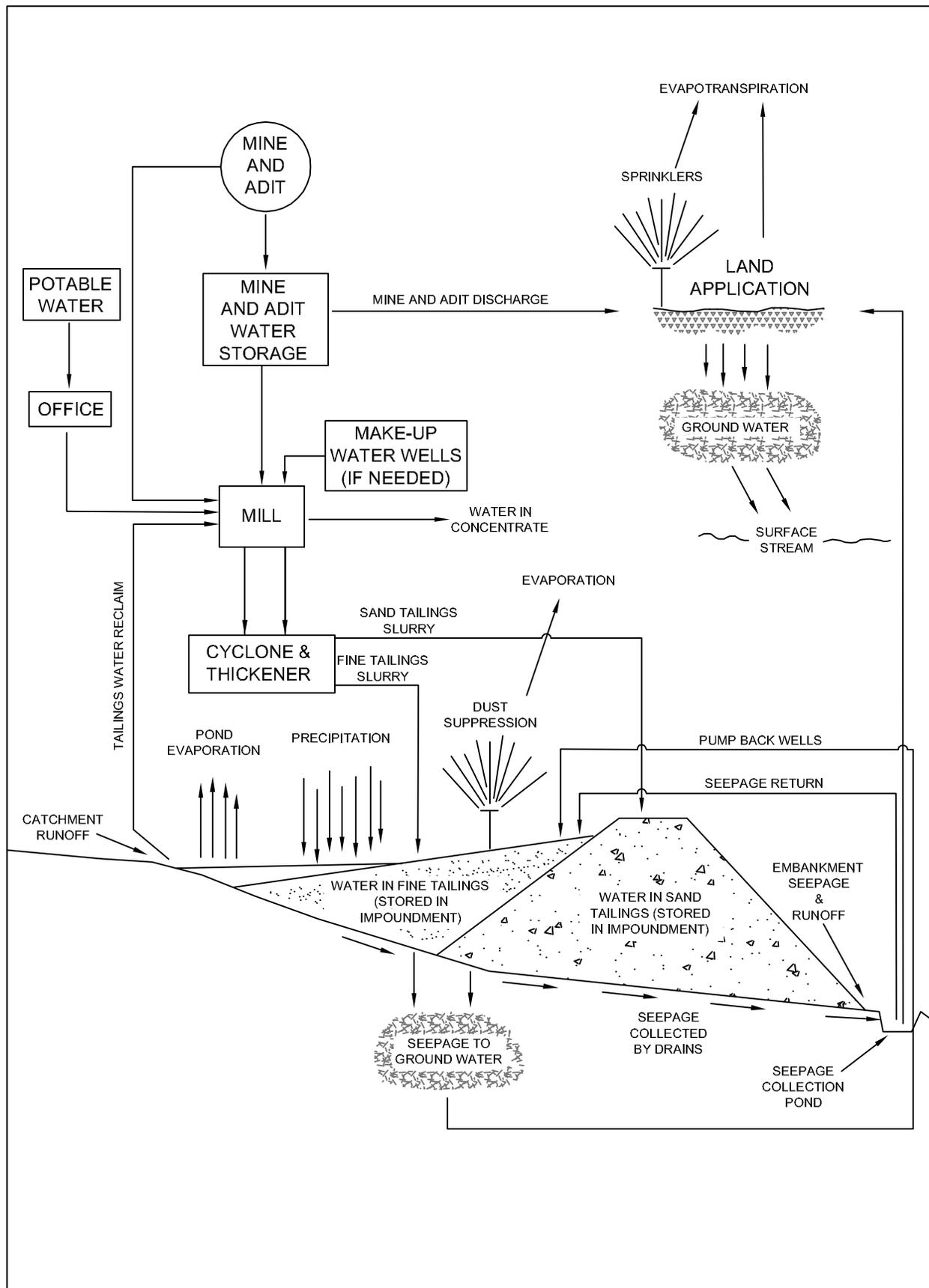


Figure 14. Proposed Water Management, Alternative 2

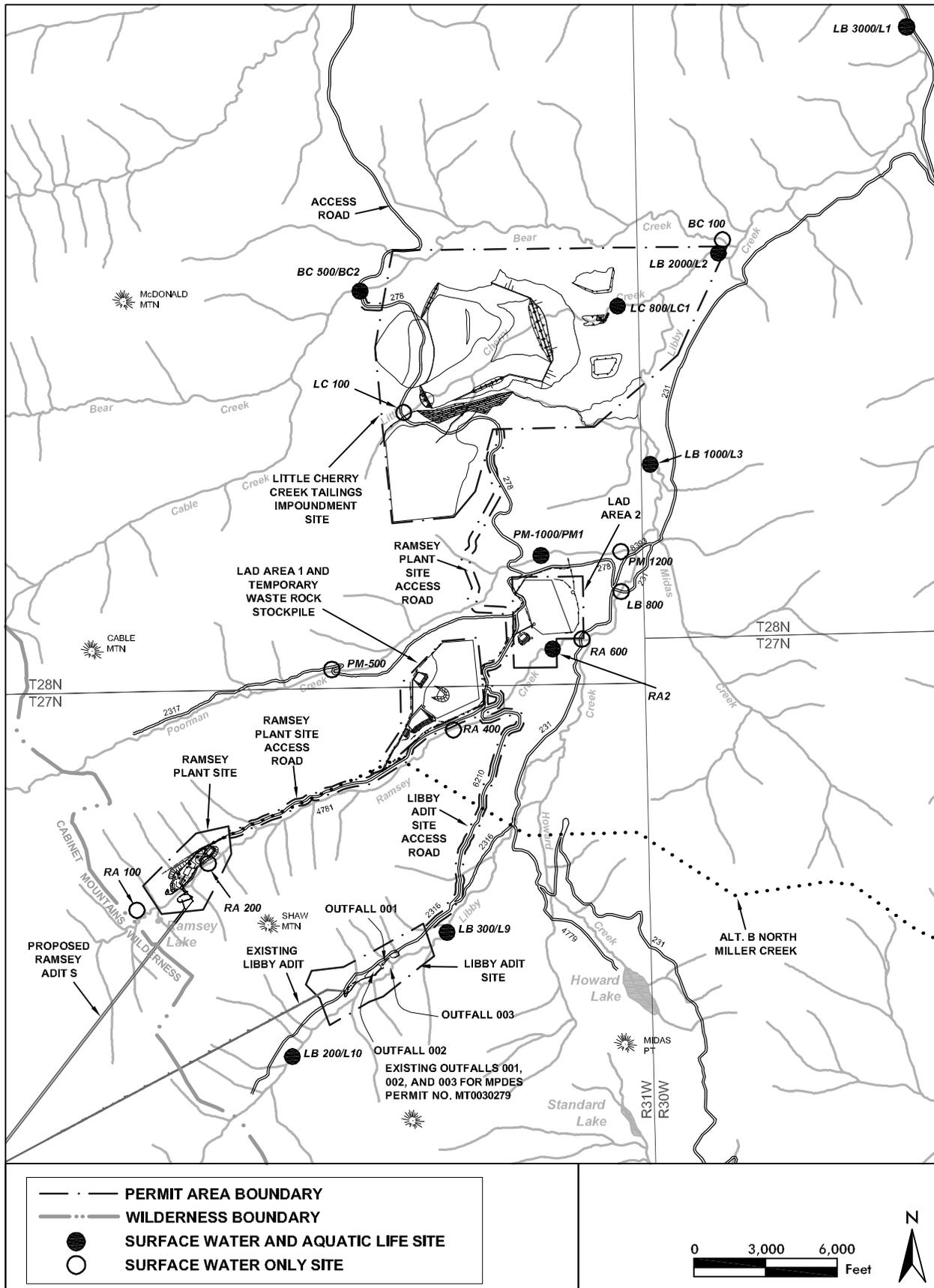


Figure 15. Existing Outfalls and Surface Water Monitoring Locations, Alternative 2

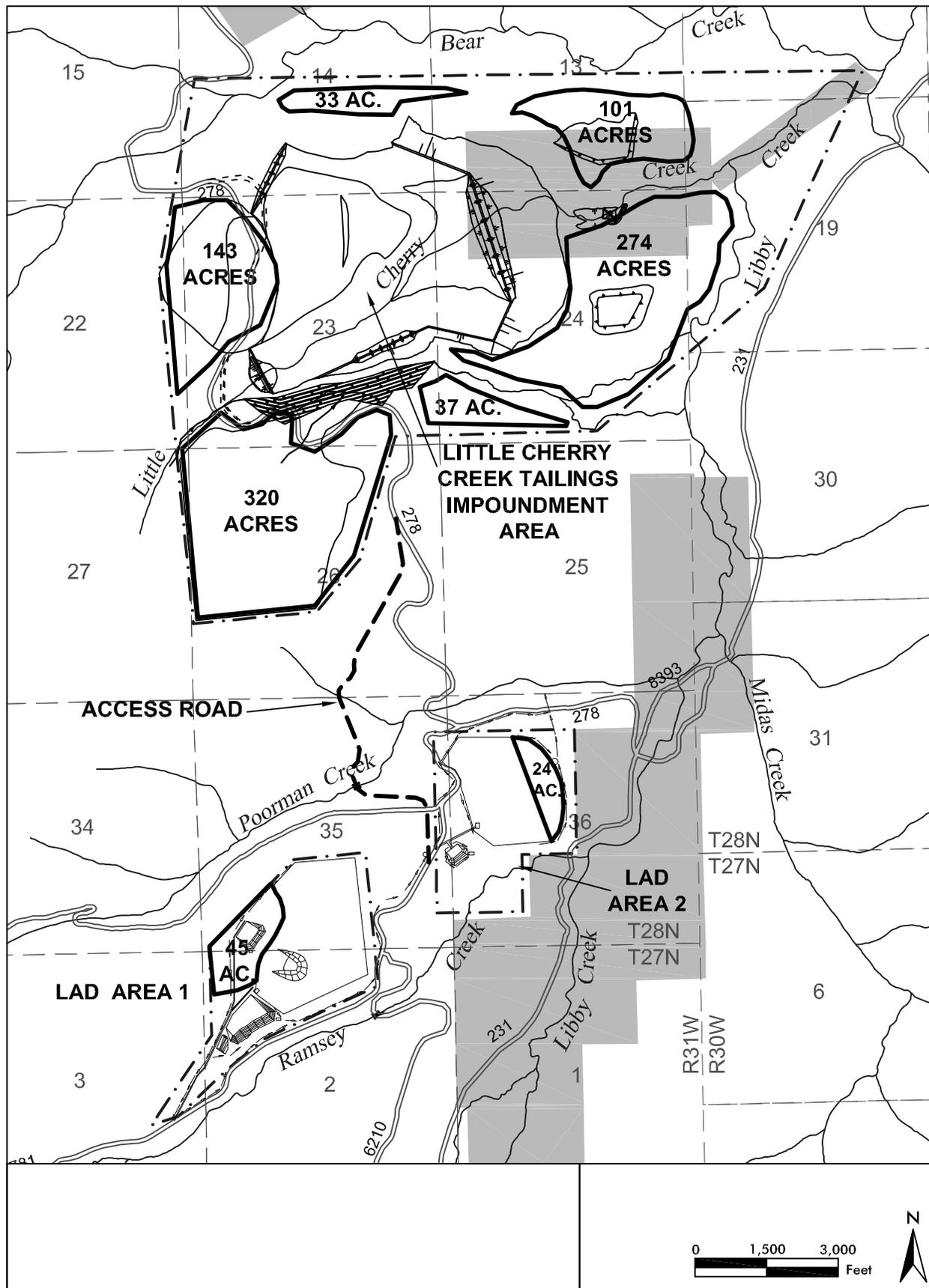


Figure 16. Supplemental LAD Areas, Alternative 2

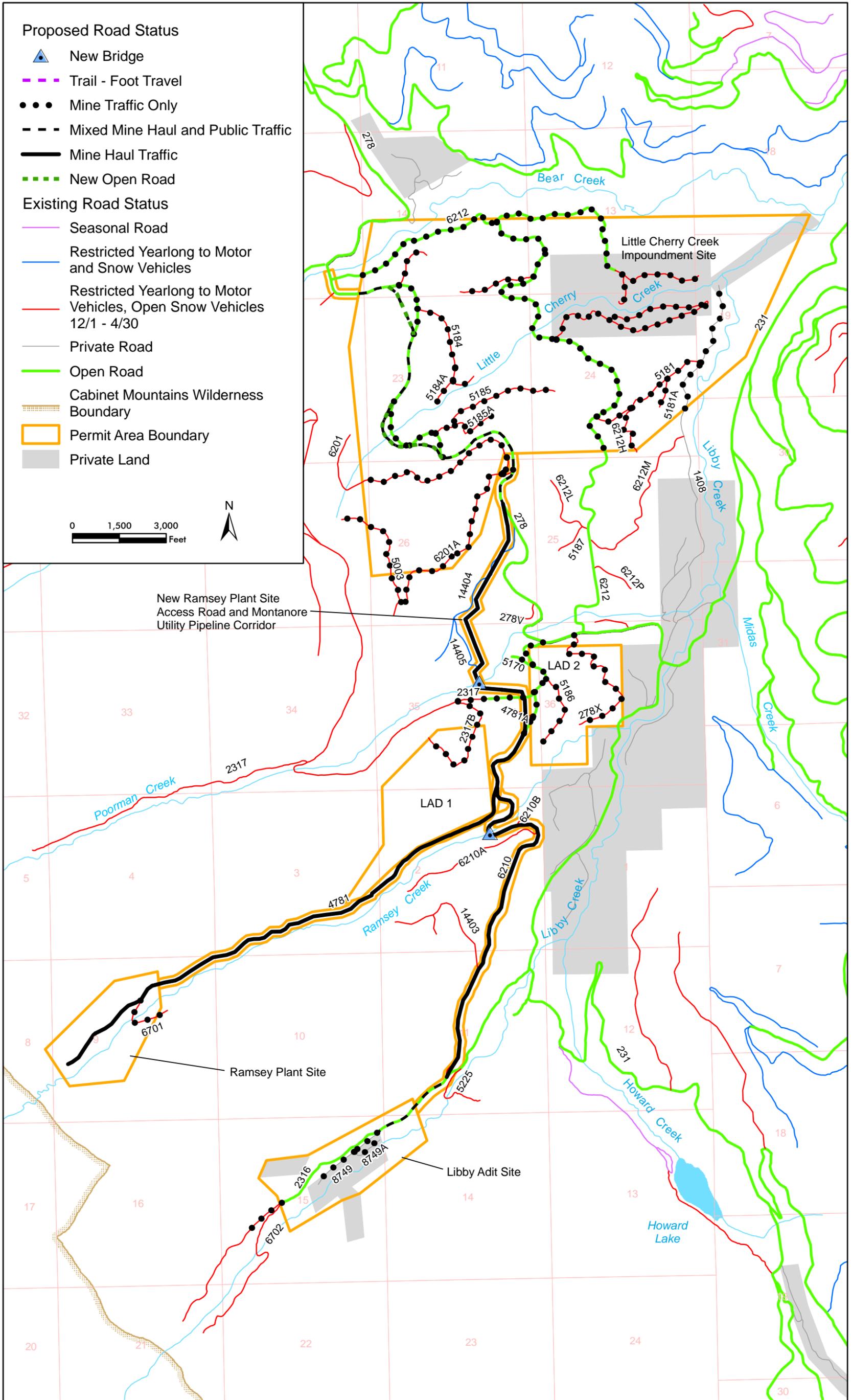


Figure 17. Roads Proposed for Use in Alternative 2

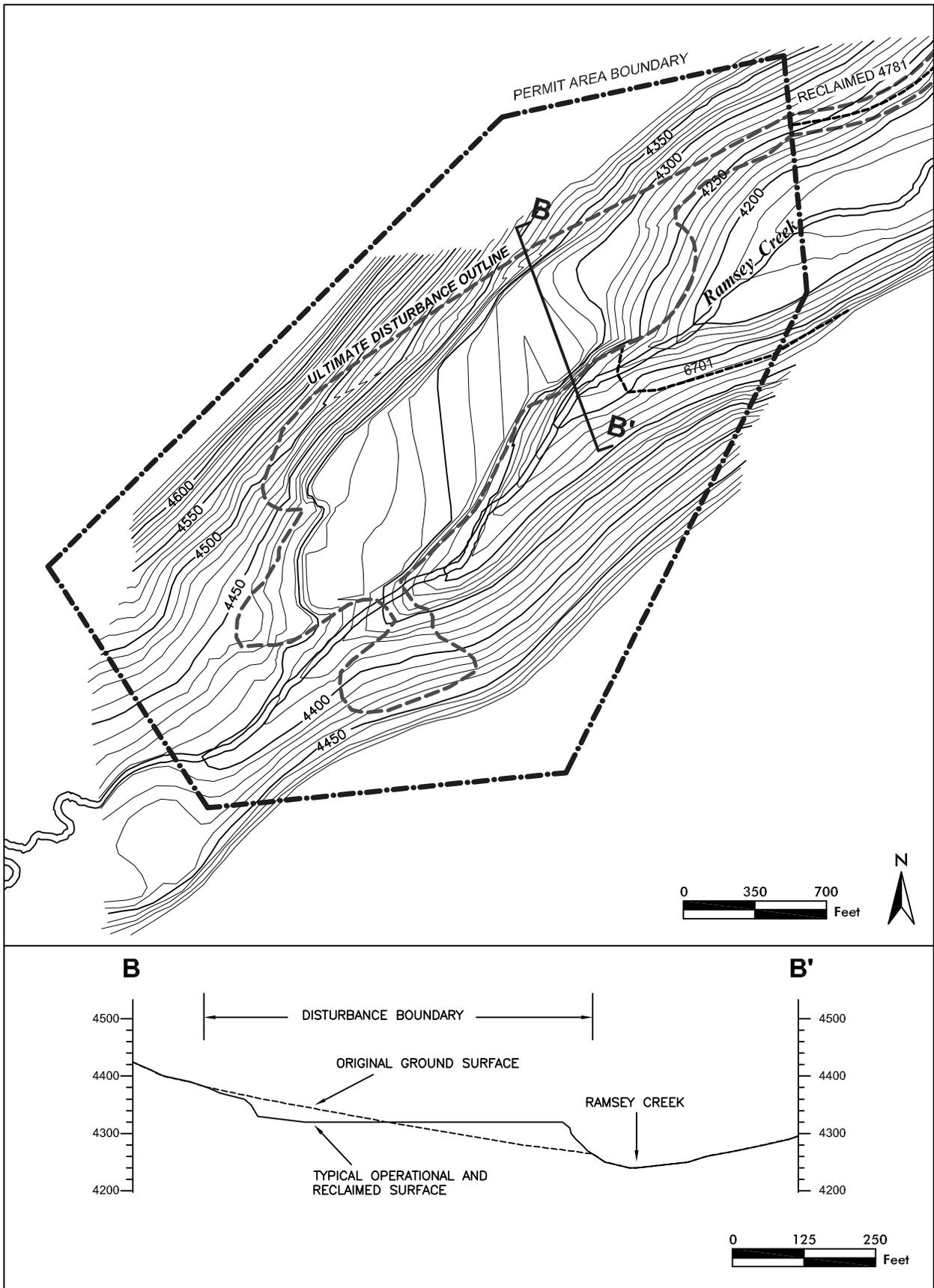


Figure 18. Post-mining Topography, Ramsey Plant Site, Alternative 2

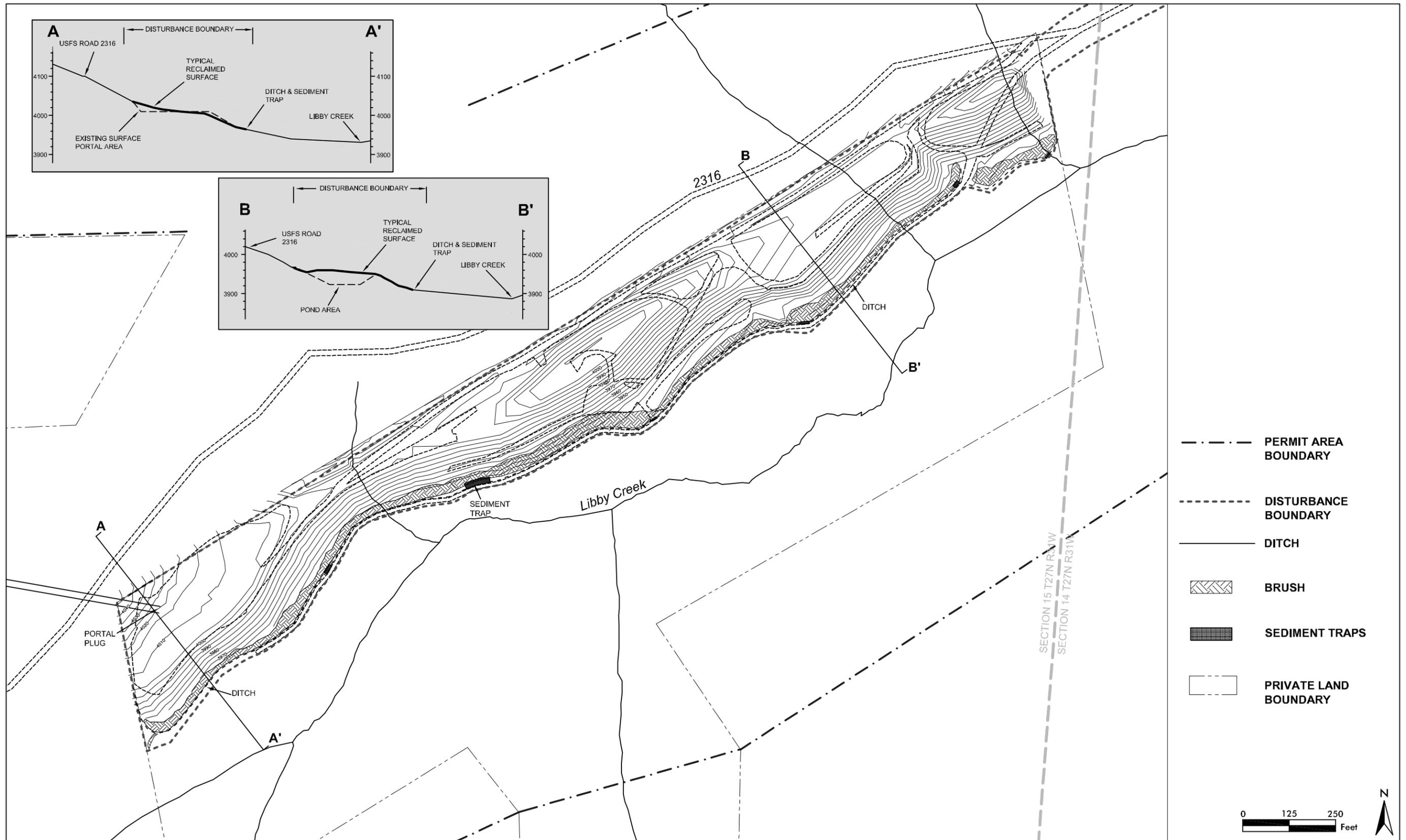


Figure 19. Post-mining Topography, Libby Adit Site

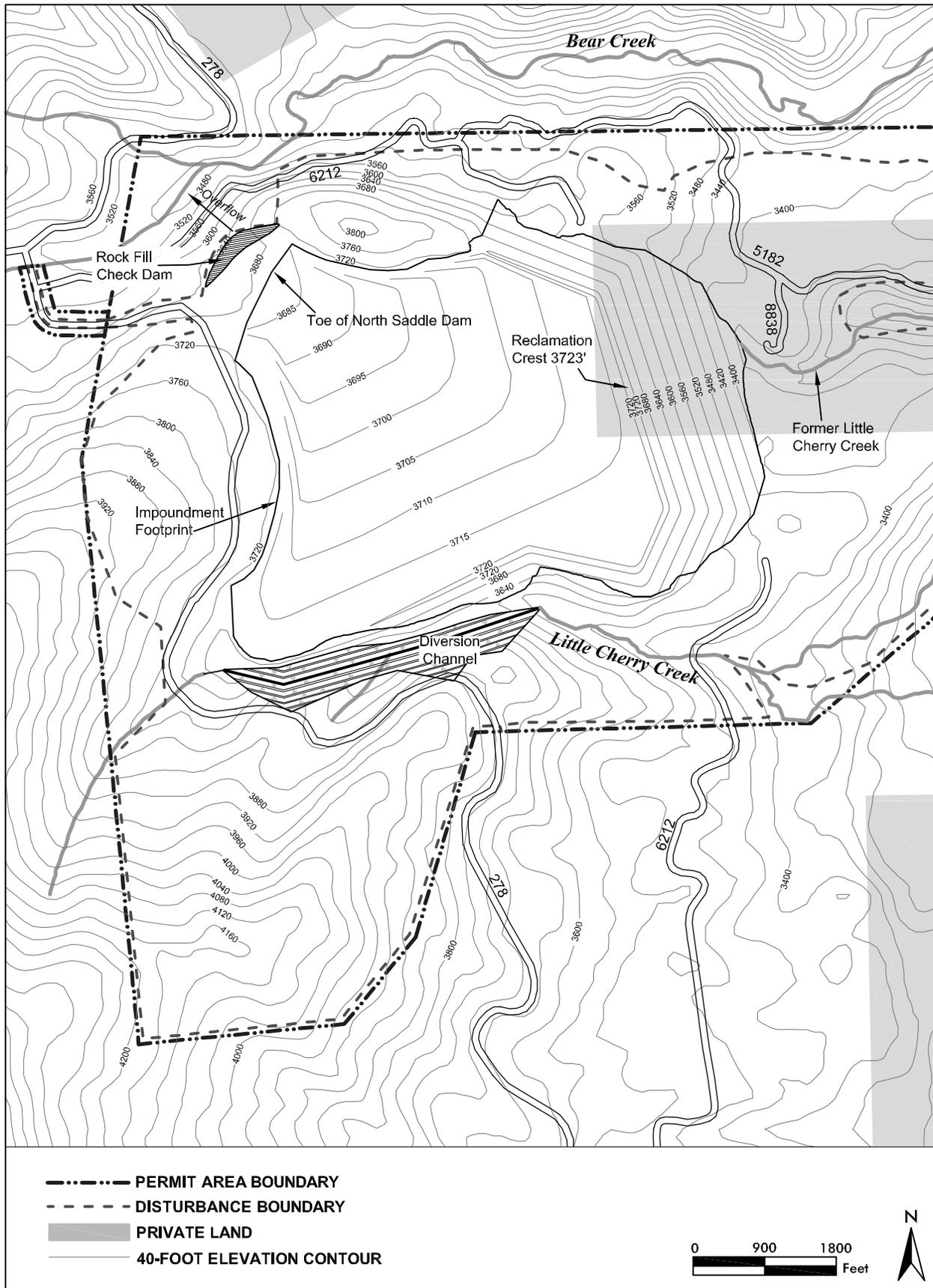


Figure 20. Post-mining Topography, Little Cherry Creek Tailings Impoundment Site, Alternative 2

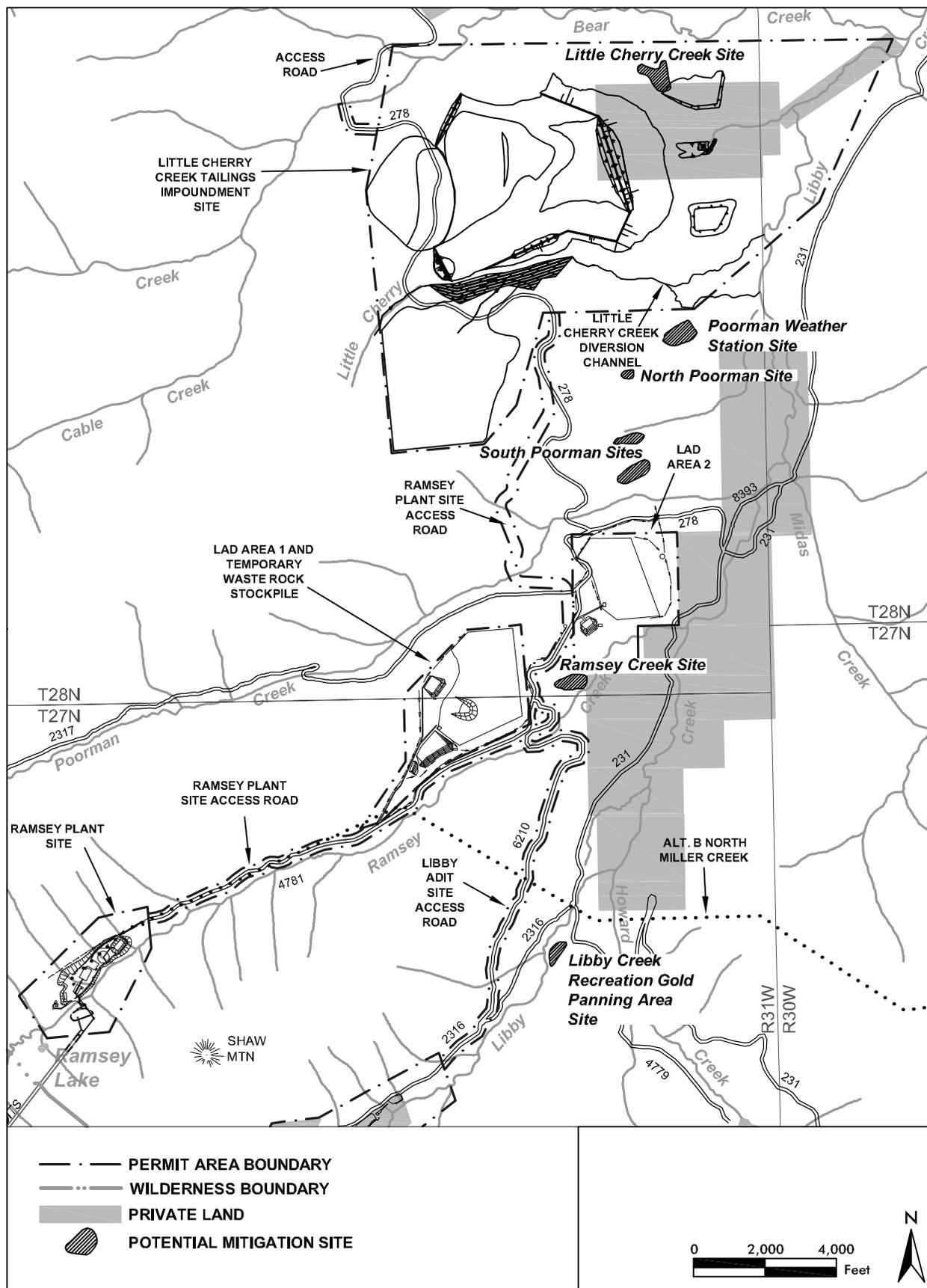


Figure 21. Potential Wetland Mitigation Sites, Alternative 2

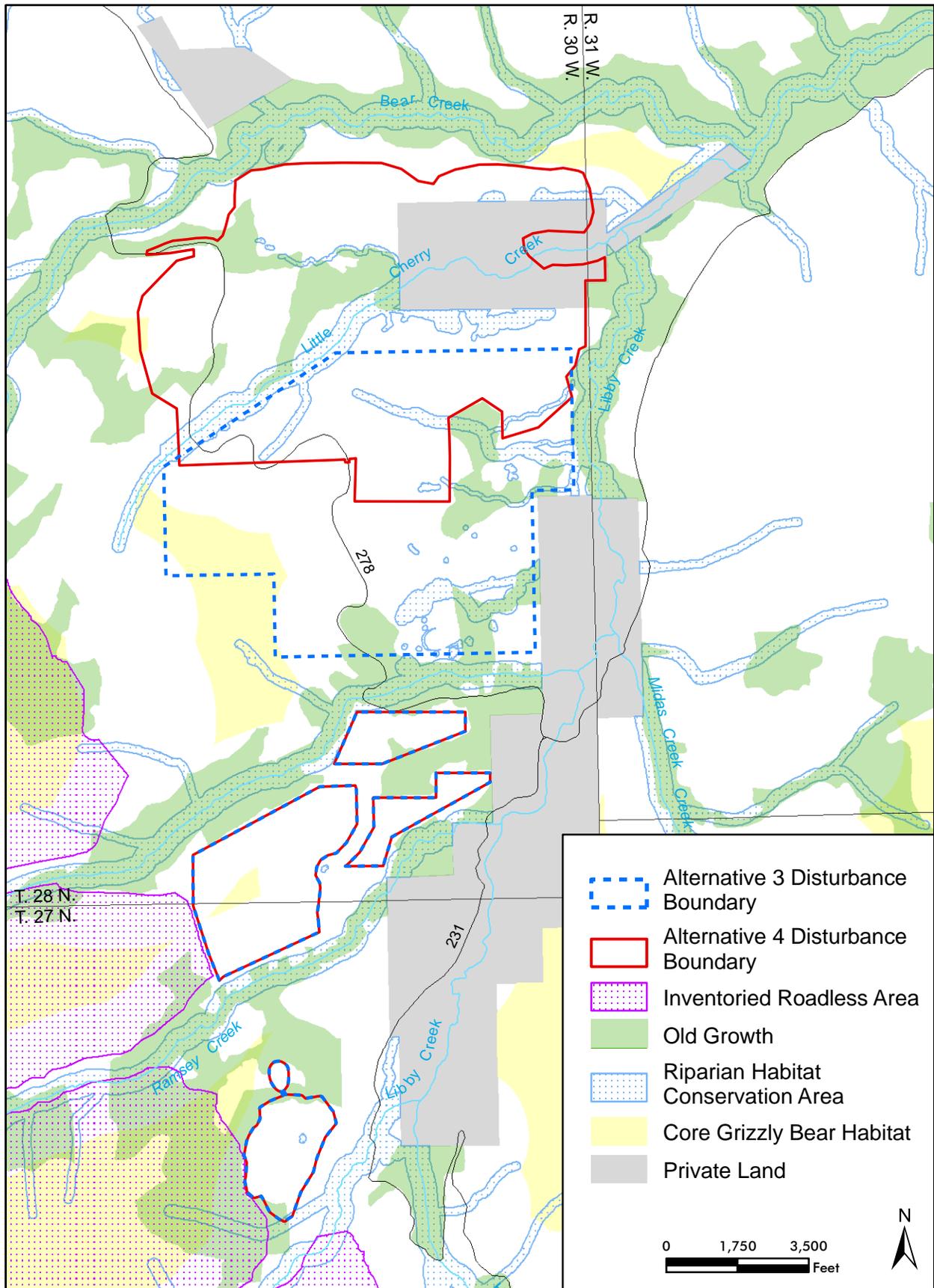


Figure 22. Key Resources Avoided by Alternatives 3 and 4

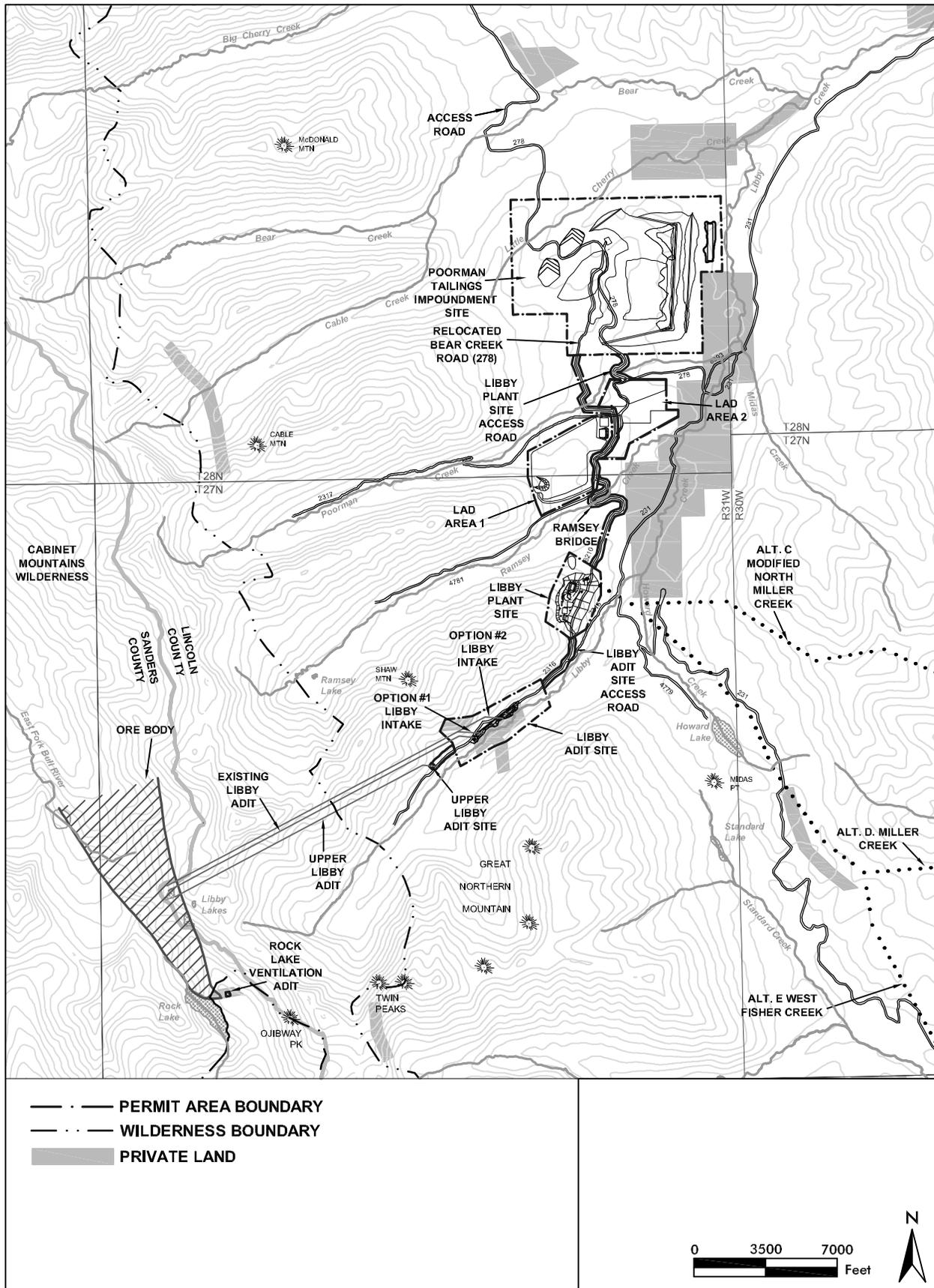


Figure 23. Mine Facilities and Permit Areas, Alternative 3

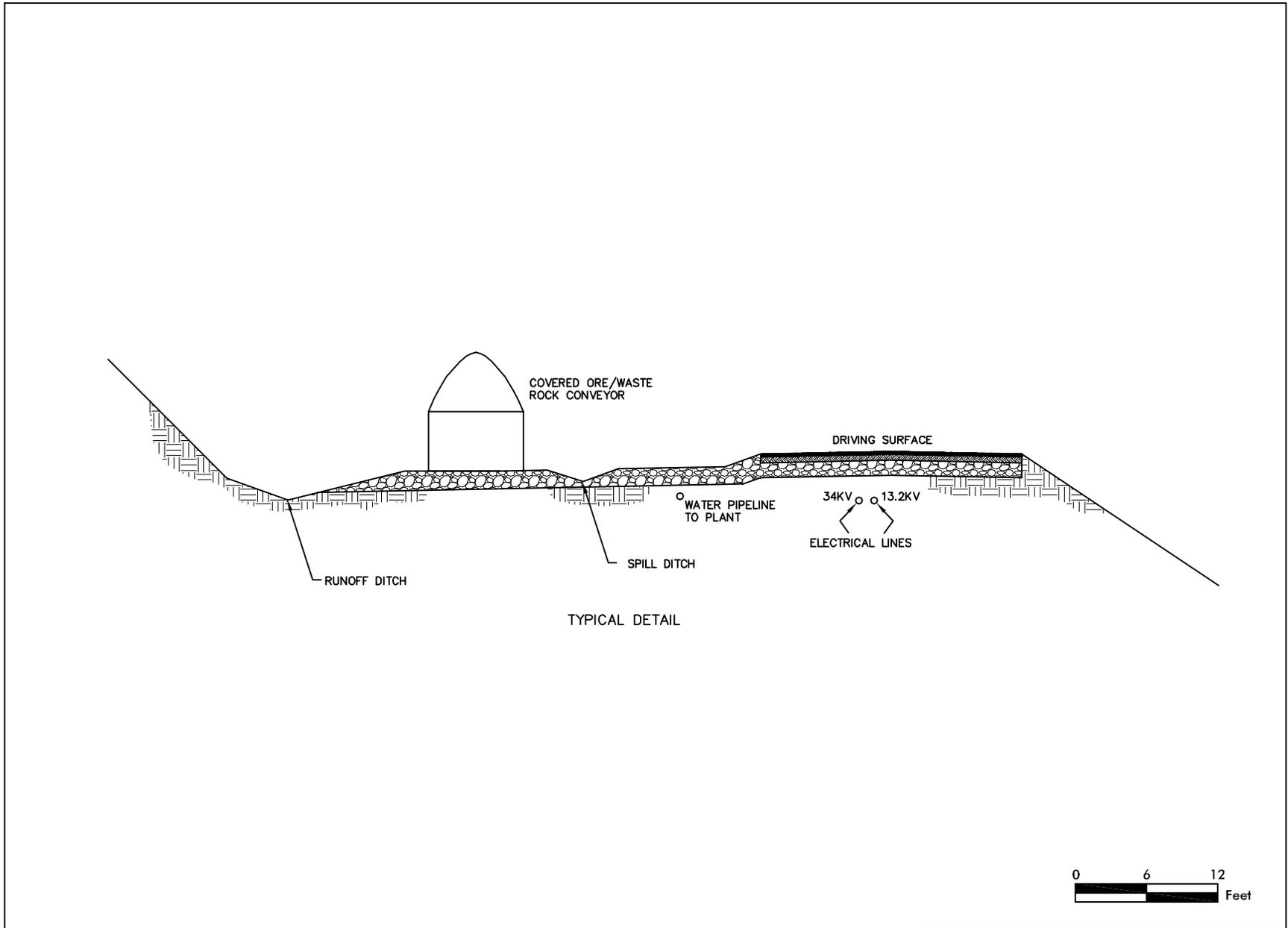


Figure 24. Detail of Overland Conveyor and Libby Adit Access Road, Alternatives 3 and 4

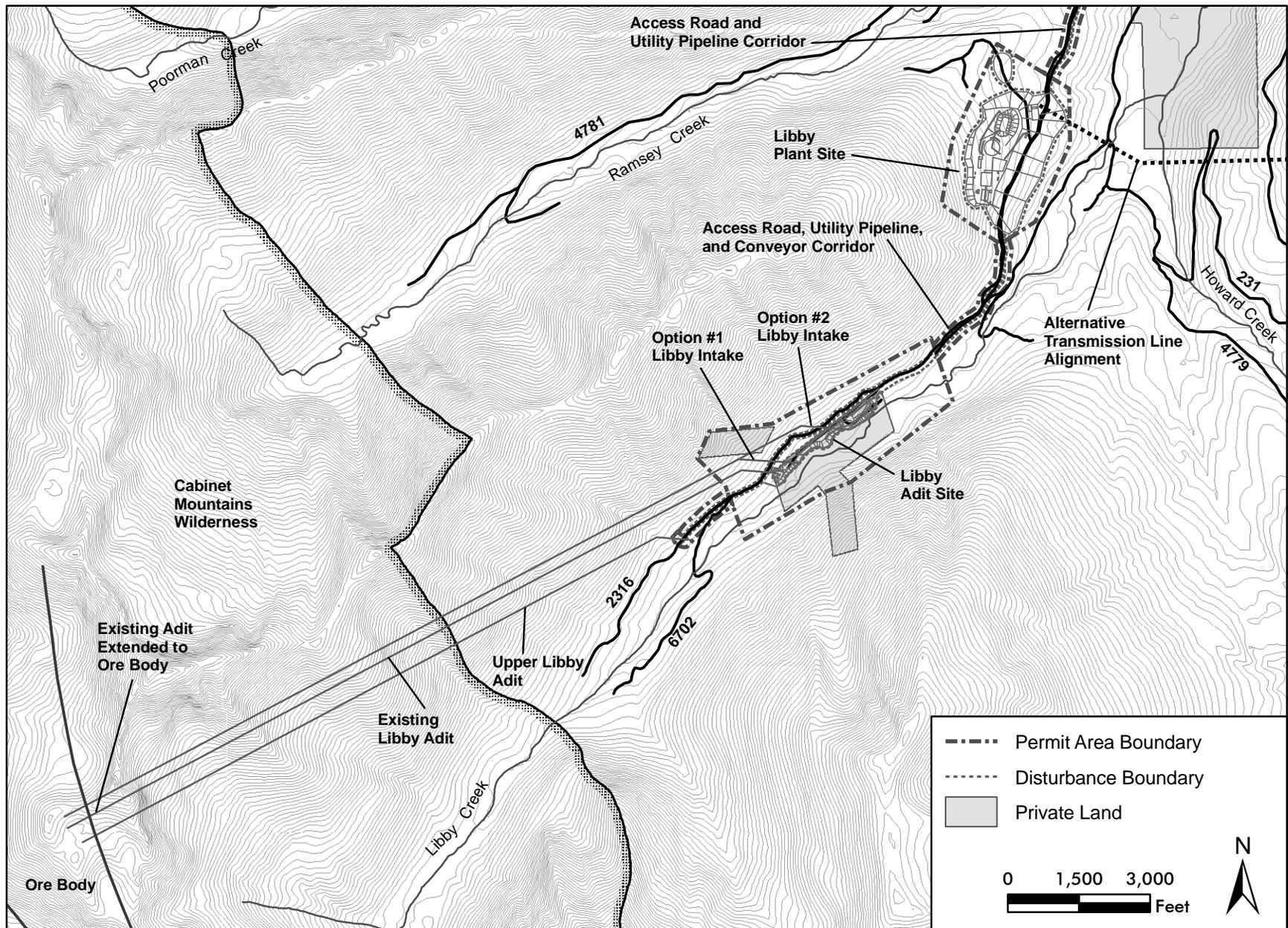


Figure 25. Libby Plant Site and Adits, Alternatives 3 and 4

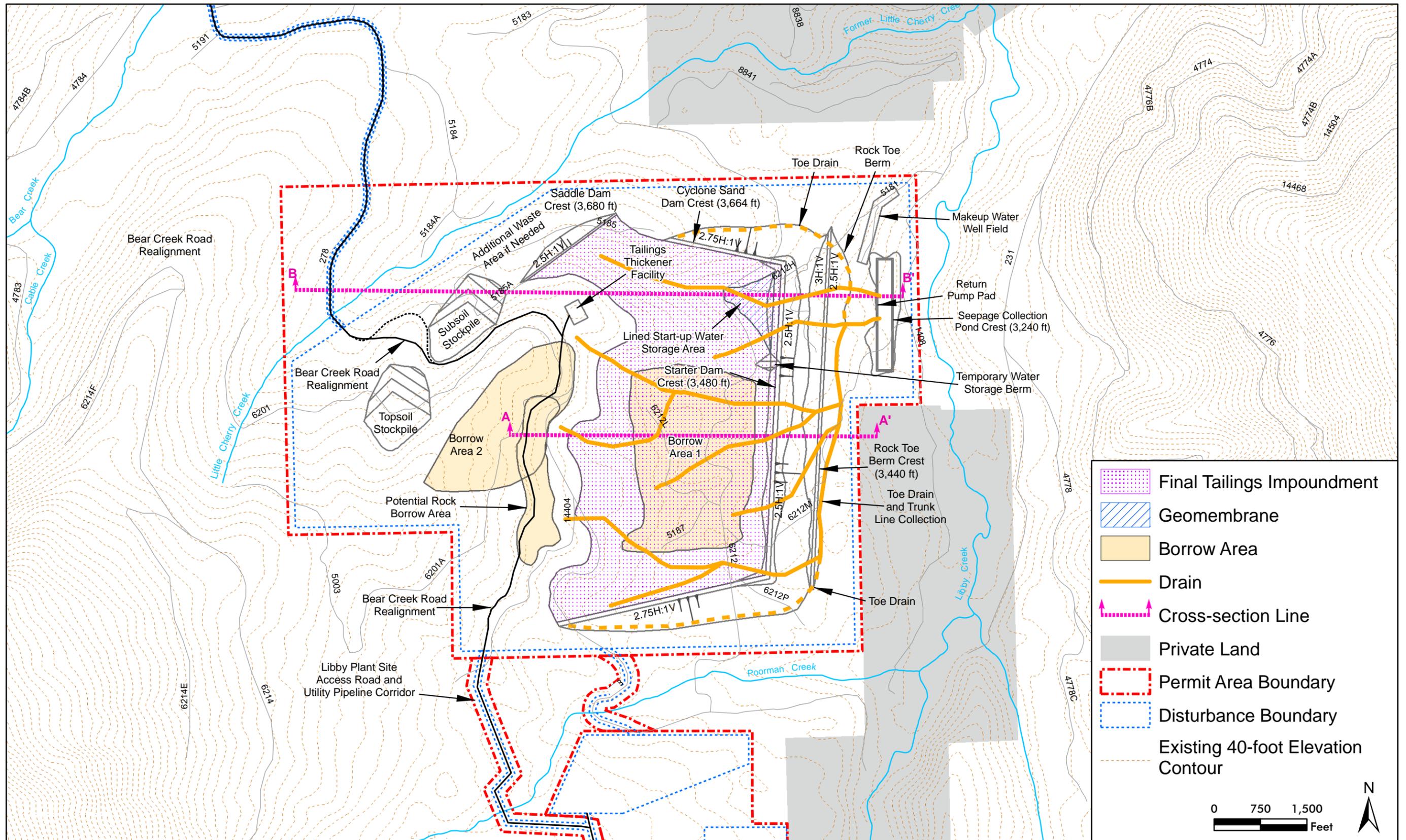


Figure 26. Poorman Tailings Impoundment Site, Alternative 3

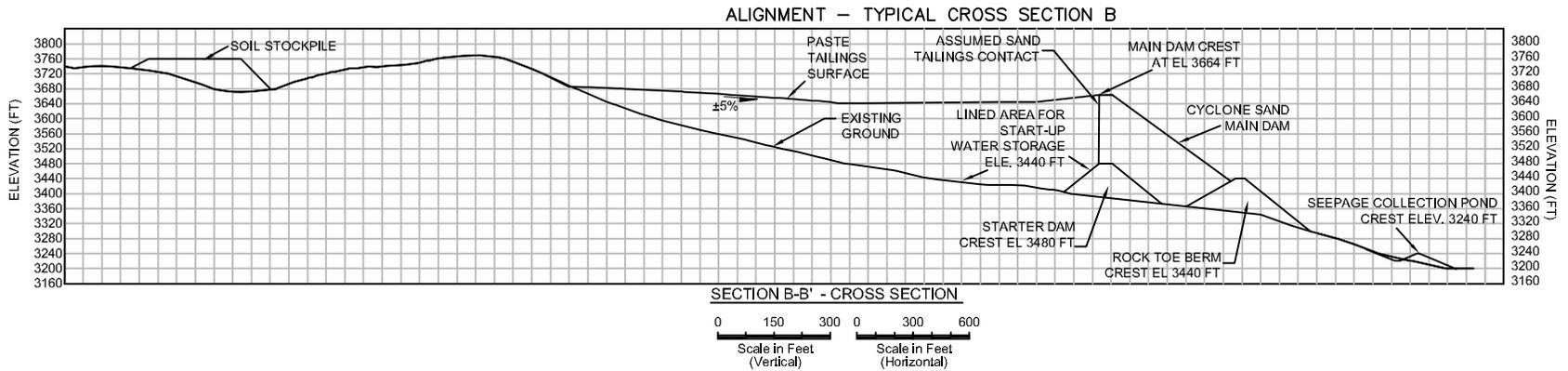
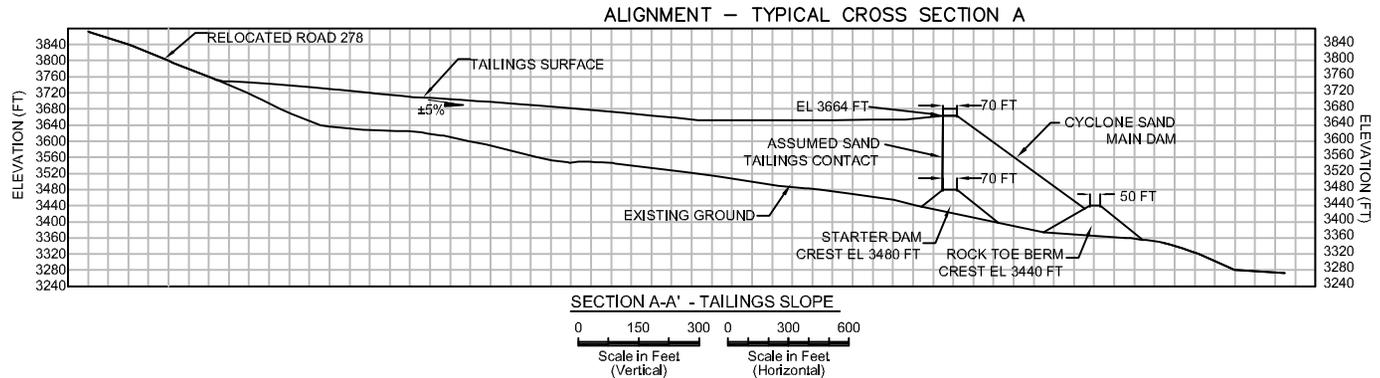


Figure 27. Poorman Tailings Impoundment Cross Sections

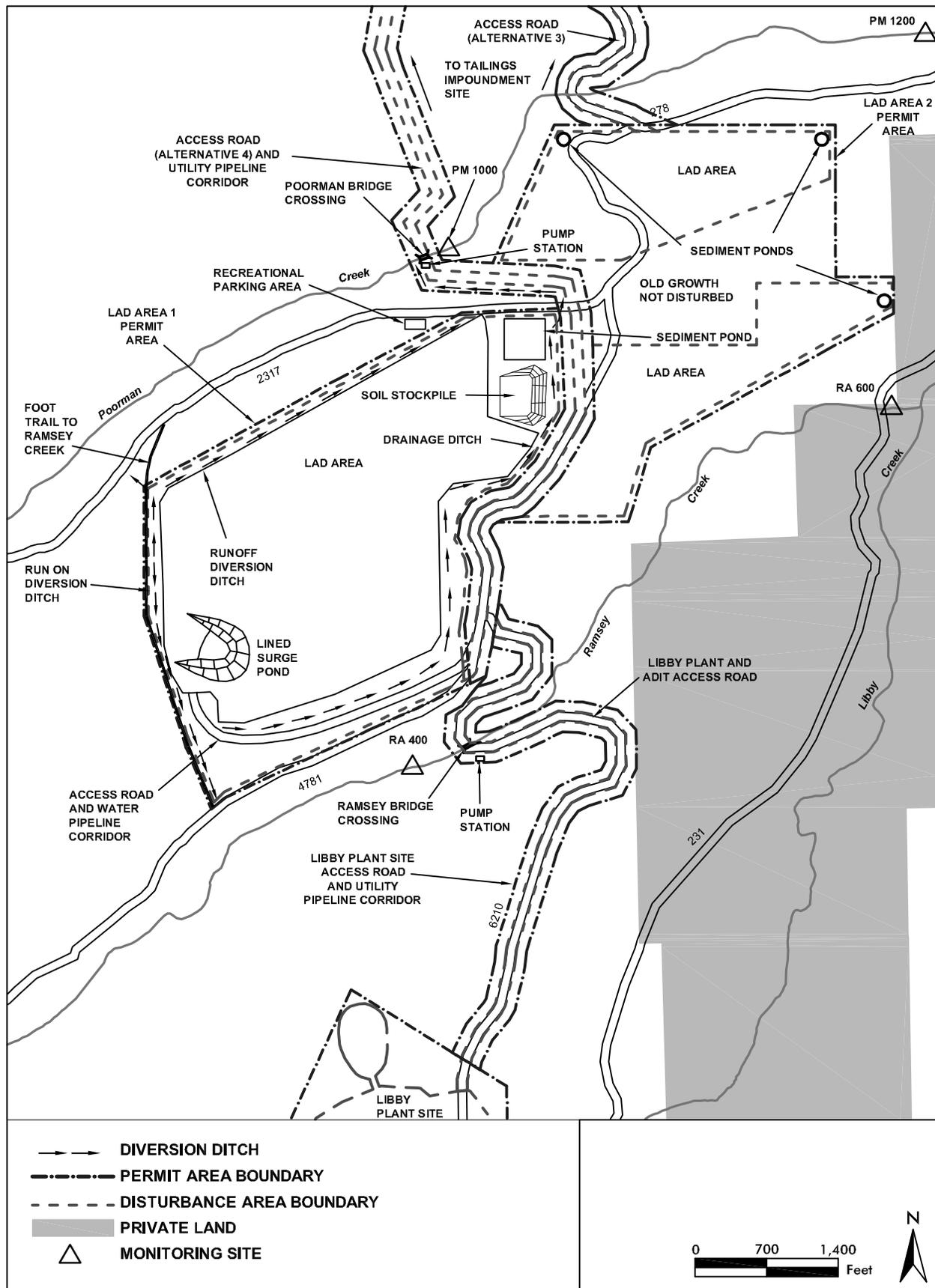


Figure 28. LAD Areas 1 and 2, Alternatives 3 and 4

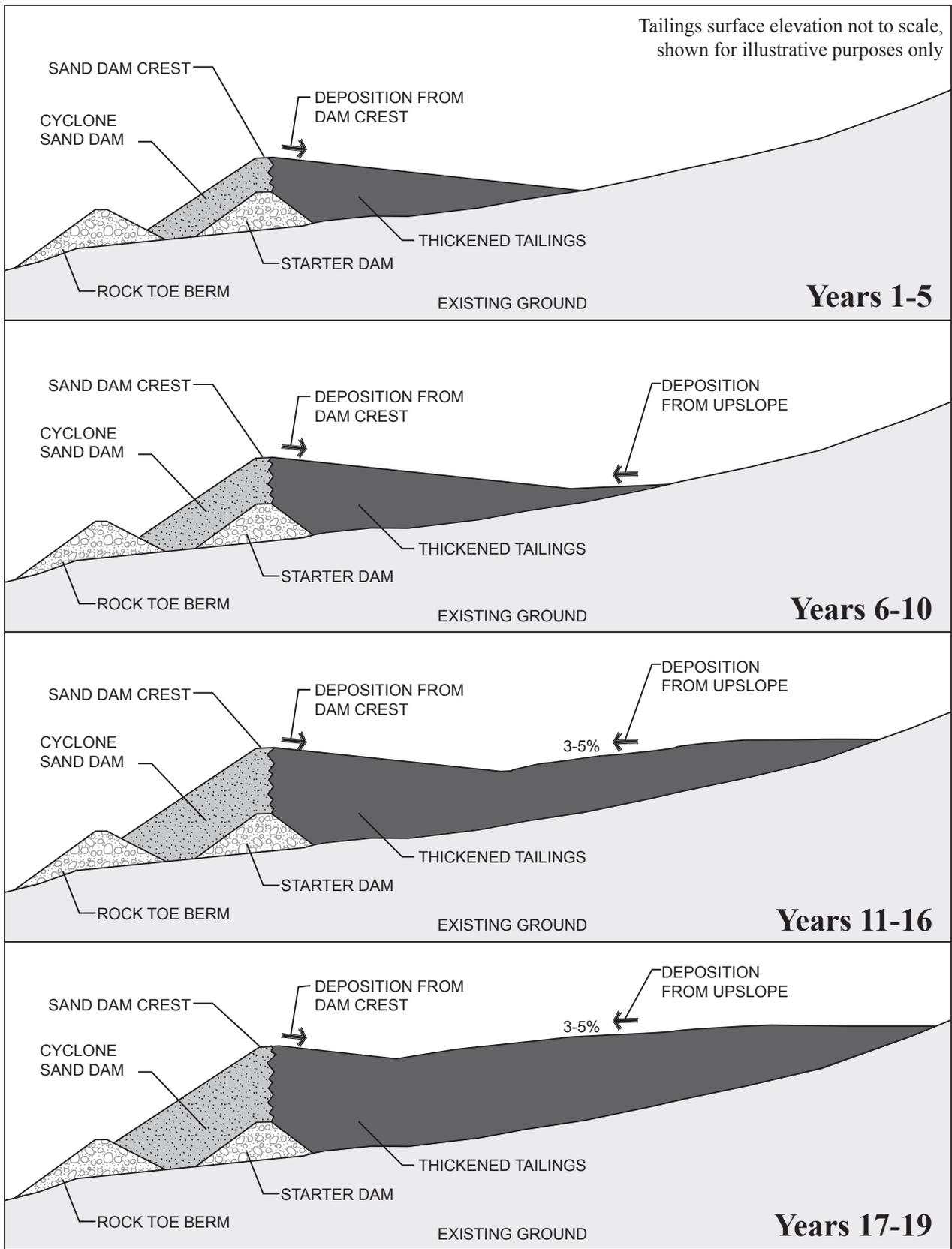


Figure 29. Tailings Deposition over Time, Alternative 3

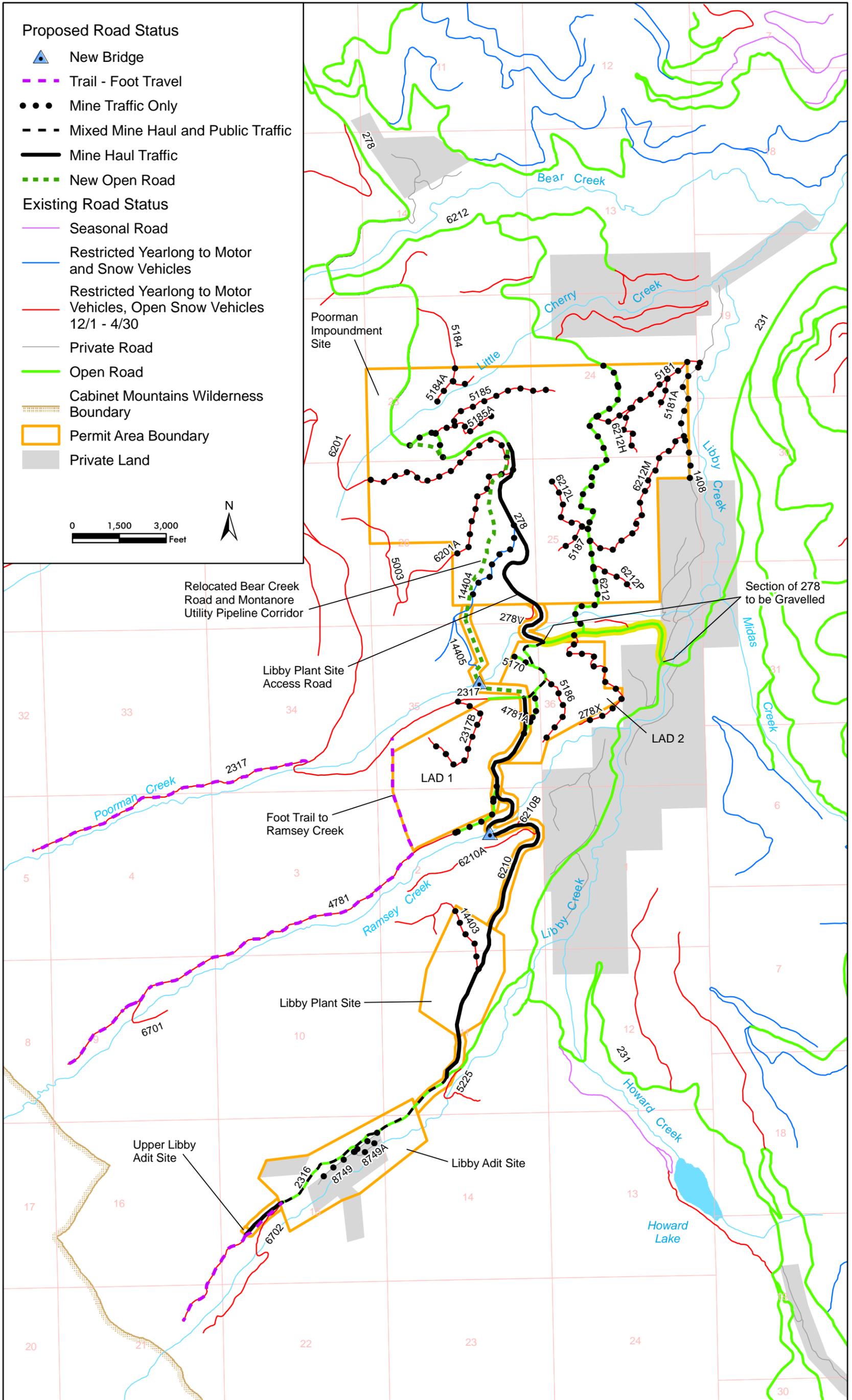


Figure 30. Roads Proposed for Use in Alternative 3

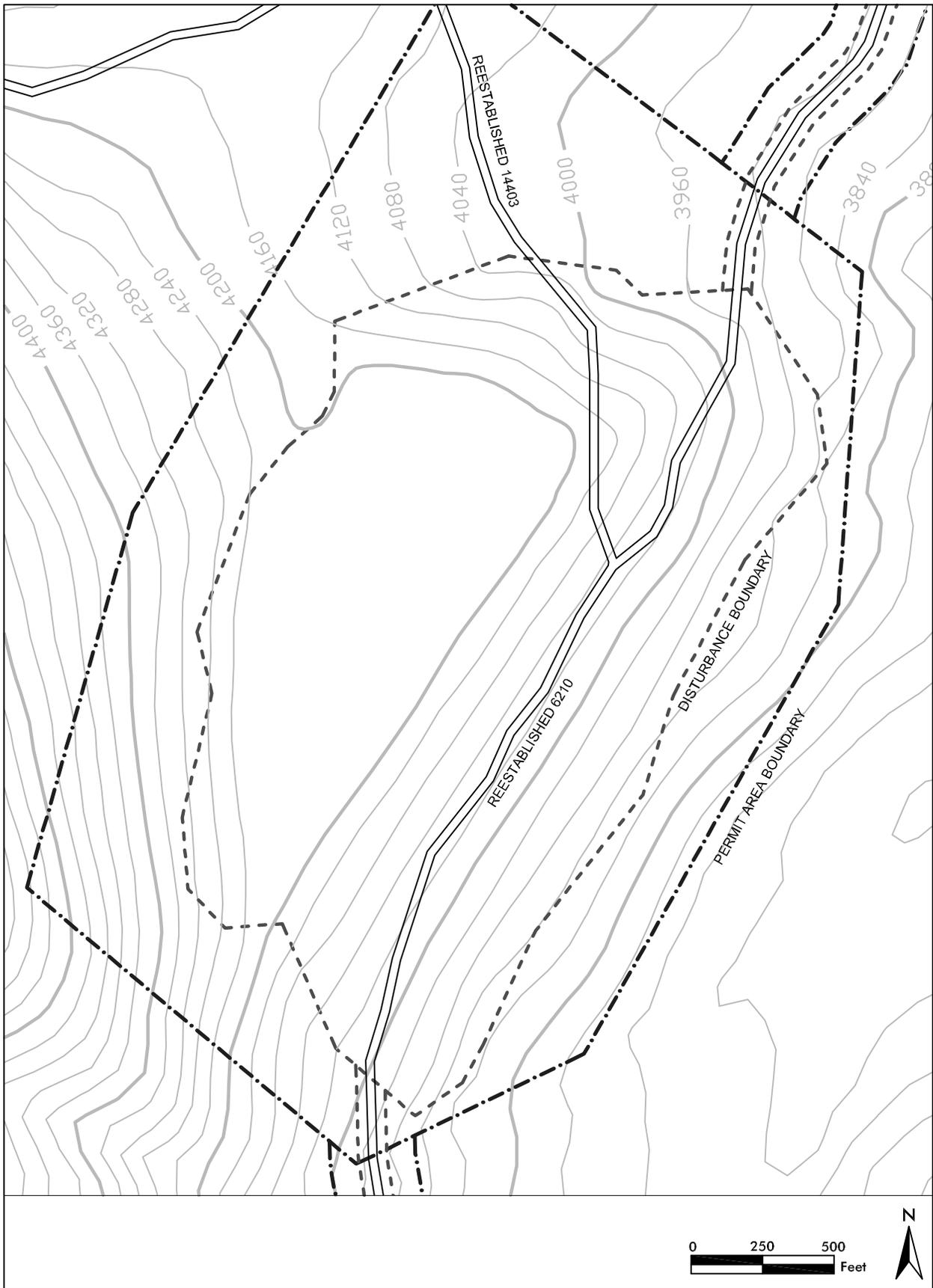


Figure 31. Post-mining Topography, Libby Plant Site, Alternatives 3 and 4

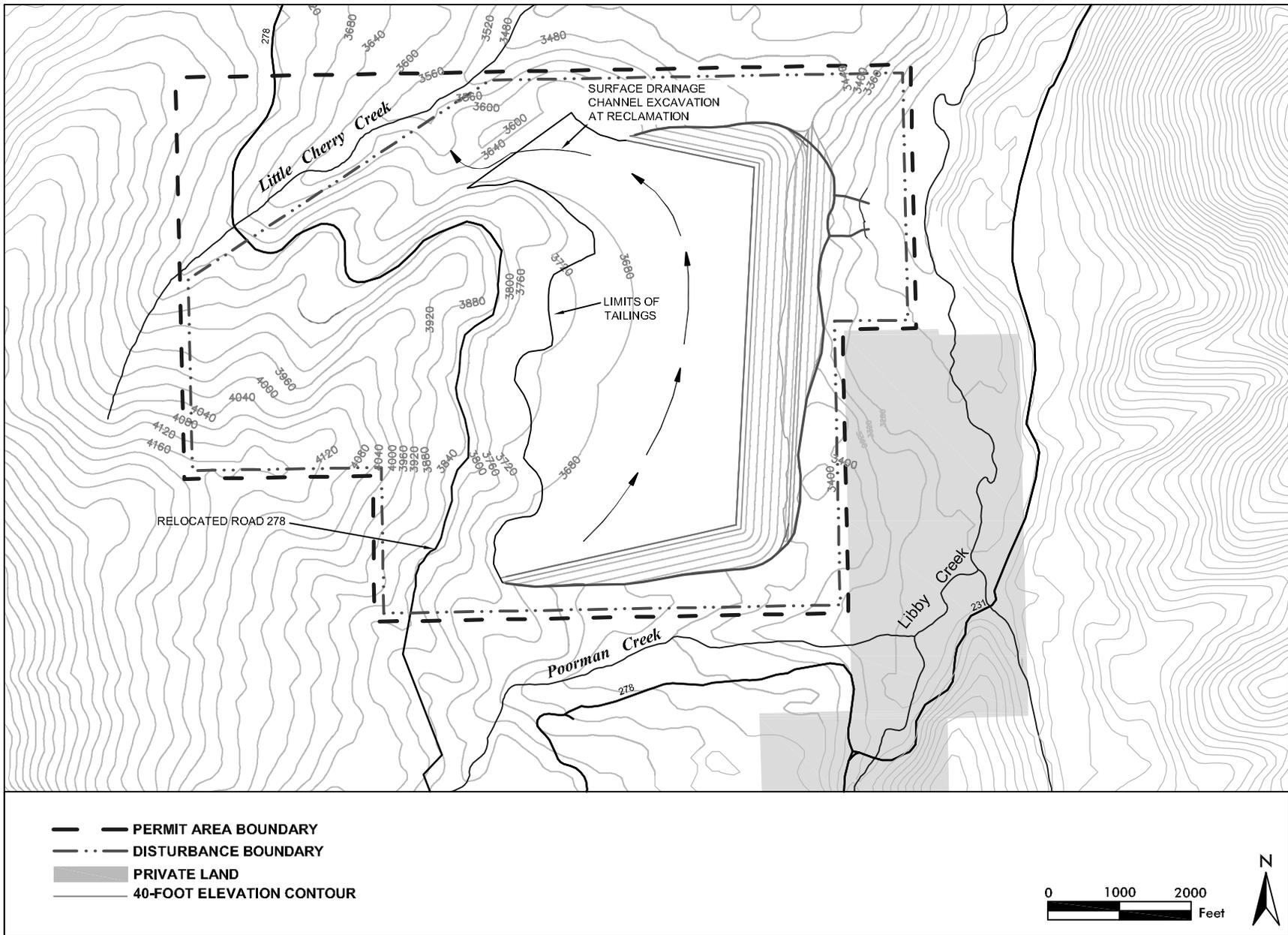


Figure 32. Post-mining Topography, Poorman Tailings Impoundment Site, Alternative 3

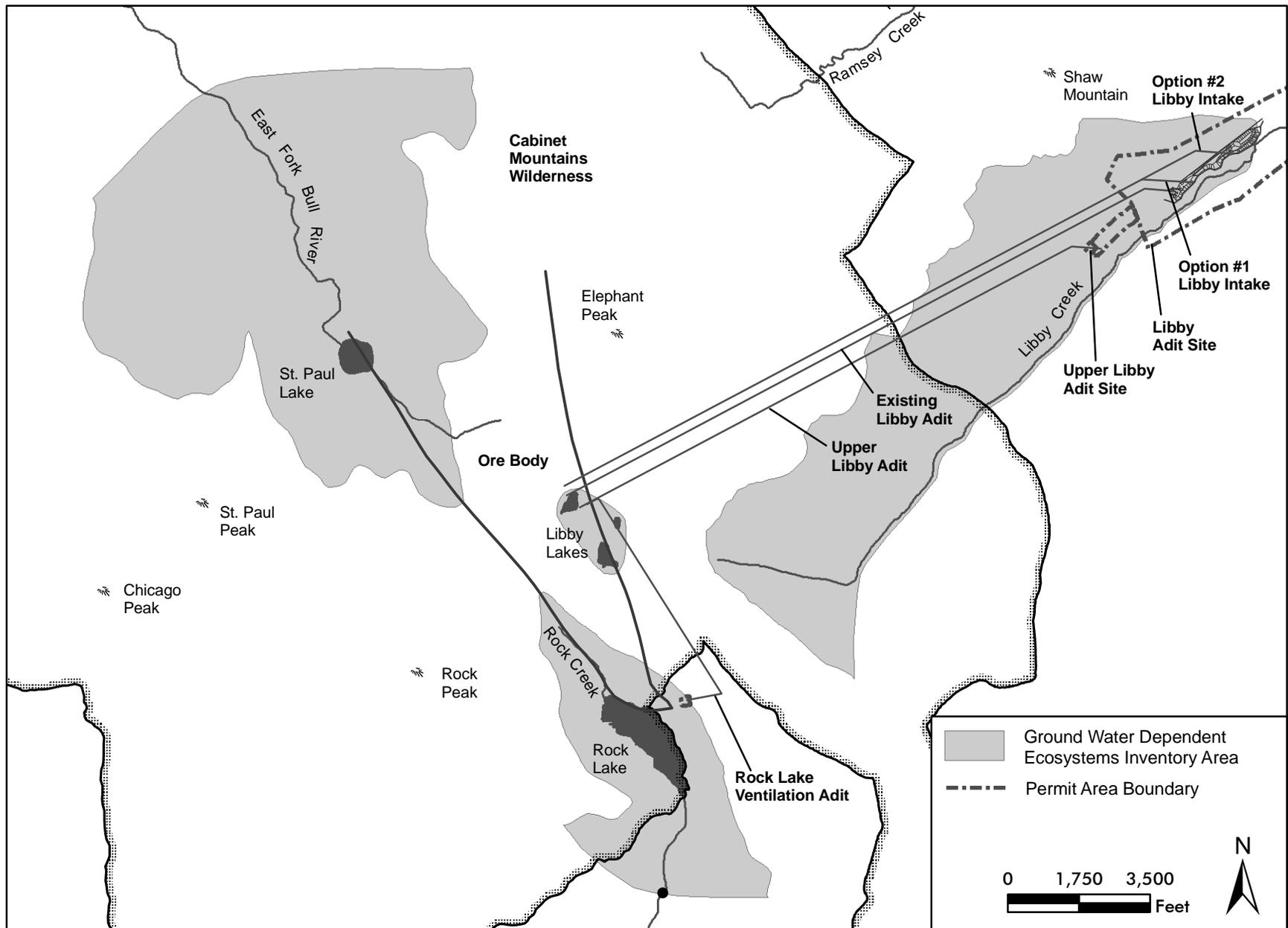


Figure 33. Ground Water Dependent Ecosystems Inventory Areas, Alternatives 3 and 4

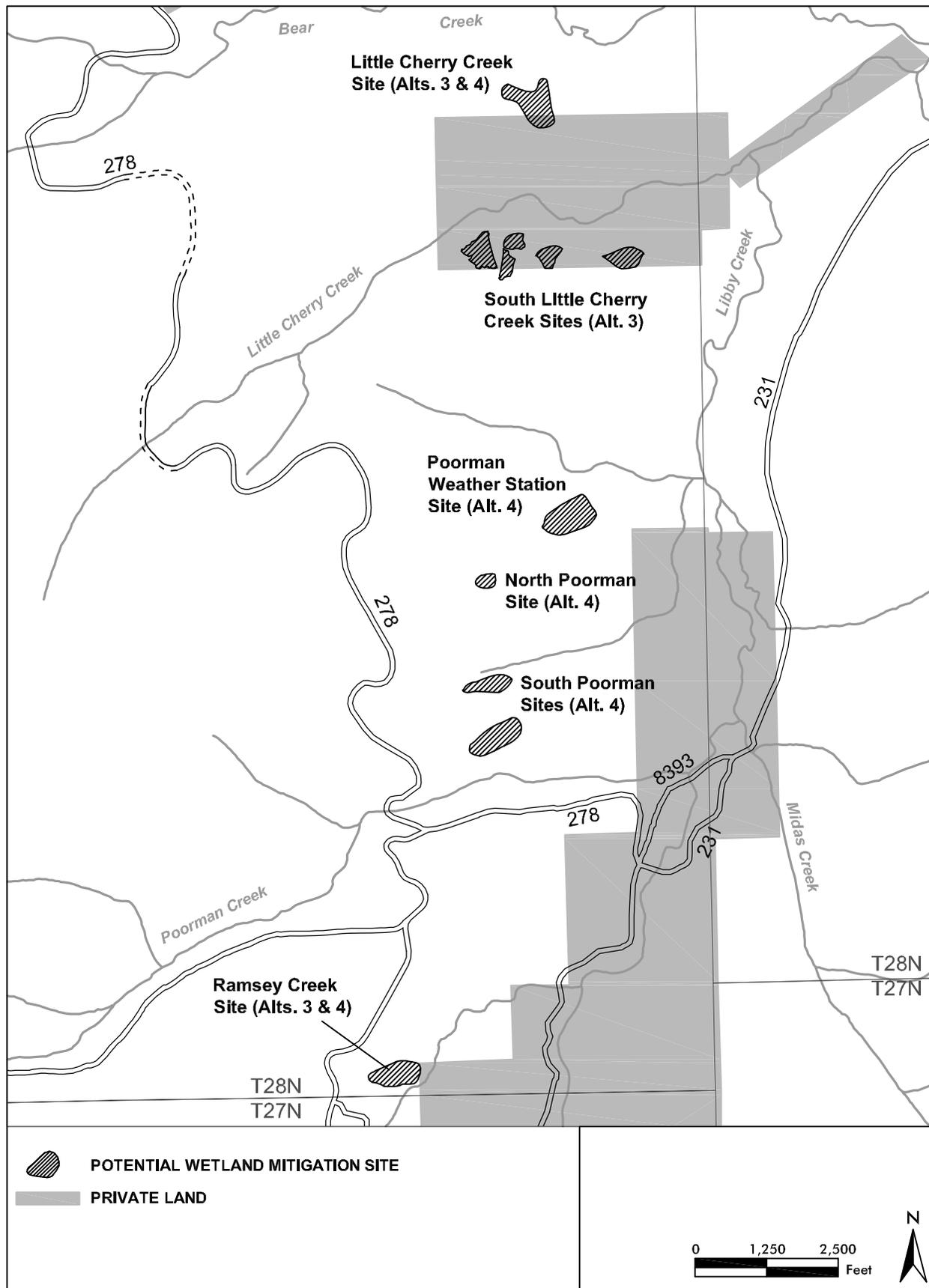


Figure 34. Potential Wetland Mitigation Sites, Alternatives 3 and 4

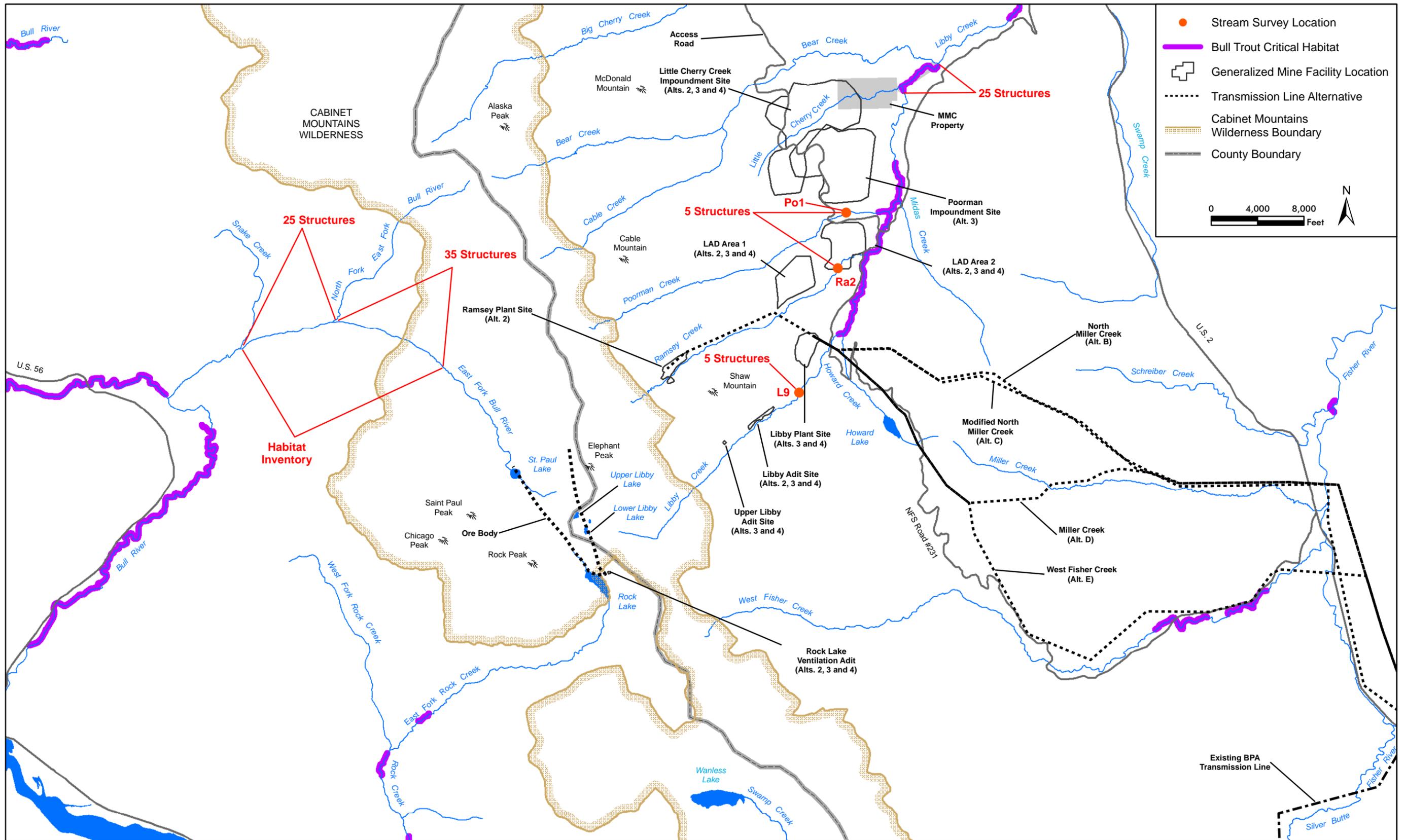


Figure 35. Proposed Fisheries Mitigation, Alternatives 3 and 4

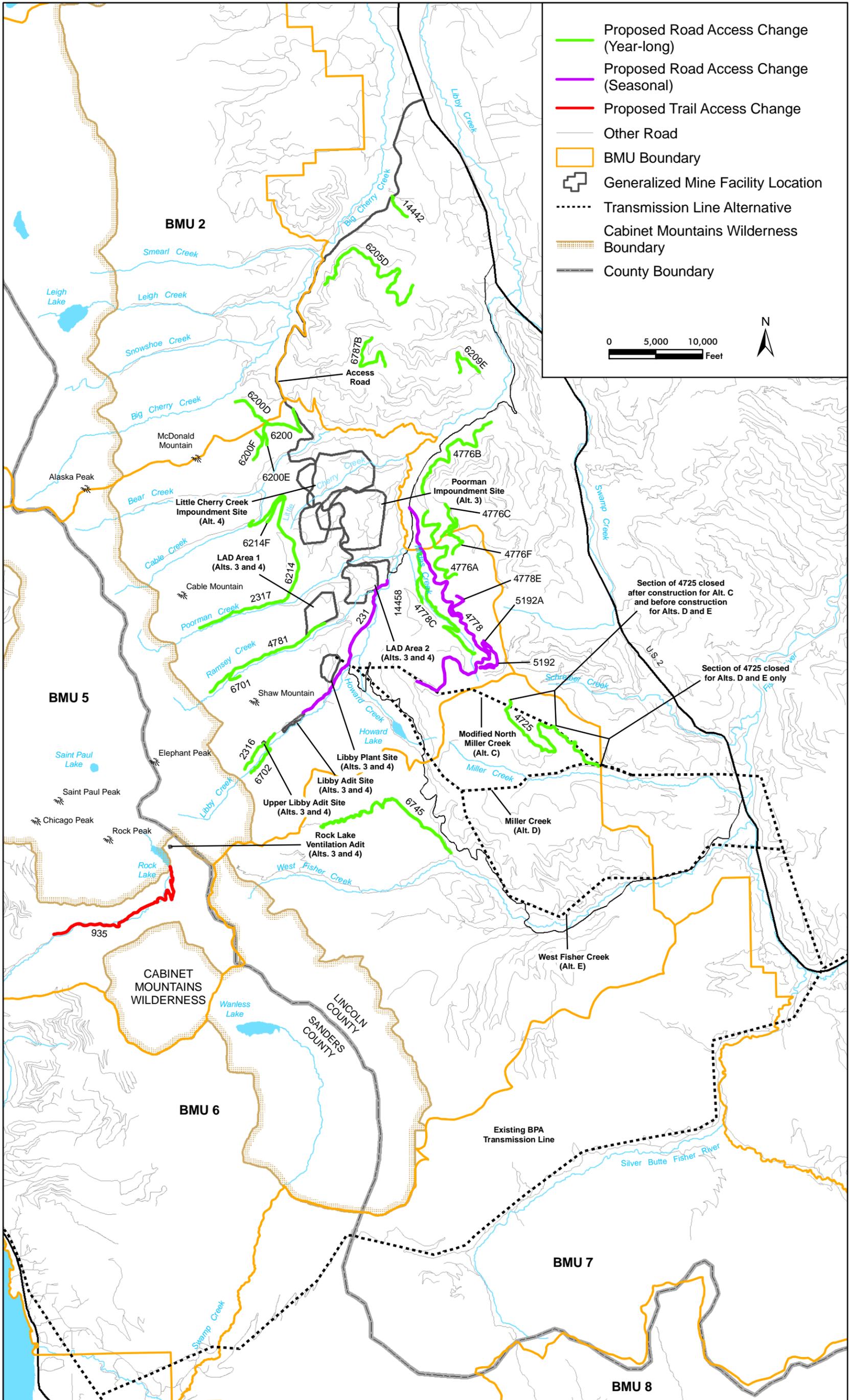


Figure 36. KNF Proposed Road and Trail Access Changes for Wildlife Mitigation, Alternatives 3, 4, C, D, and E

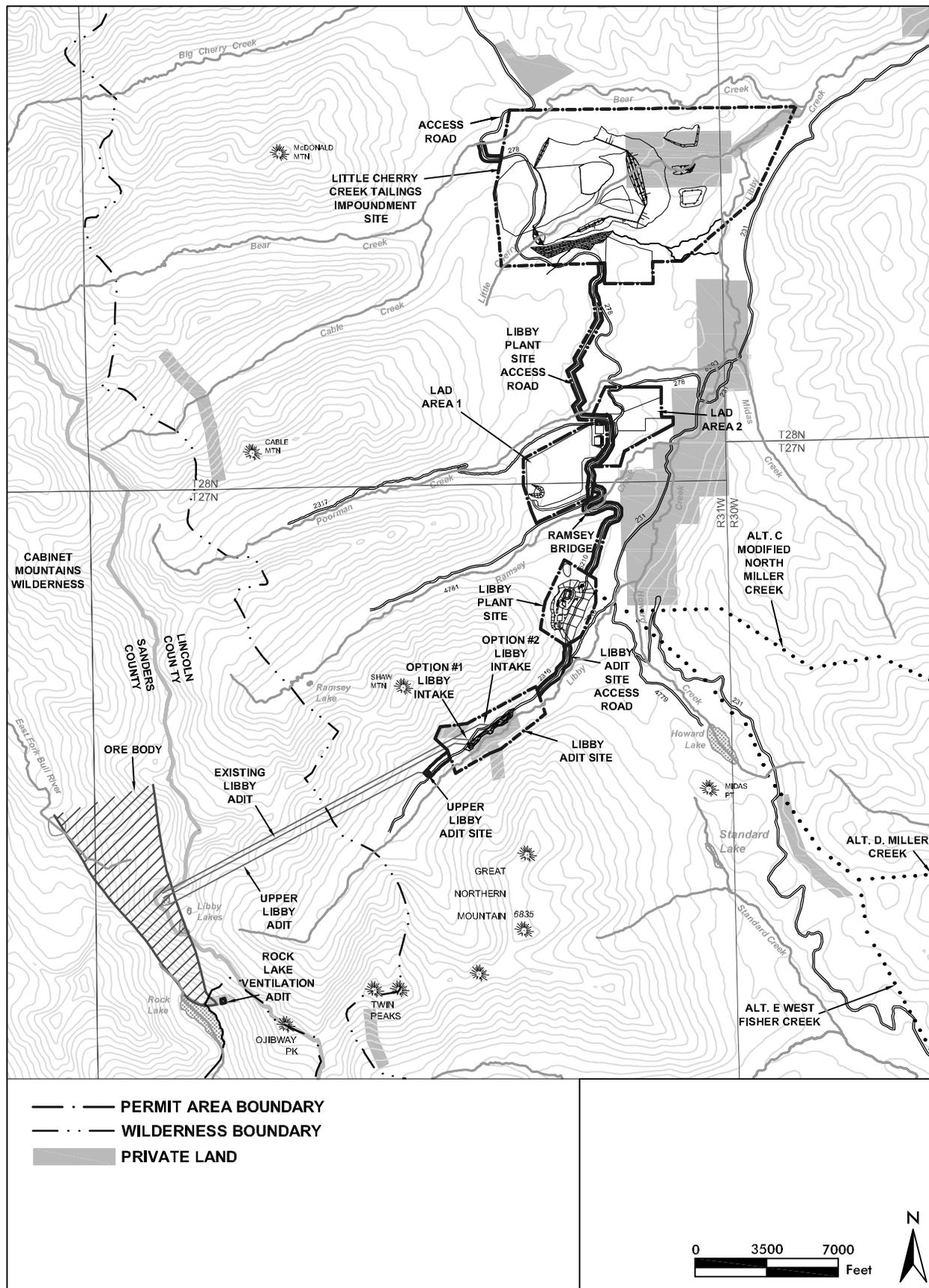


Figure 37. Mine Facilities and Permit Areas, Alternative 4

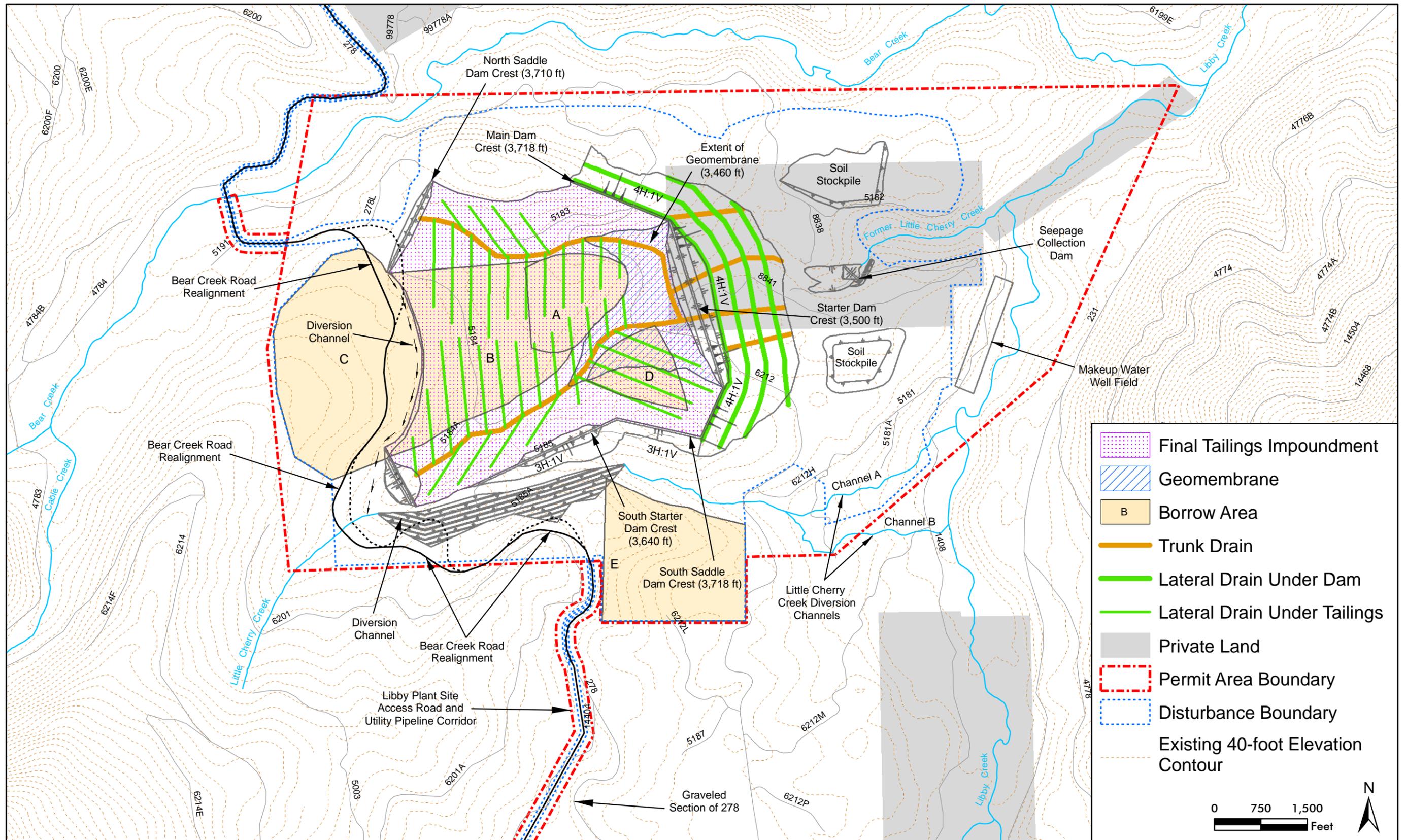


Figure 38. Little Cherry Creek Tailings Impoundment Site, Alternative 4



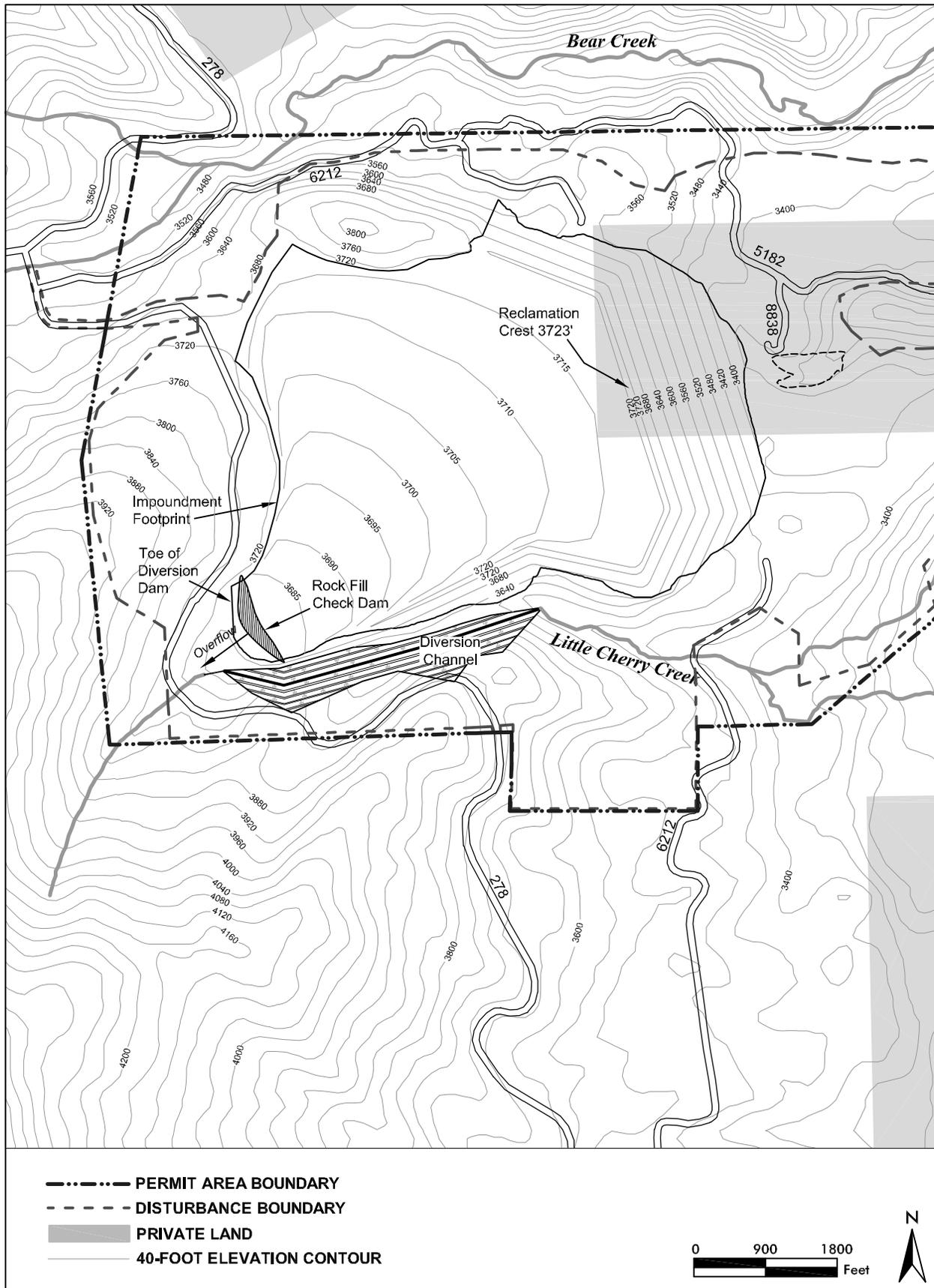


Figure 40. Post-mining Topography, Little Cherry Creek Tailings Impoundment Site, Alternative 4

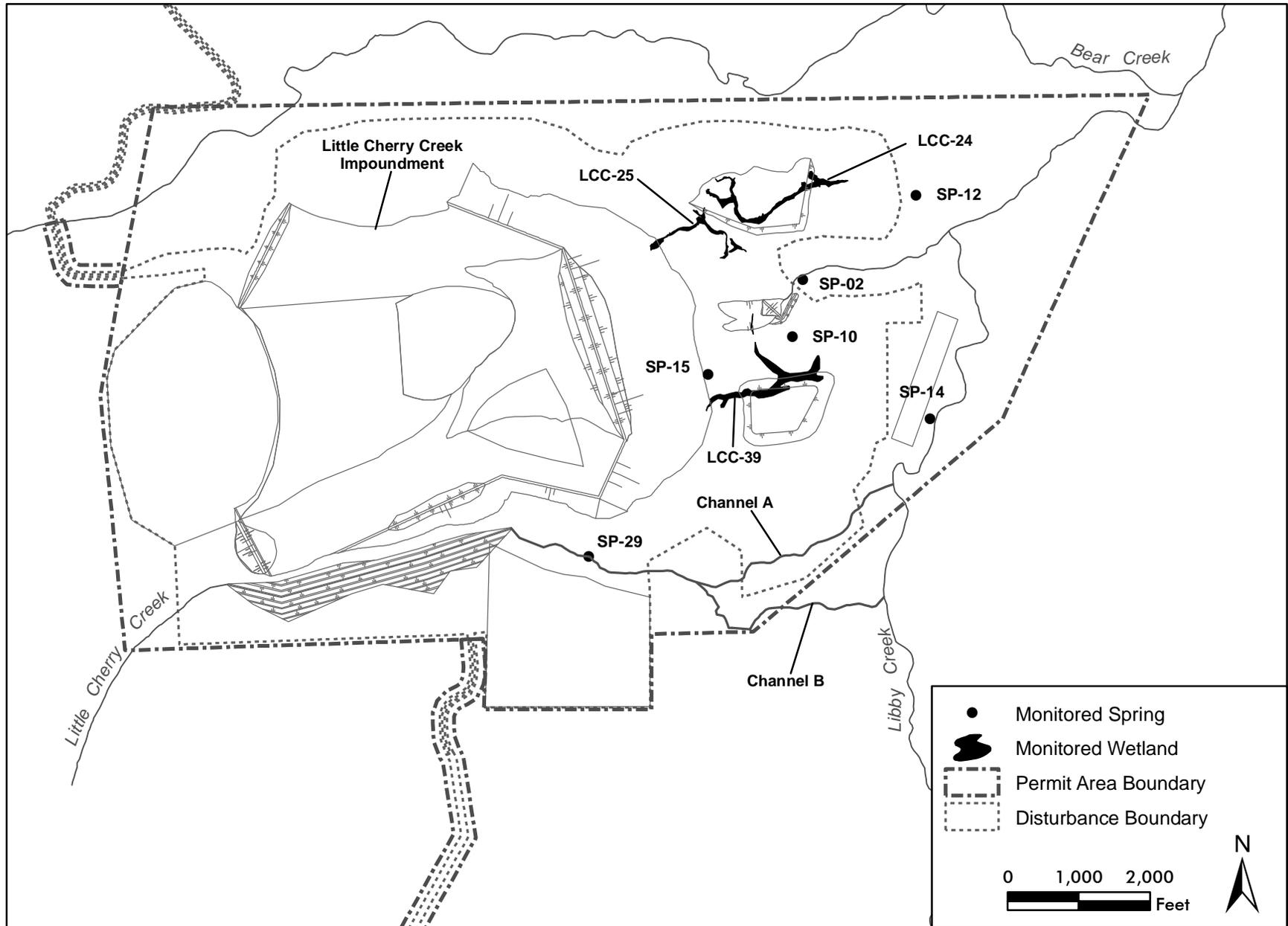


Figure 41. Spring and Wetland Monitoring Locations in the Impoundment Area, Alternative 4

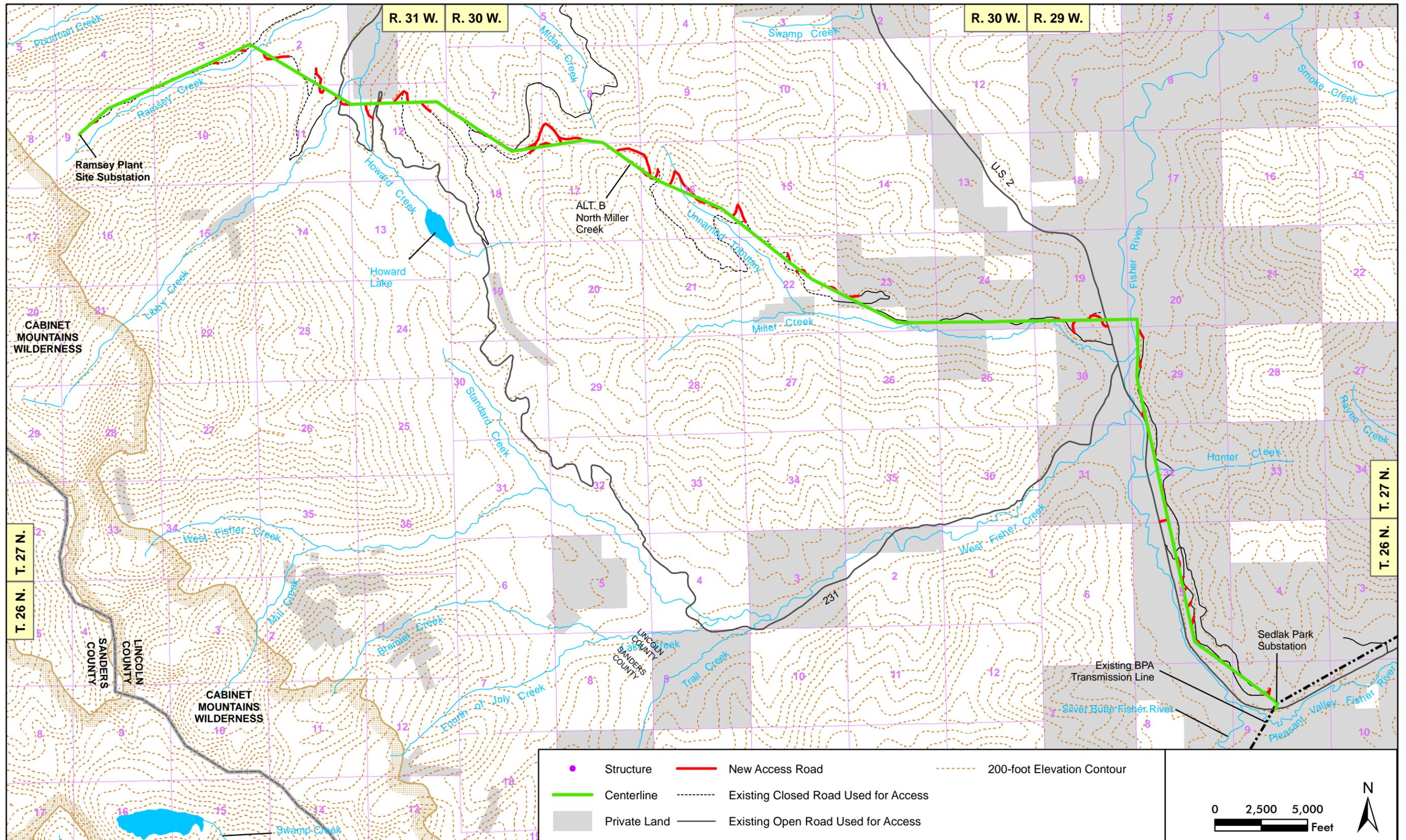


Figure 42. North Miller Creek Alignment, Structures, and Access Roads, Alternative B

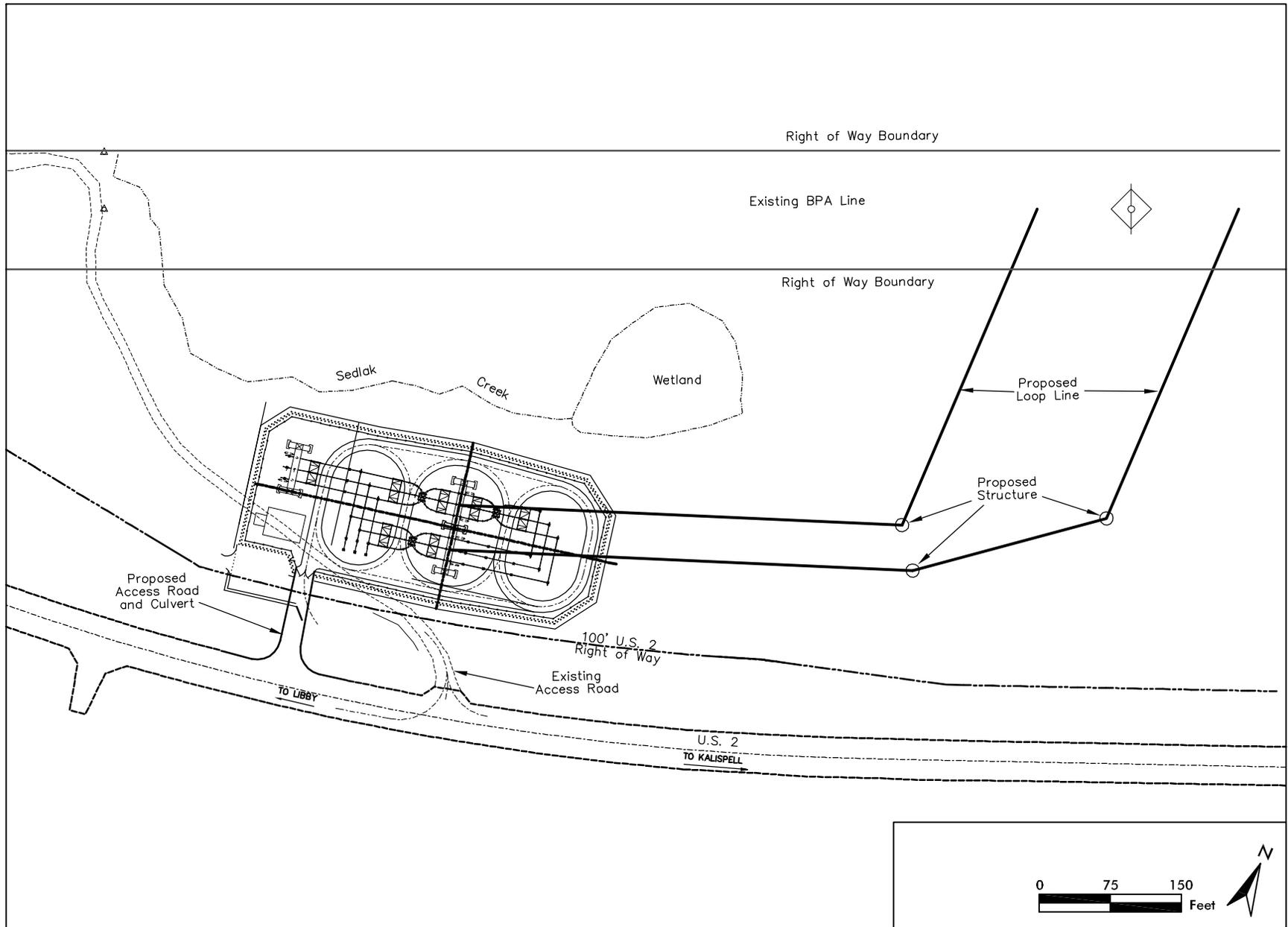
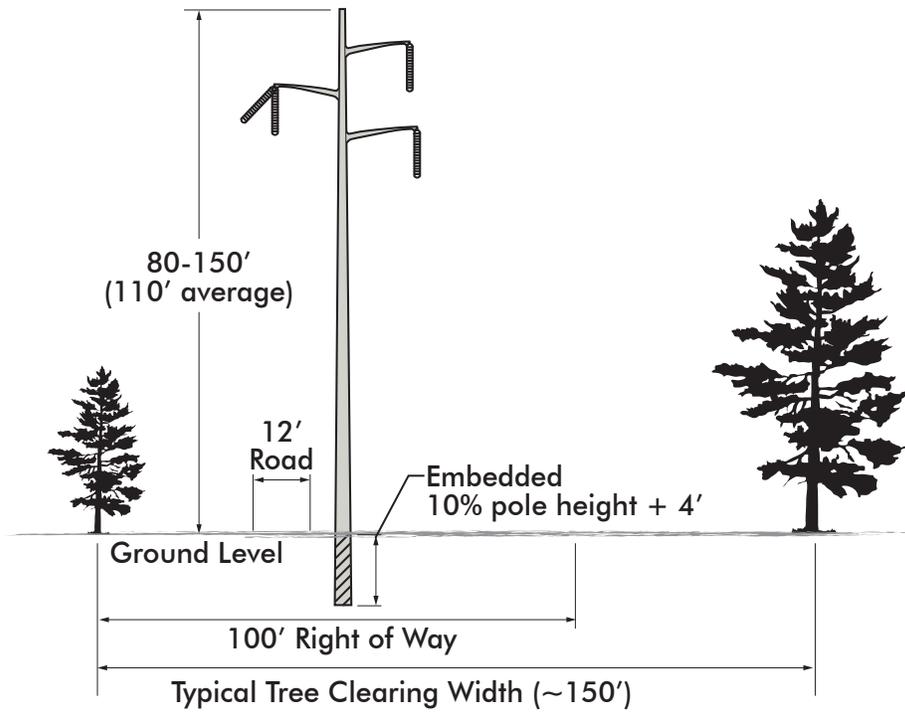
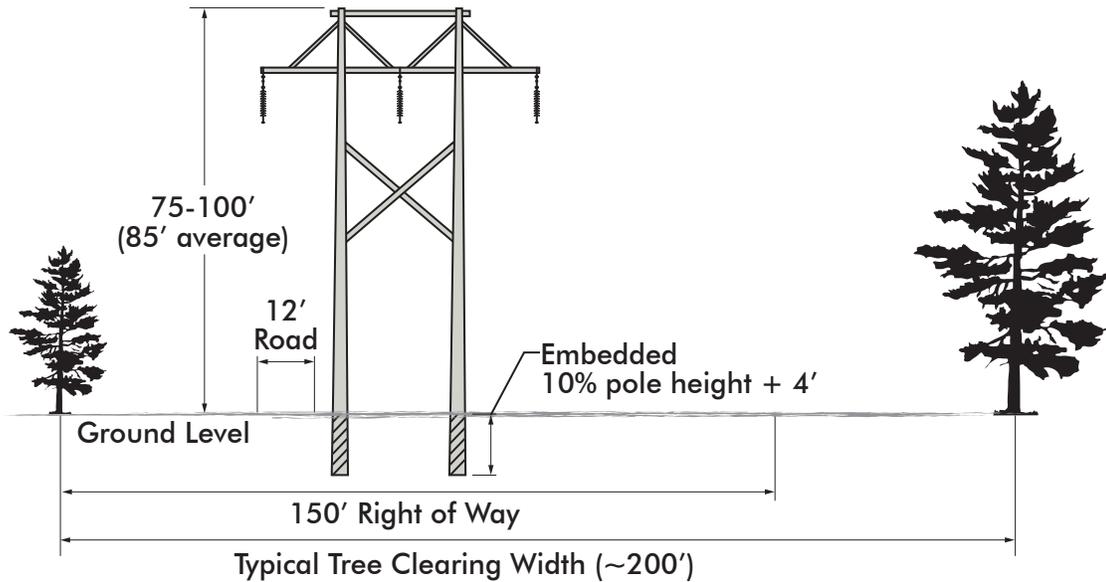


Figure 43. Sedlak Park Substation

## Monopole Structure



## H-Frame Structure



Note: most shrubs would not require clearing on either structure type.



Figure 44. Transmission Line Right-of-Way and Clearing Requirements

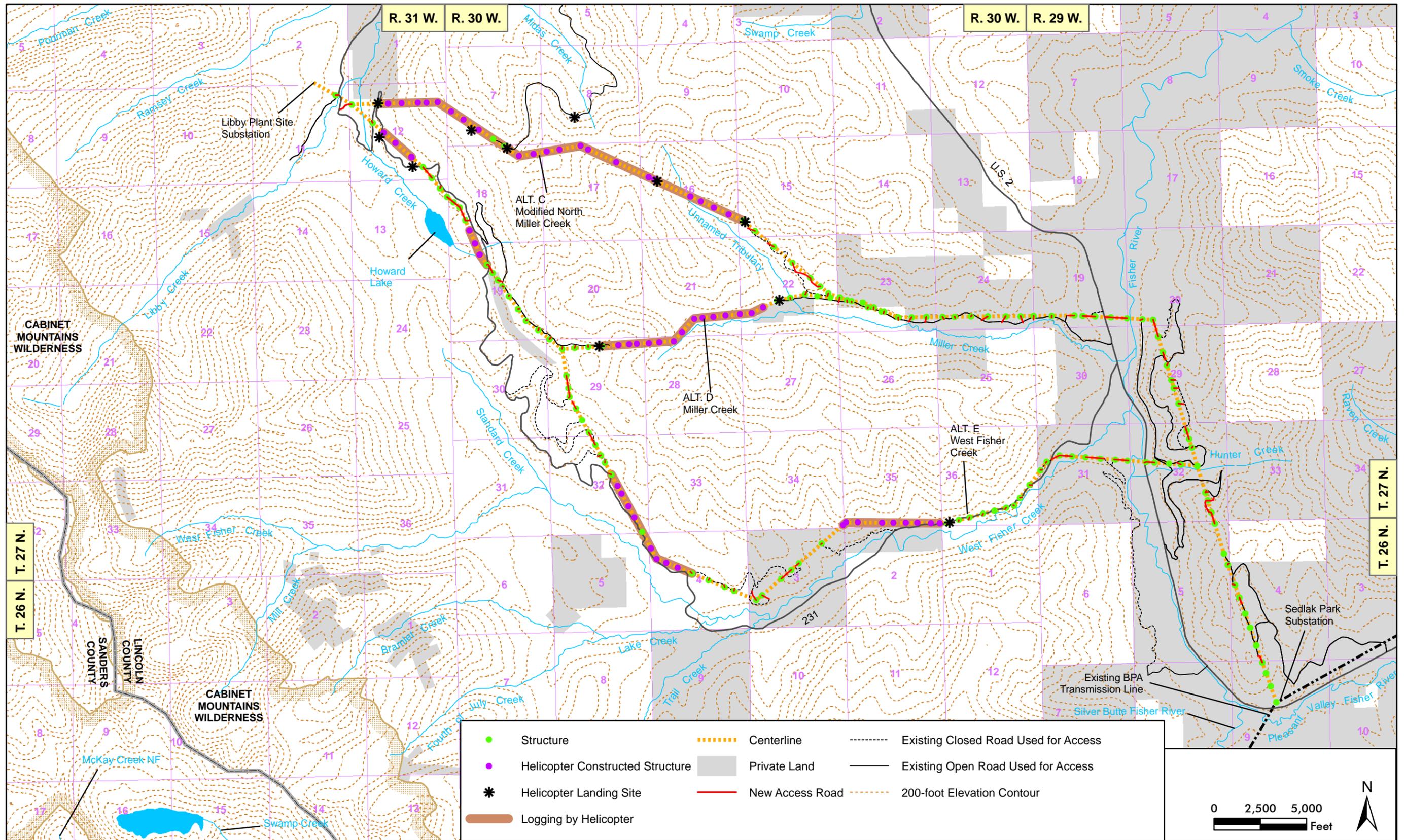


Figure 45. Transmission Line Alignment, Structures, and Access Roads, Alternatives C-E

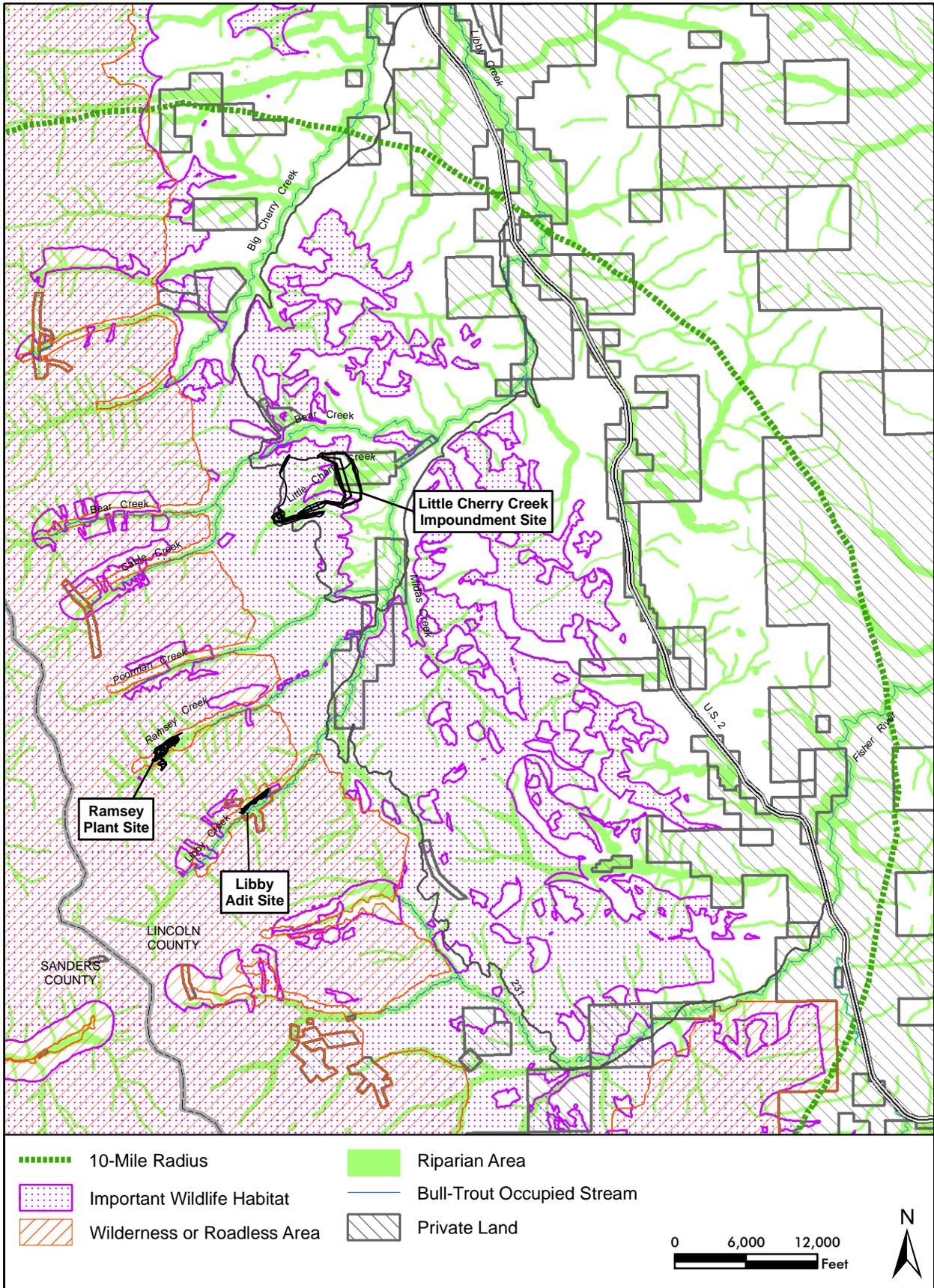


Figure 46. Key Resources Evaluated in the 2005-2007 Alternatives Analysis

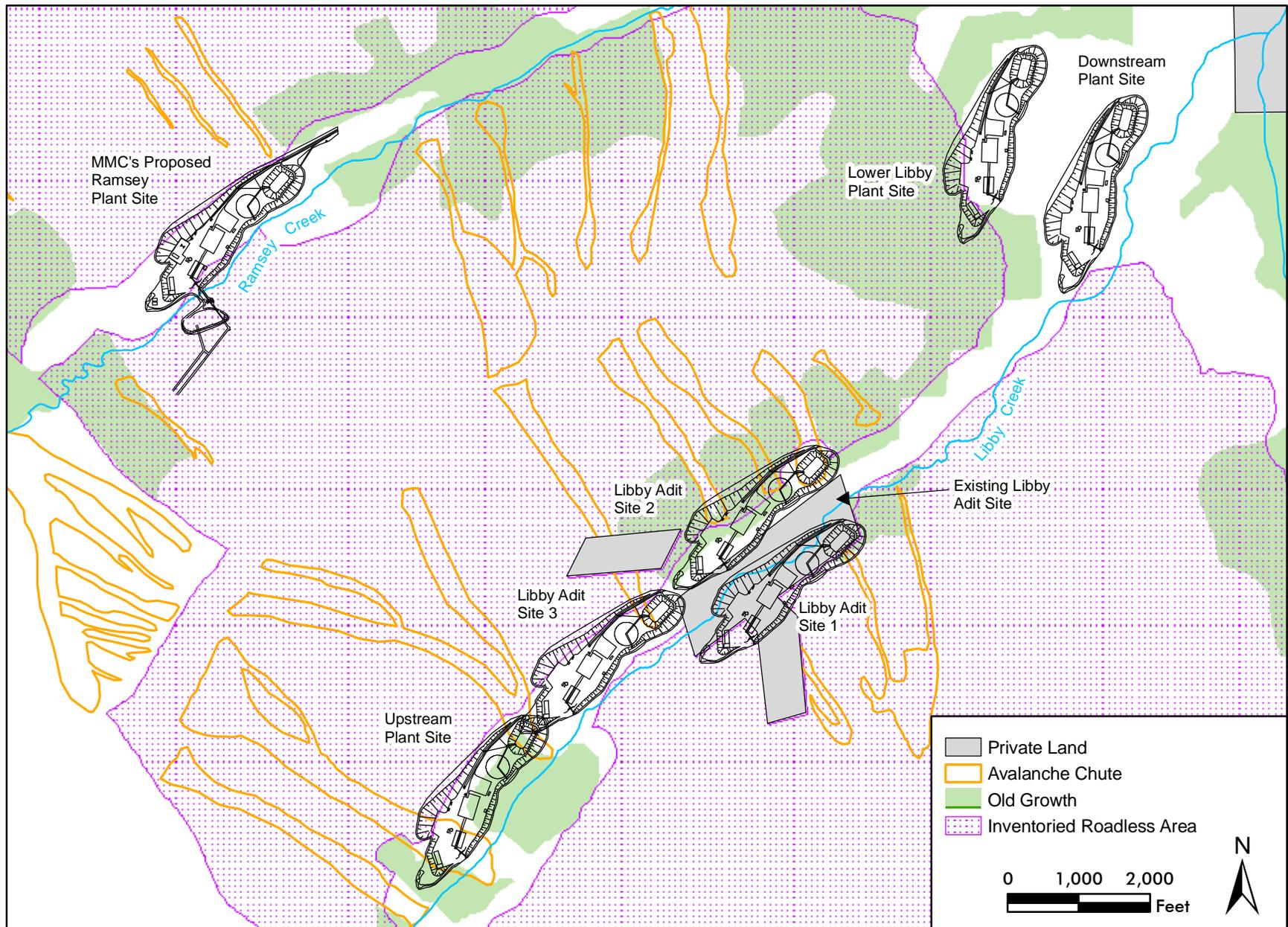


Figure 47. Plant Sites Evaluated in Upper Libby Creek for this EIS

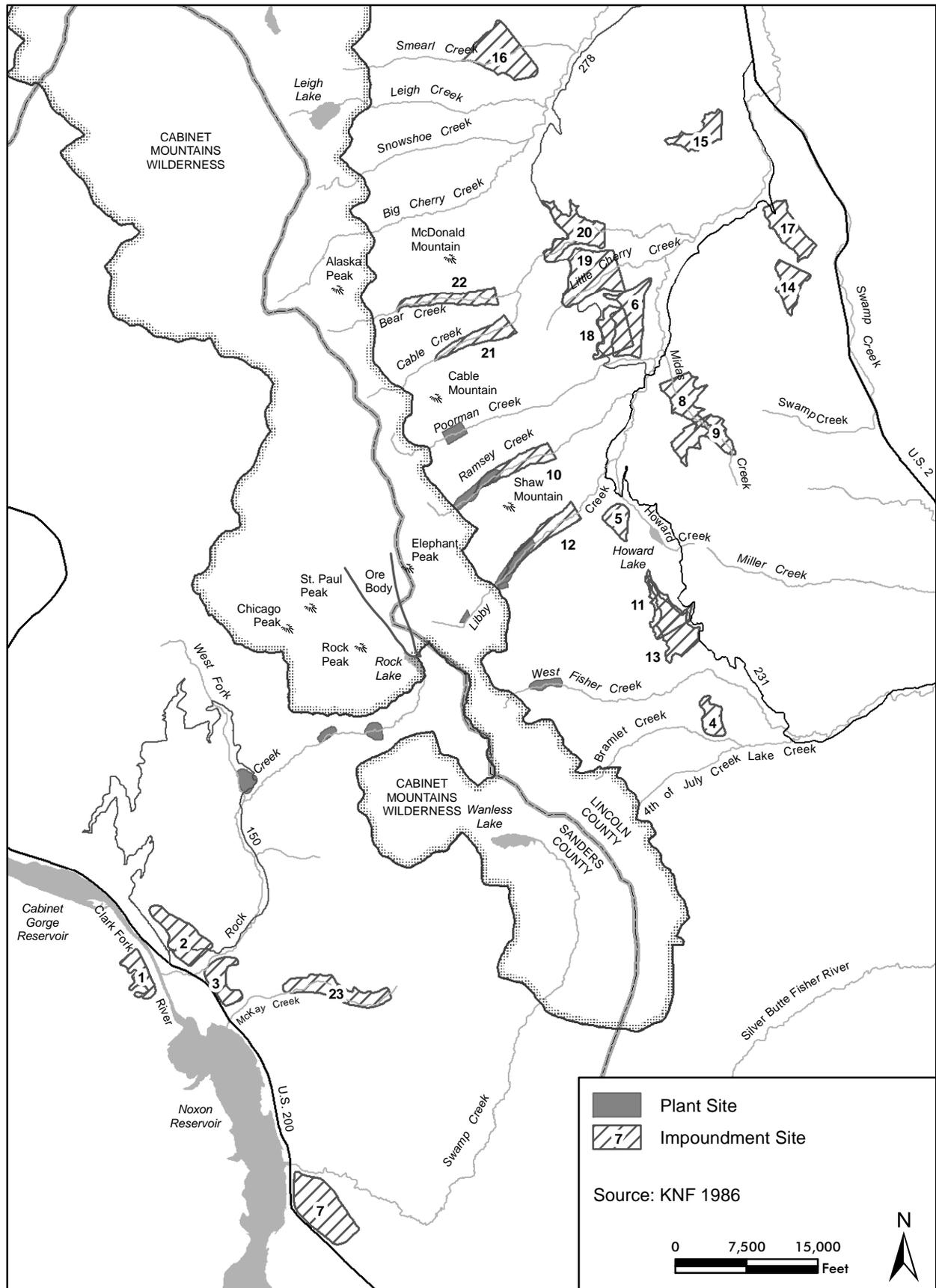


Figure 48. Plant and Impoundment Sites Evaluated in the Initial Screening

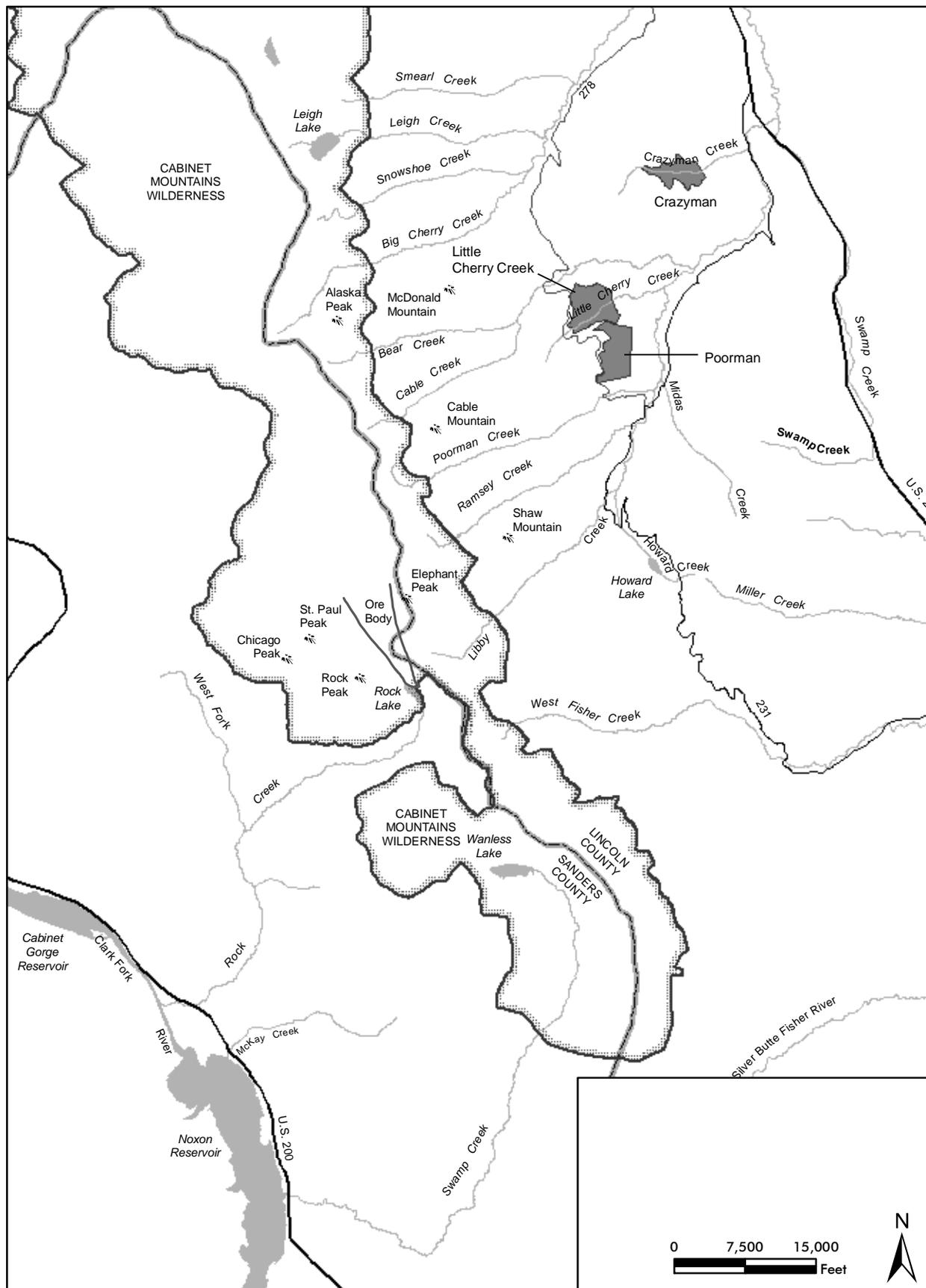


Figure 49. Tailings Impoundment Sites Evaluated in the Detailed Screening

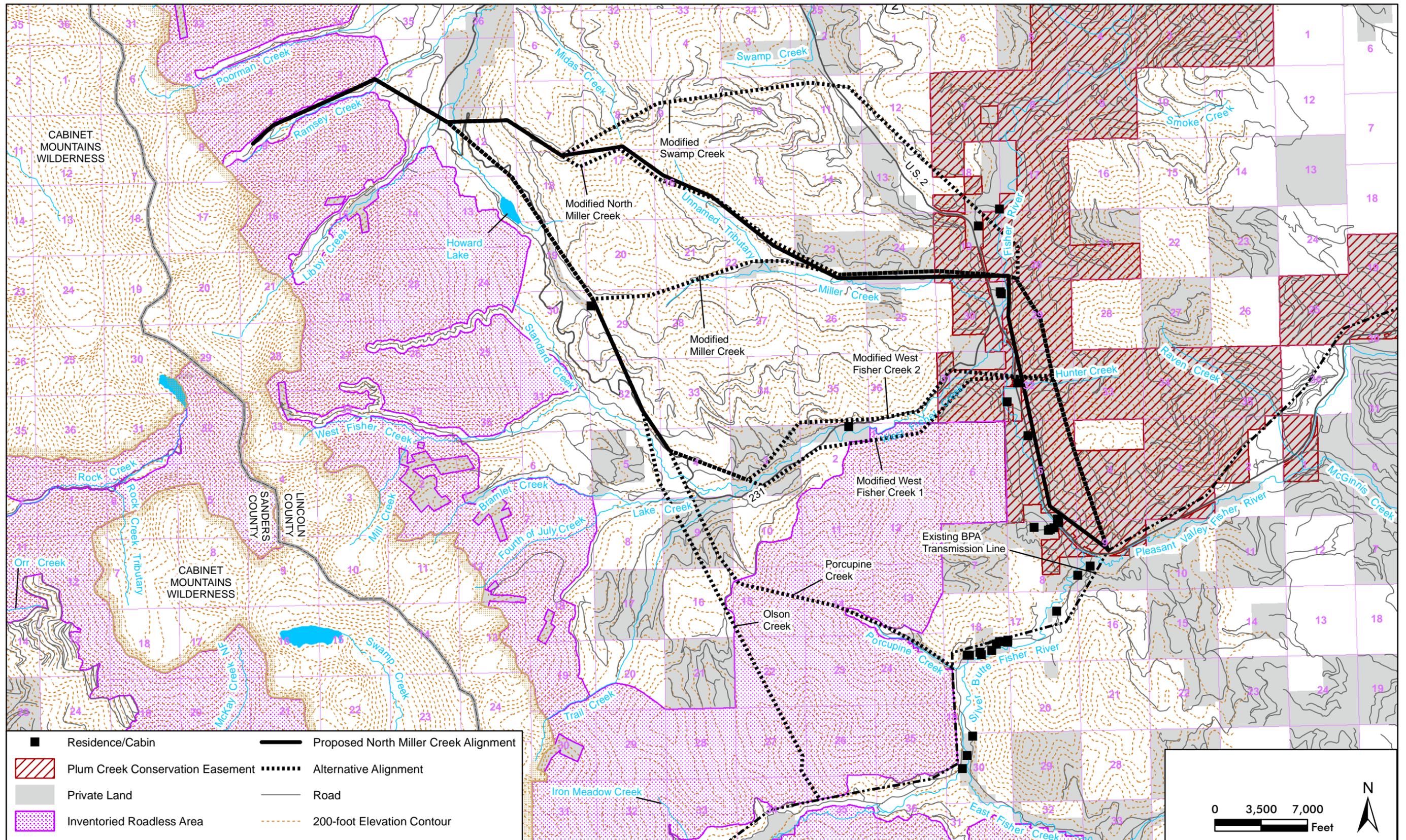


Figure 50. Transmission Line Alignment Alternatives Evaluated for this EIS

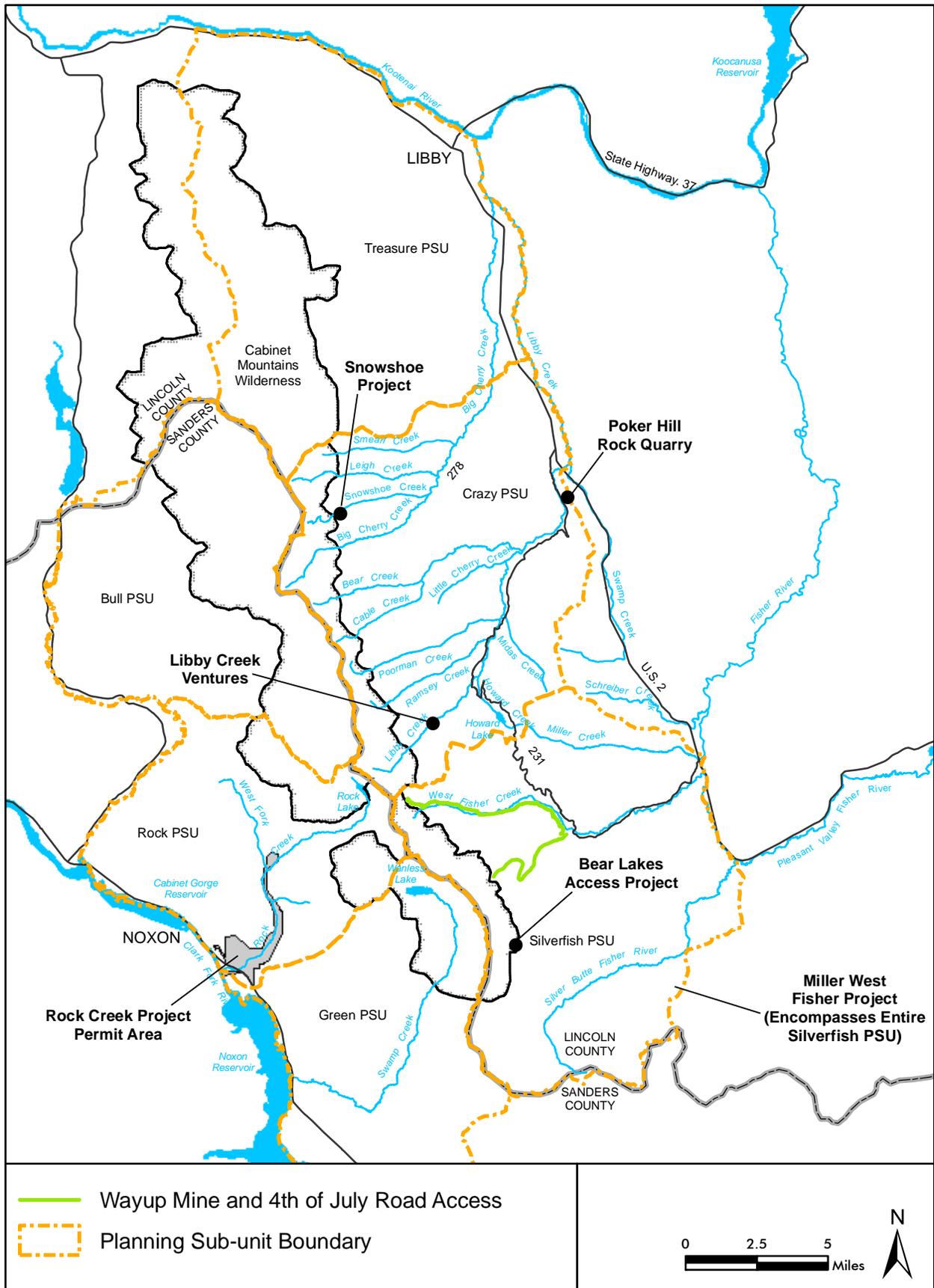


Figure 51. Past, Current and Reasonably Foreseeable Actions for the Proposed Montanore Project



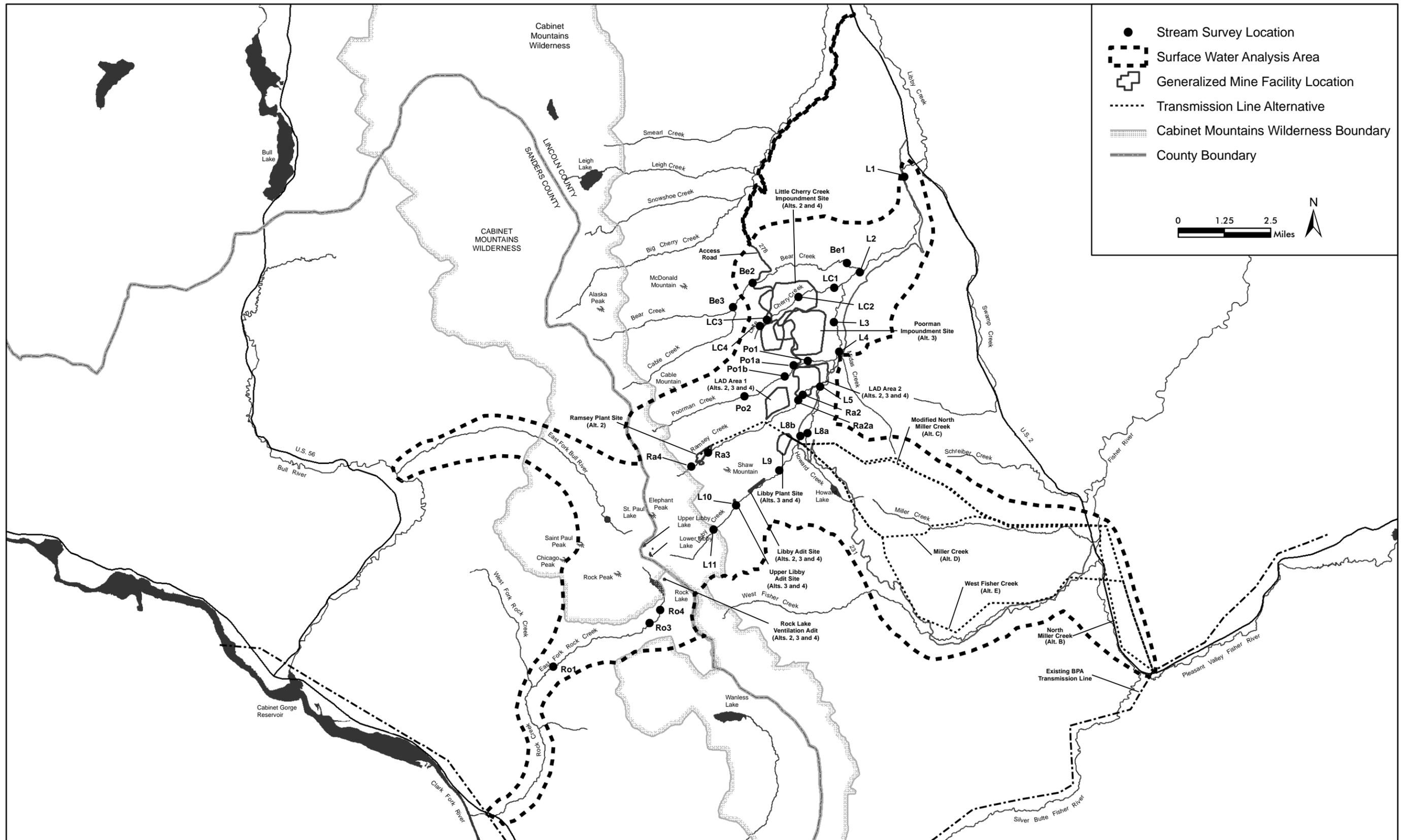


Figure 53. Stream Survey Locations in the Analysis Area



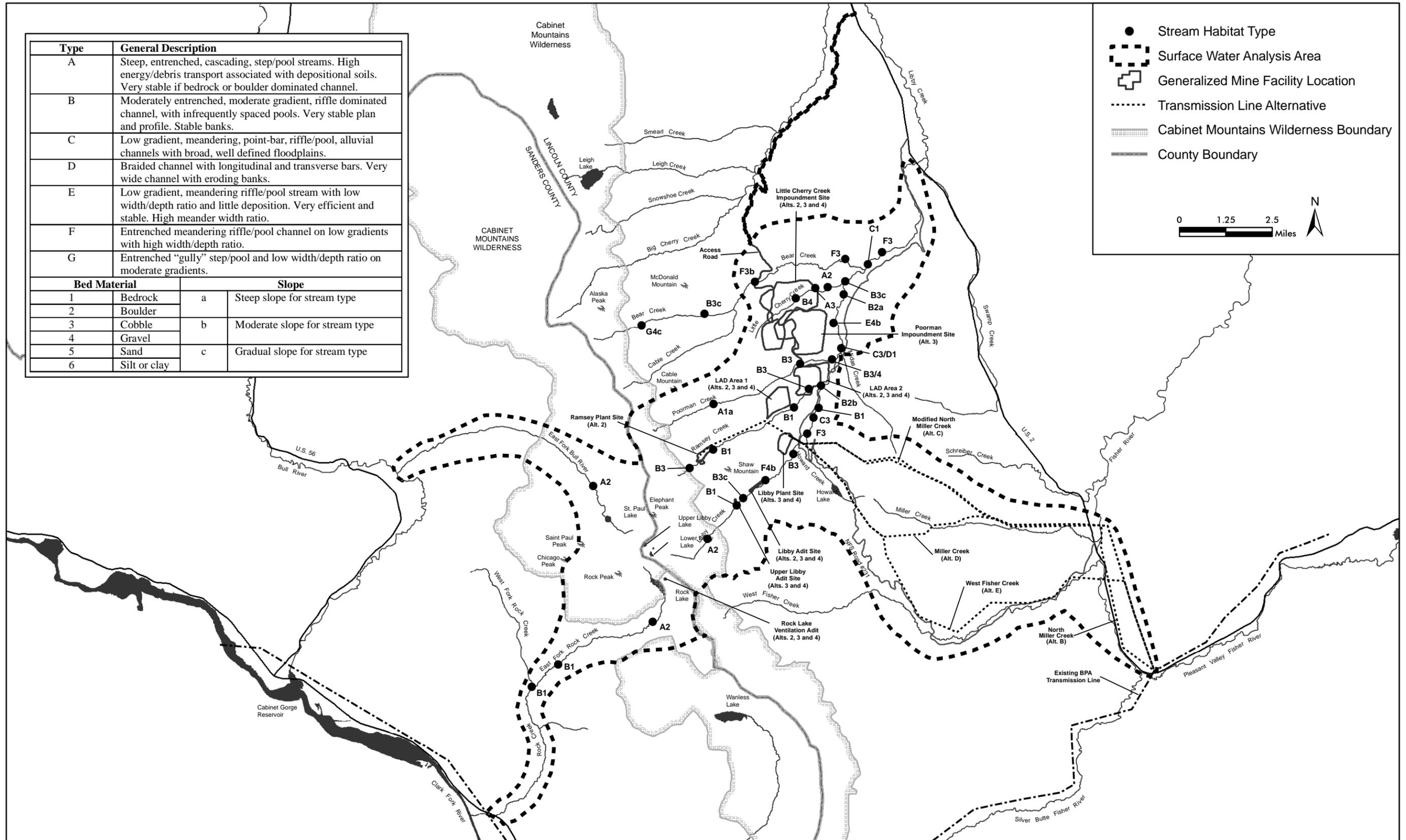


Figure 55. Stream Habitat Types of the Analysis Area Streams

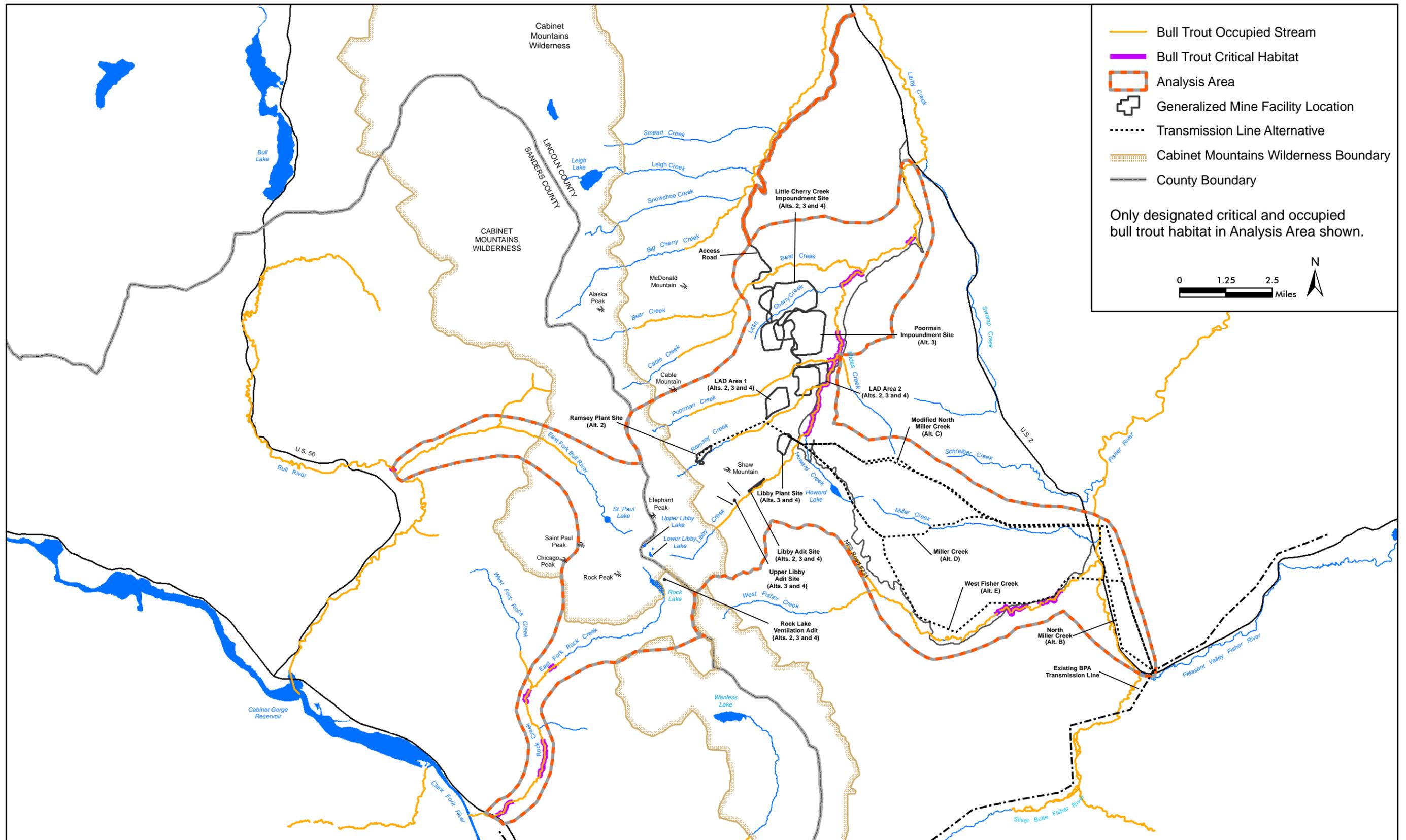


Figure 56. Designated Critical and Occupied Bull Trout Habitat in the Analysis Area Streams

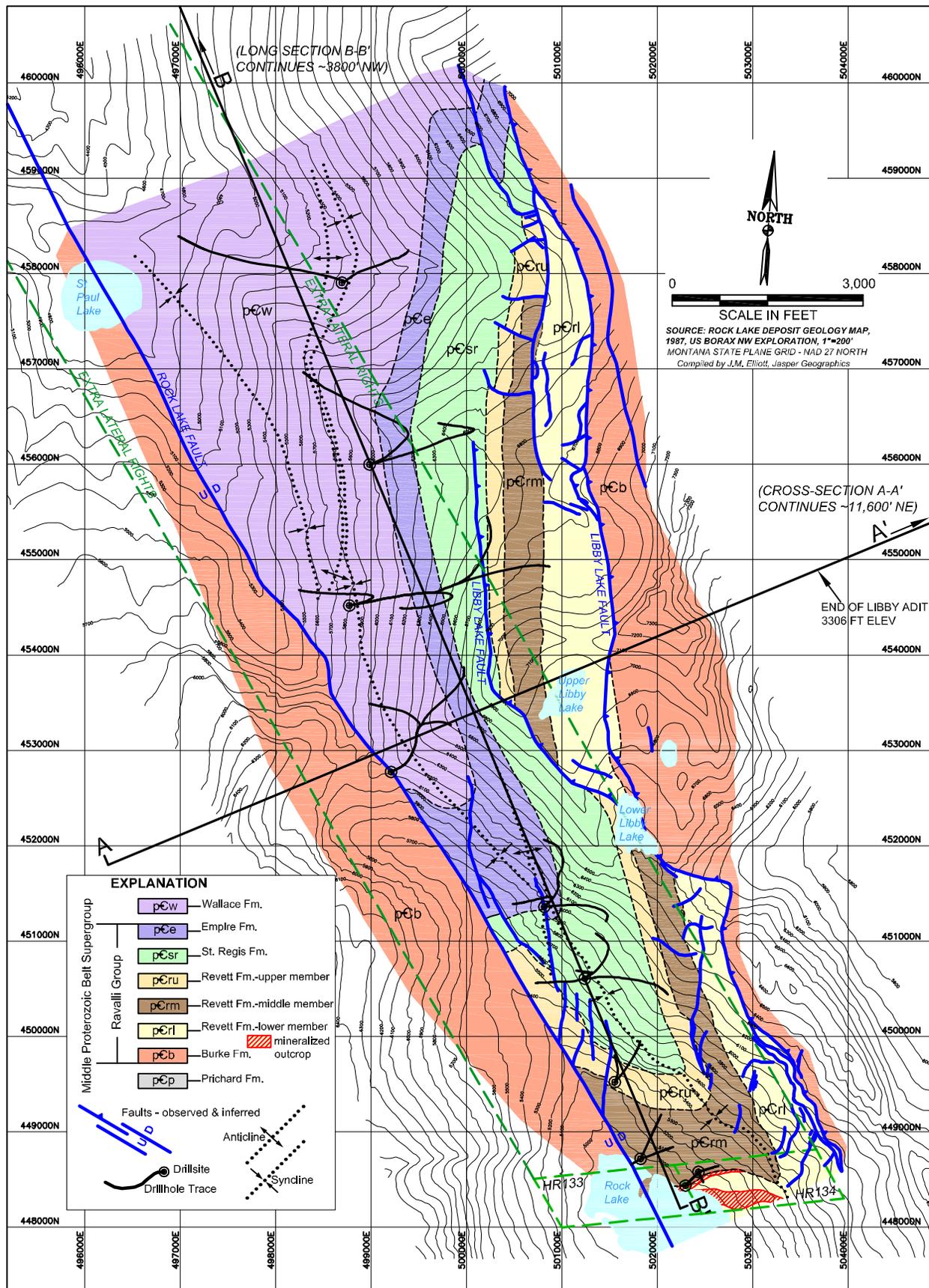
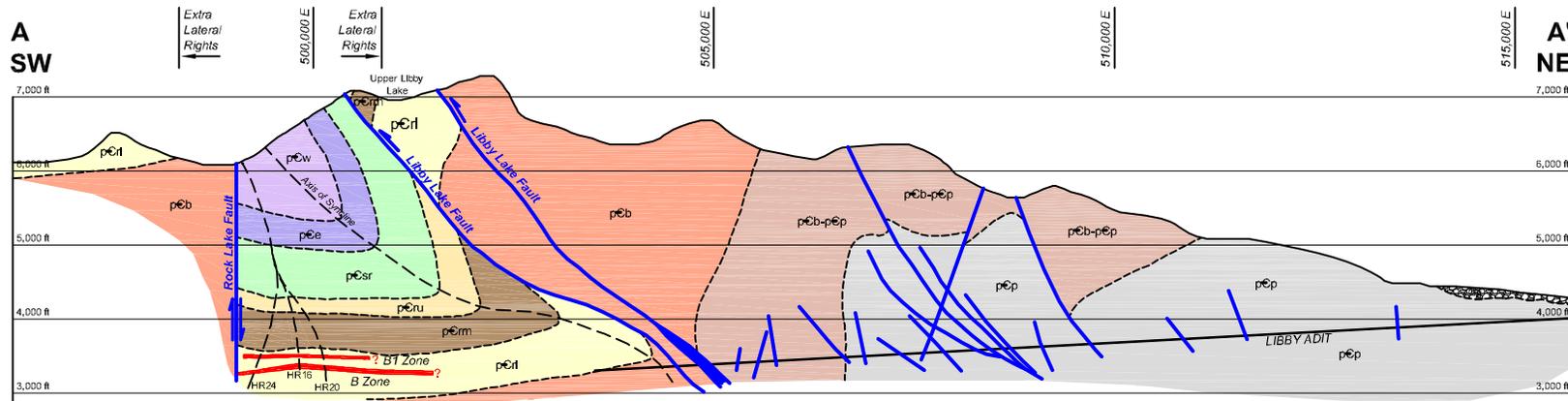


Figure 57. Bedrock Geology of the Rock Creek-Montanore Deposit

### MONTANORE DEPOSIT CROSS SECTION A-A'



#### EXPLANATION

- Quaternary - Glacial gravels
- pEw - Wallace Fm.
- pEe - Empire Fm.
- pEsr - St. Regis Fm.
- pEru - Revett Fm.-upper member
- pErm - Revett Fm.-middle member
- pErl - Revett Fm.-lower member
- pEb - Burke Fm.
- pEb-pEp - Prichard Burke Transition
- pEp - Prichard Fm.
- Faults

STATIONS ALONG LIBBY ADIT  
 +14,000 +13,000 +12,000 +11,000 +10,000 +9,000 +8,000 +7,000 +6,000 +5,000 +4,000 +3,000 +2,000 +1,000  
 LIBBY PORTAL APPROX 650 FT SE OF PI

Sources:  
 1983-88 US Borax surface mapping, drillhole logs, cross-section interpretation  
 1992 Noranda decline mapping and cross-sectional interpretation  
 1995 J. Balla revision of cross-sectional interpretation  
 2004 D. Boleneus cross-sectional interpretation west of Rock Lake Fault;  
 MDA Resource Model  
 Notes:  
 1. Drillholes projected horizontally to plane of section  
 2. Geology projected along dip  
 3. Mineralized zones from 2005 MDA Resource Model  
 4. Montana State Plane NAD 27 North Grid  
 5. Compiled by J.M. Elliott, Jasper Geographics

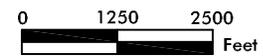


Figure 58. Geologic Cross Section-Libby Adit

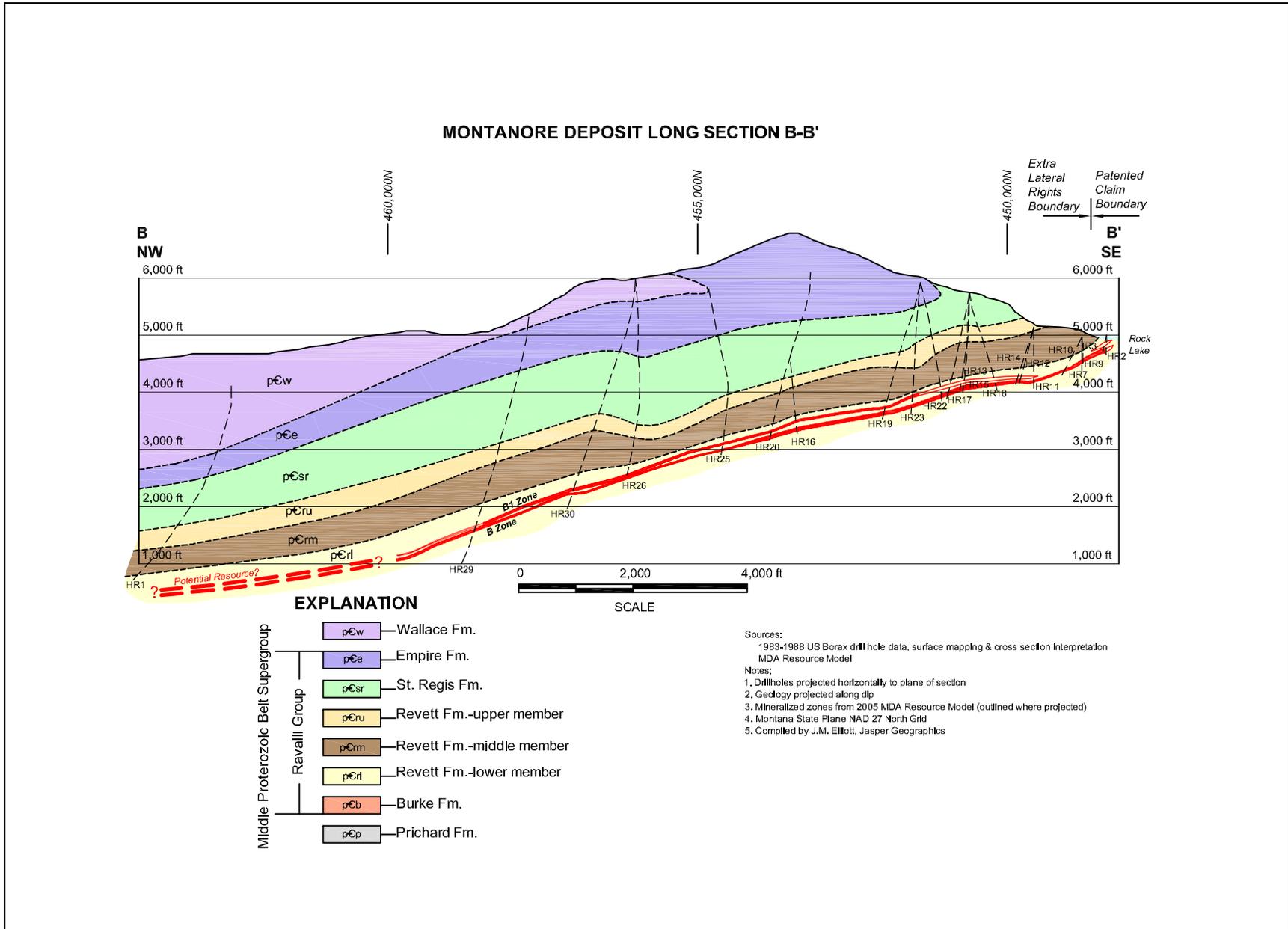


Figure 59. Geologic Cross Section-Montanore Sub-deposit

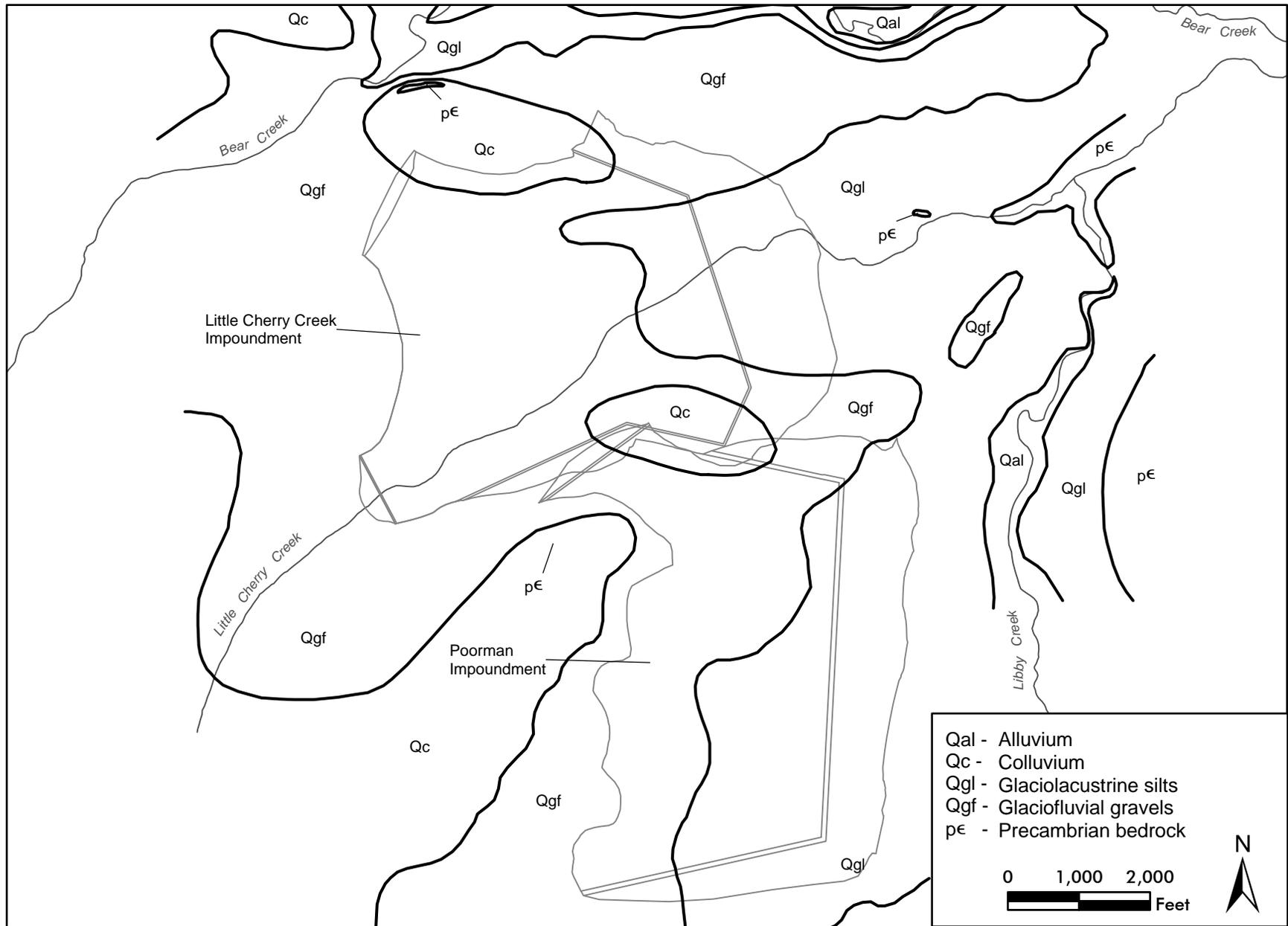


Figure 60. Geology of the Two Tailings Impoundment Areas

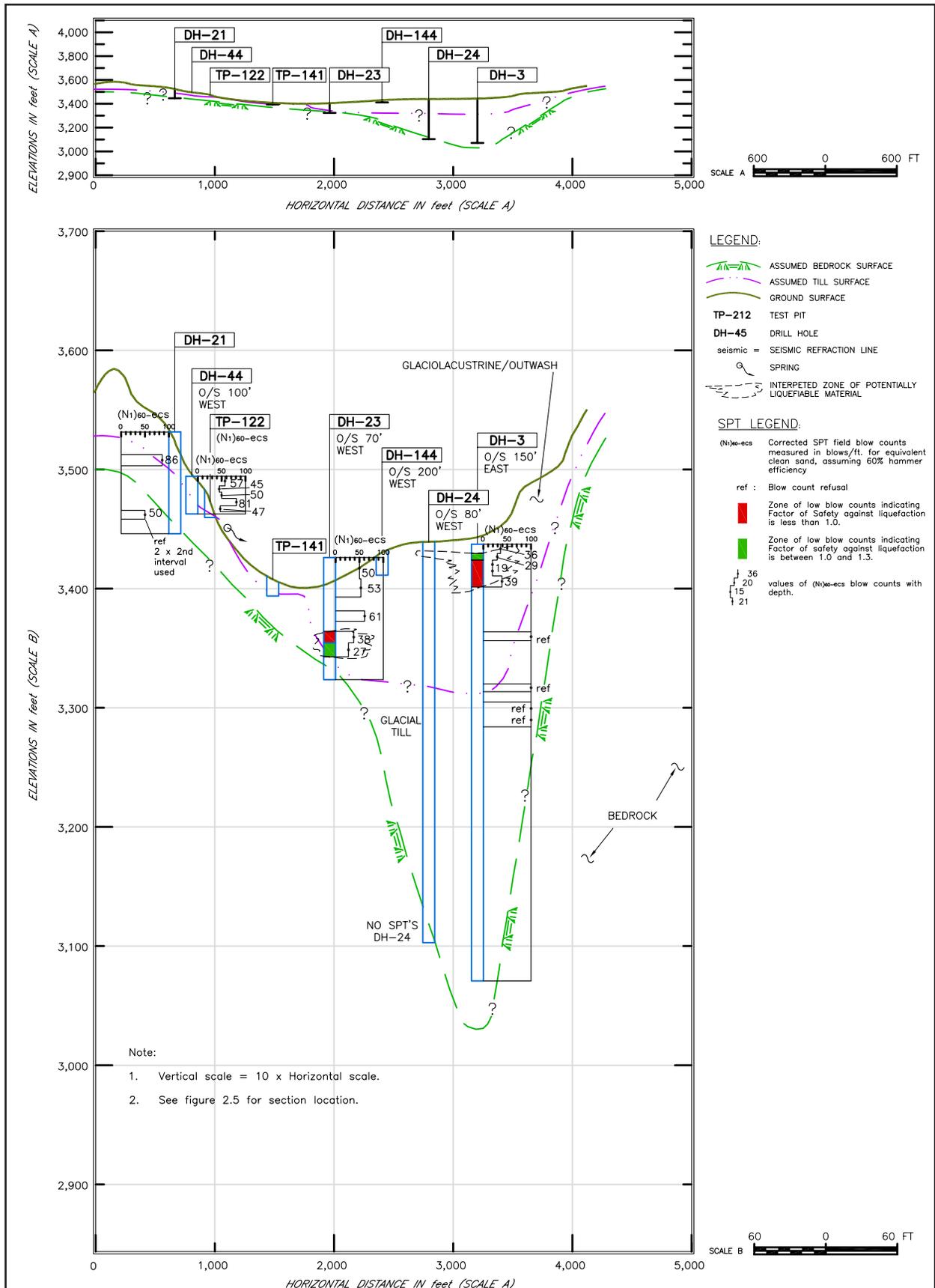
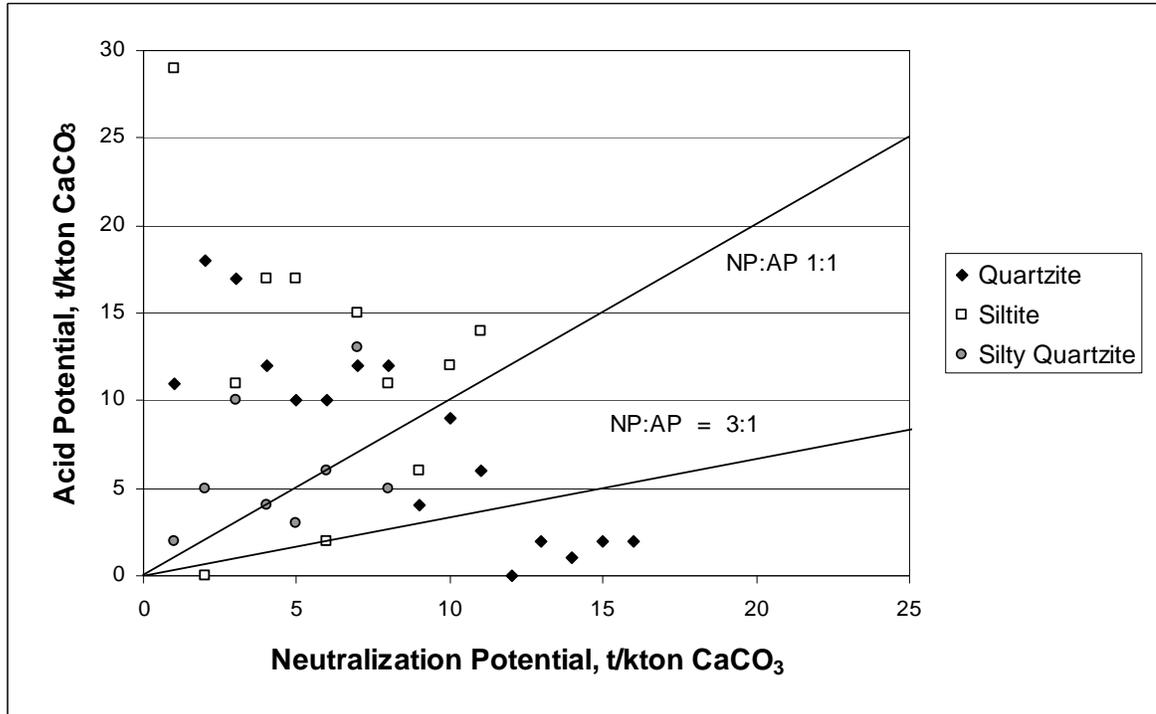


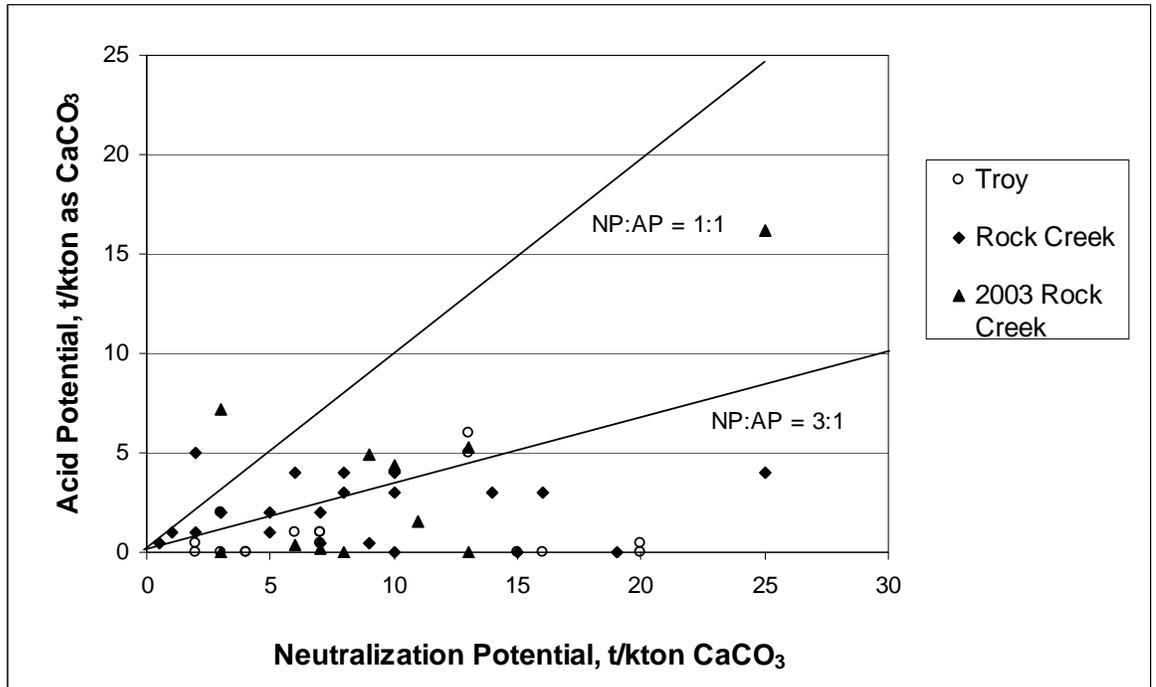
Figure 61. Geologic Cross Section of the Little Cherry Creek Tailings Impoundment Site

Figure 62. Acid Generation Potential of the Montanore Sub-Deposit Ore.



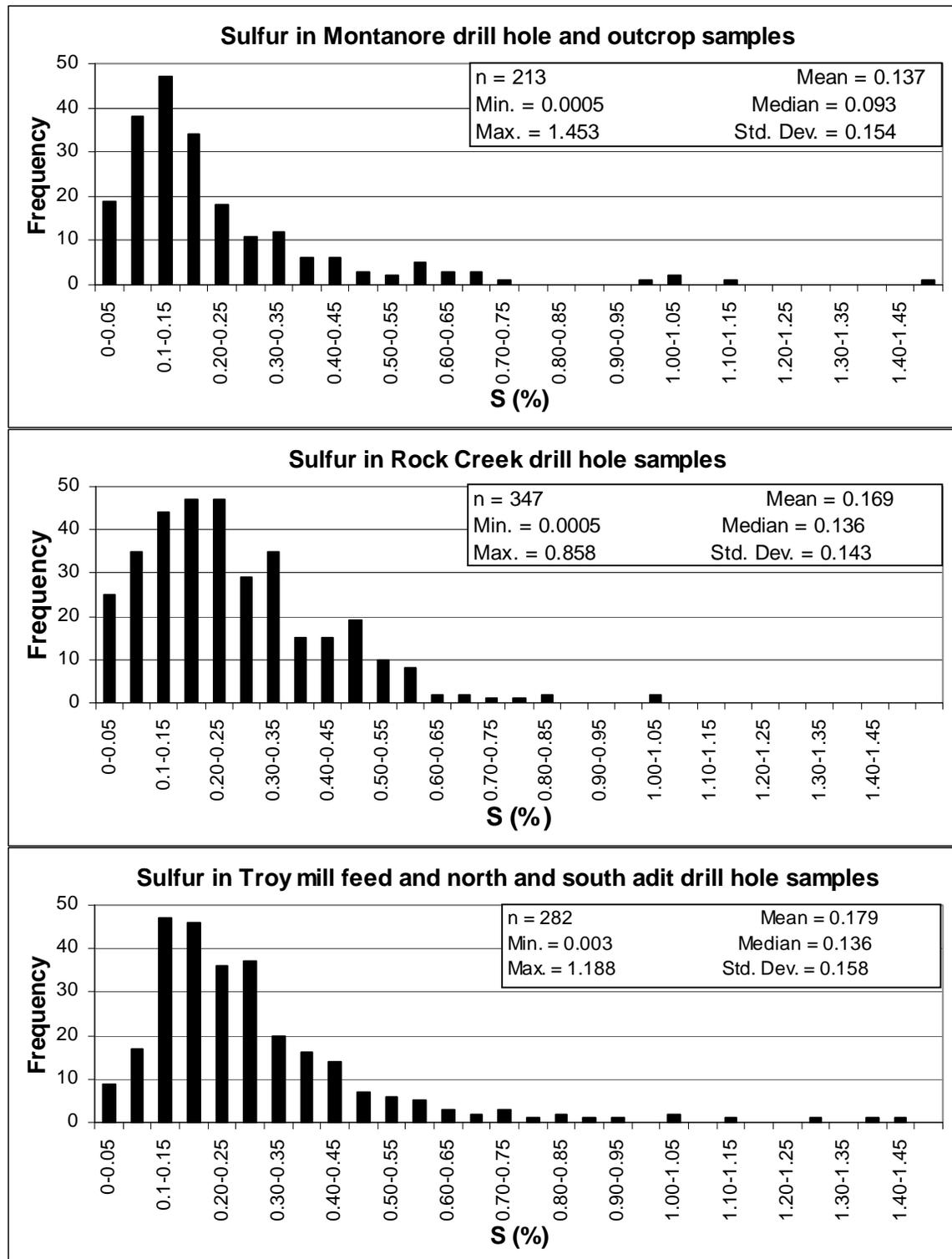
Source: Enviromin 2007

Figure 63. Acid Generation Potential of Ore, from the Rock Creek Sub-deposit and Troy Deposit.



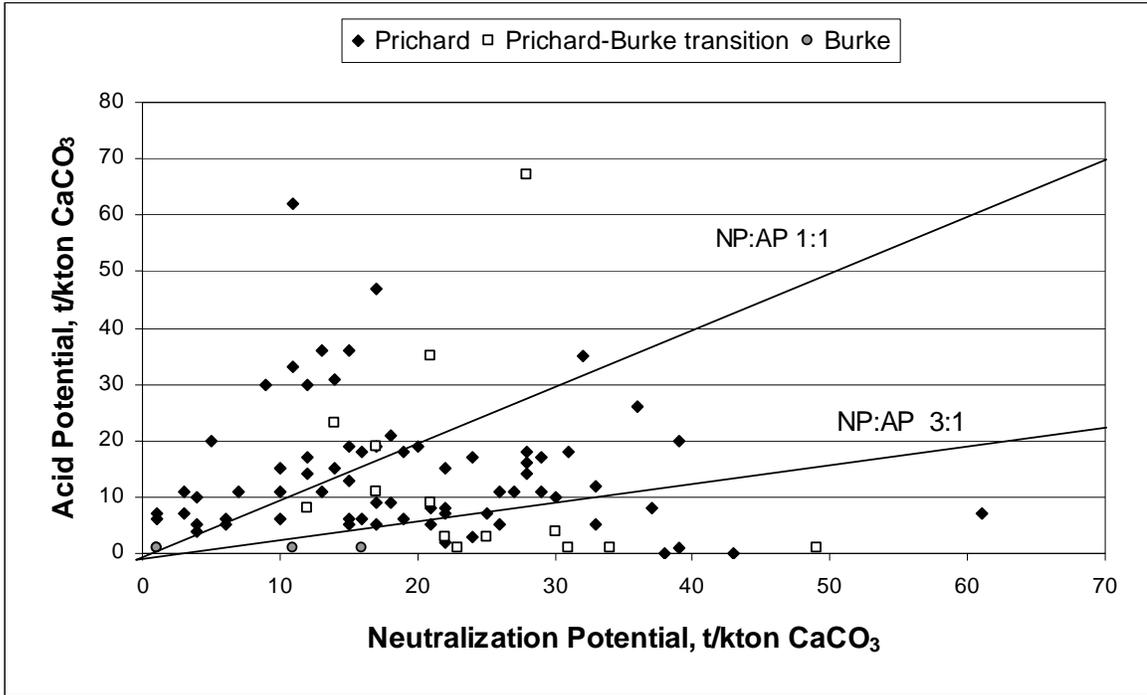
Source: Enviromin 2007

Figure 64. Distribution of Sulfide Calculated Based on Copper Assays for Montanore, Rock Creek, and Troy Deposits.



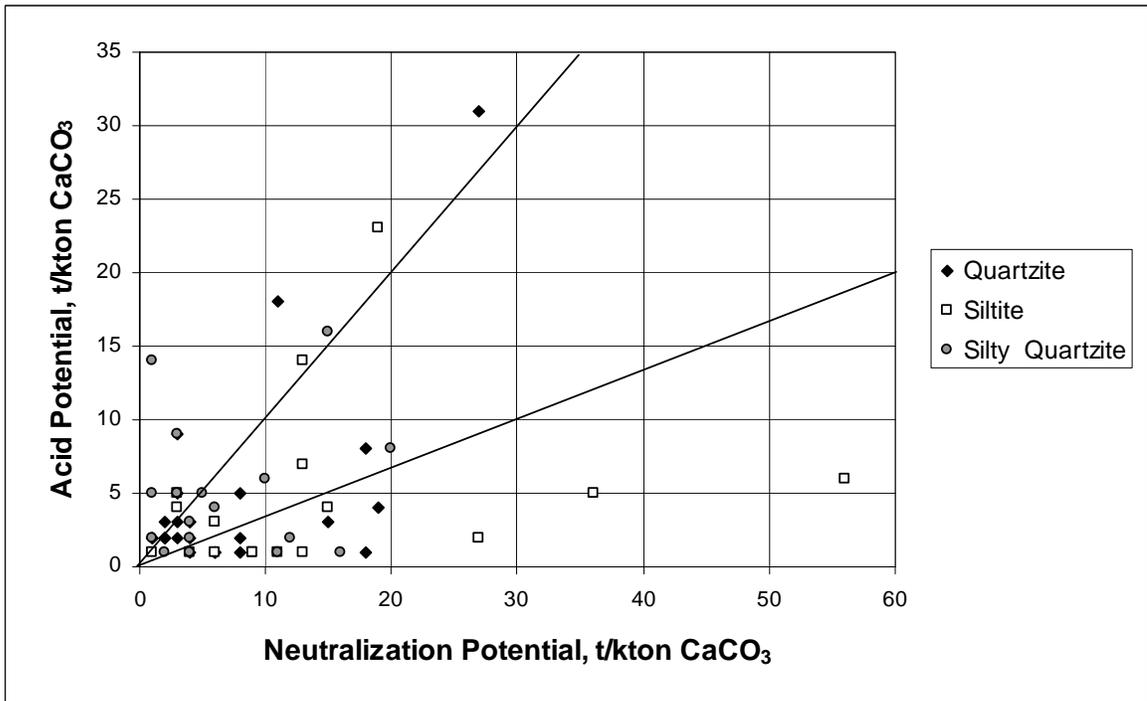
Source: Enviromin 2007

Figure 65. Acid Generation Potential of Waste Rock, Libby Adit, Montanore.



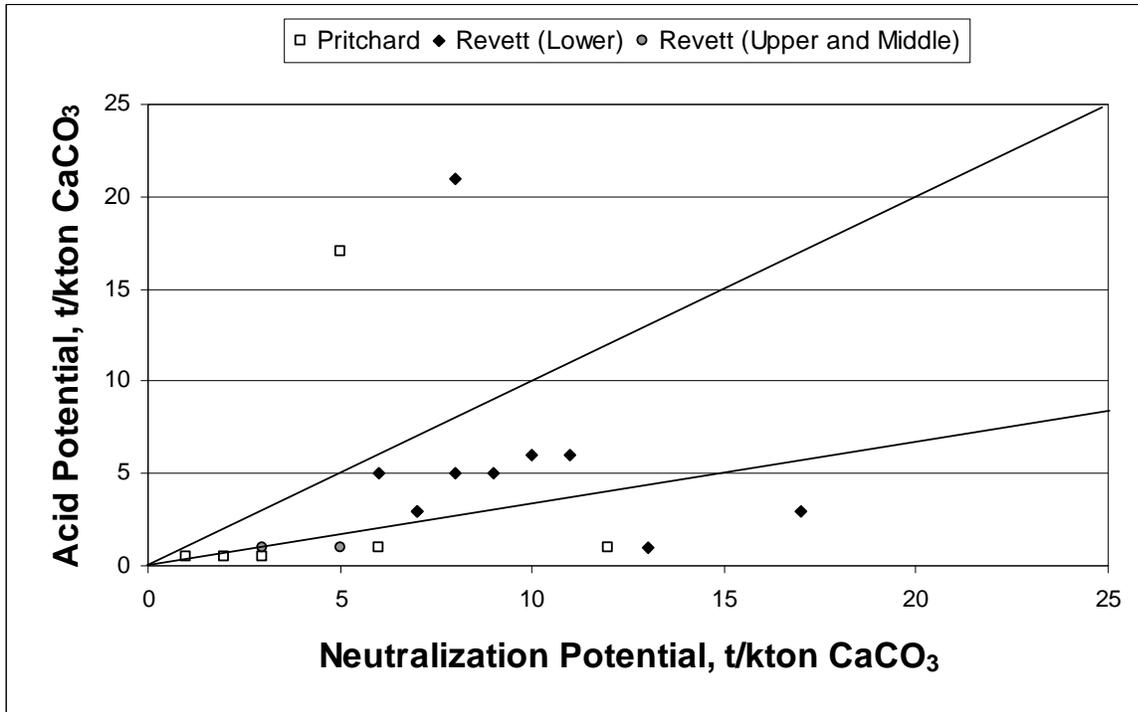
Source: Enviromin 2007.

Figure 66. Acid Generation Potential of Rock Creek and Troy Revett Waste Rock.



Source: Enviromin 2007.

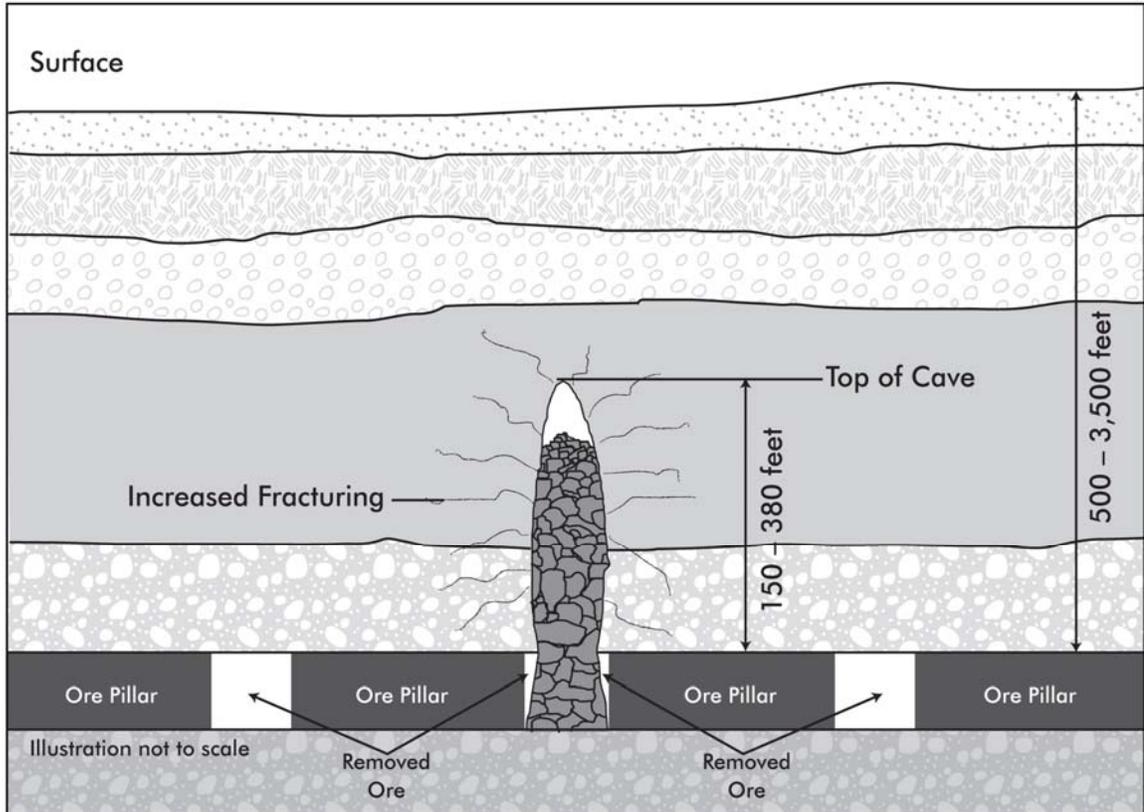
Figure 67. Acid Generation Potential of Rock Creek and Troy Waste Rock Samples by Formation.



Source: Enviromin 2007

Note: sulfide adjusted to account for acid consuming copper sulfide minerals.

Figure 68. Typical Cross Sectional View of Chimney Subsidence.



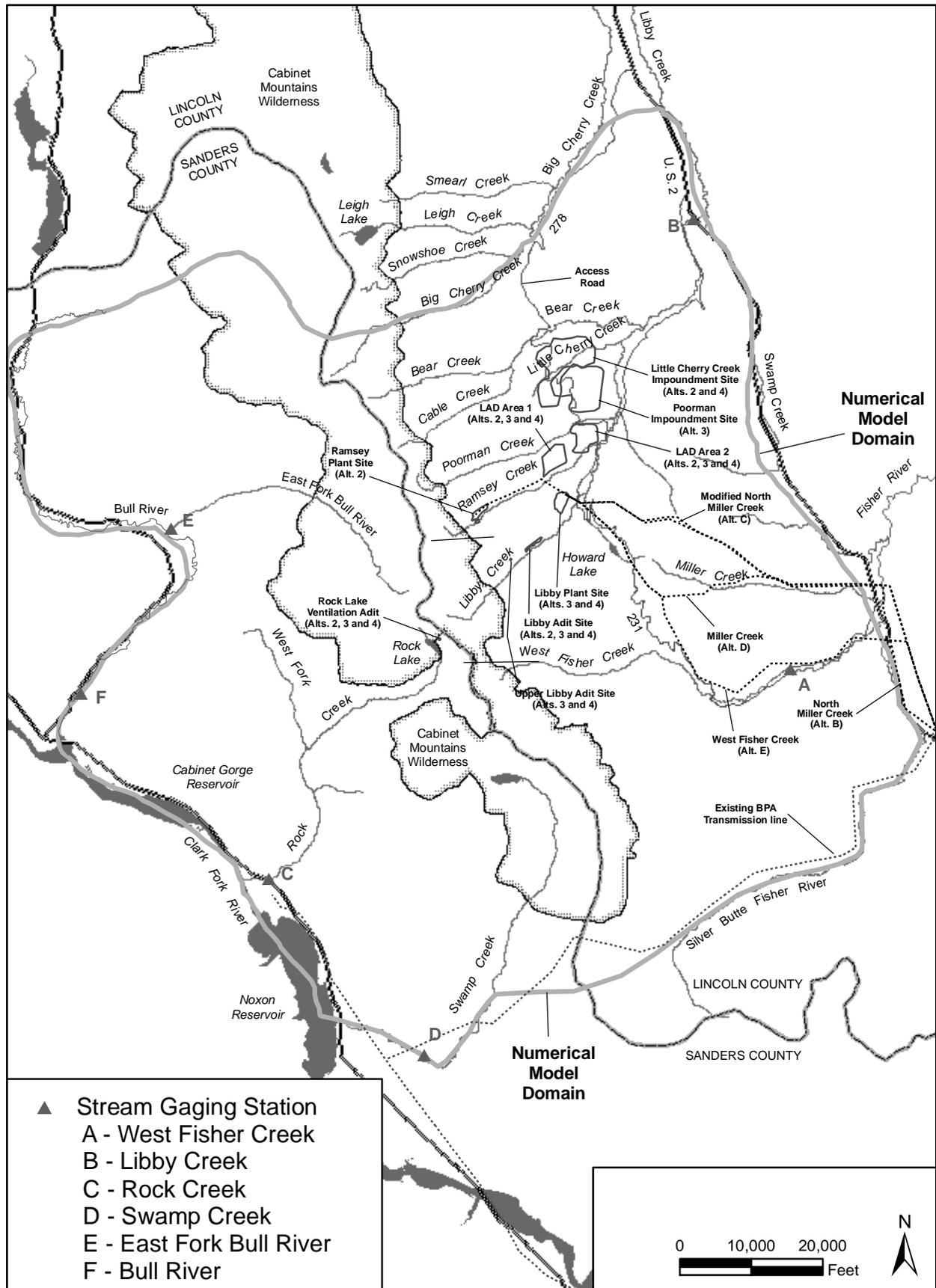


Figure 69. Numerical Model Domain and Project Area Location

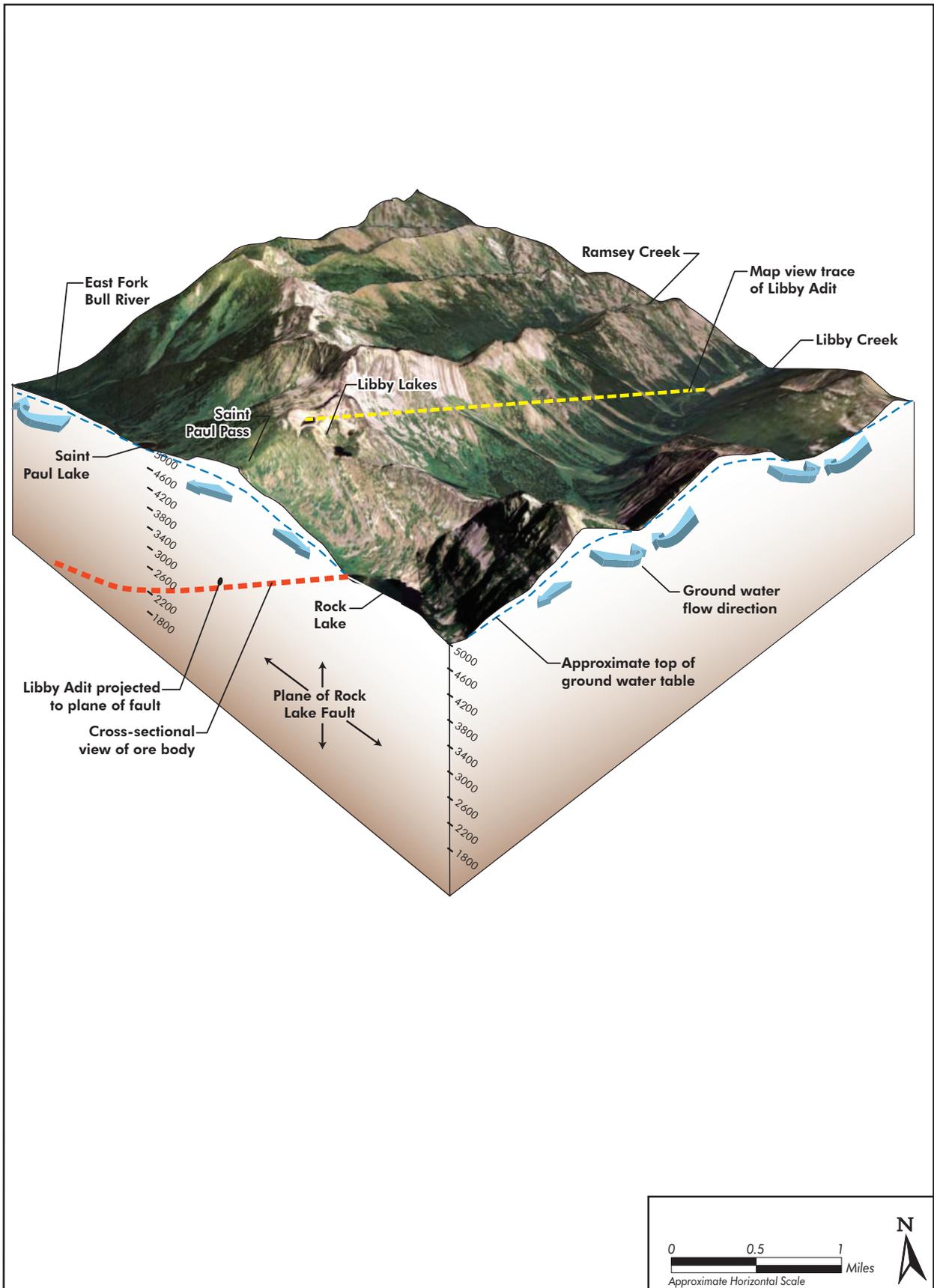


Figure 70. Agencies' Three Dimensional Conceptual Model of the Montanore Mine Area Hydrogeology

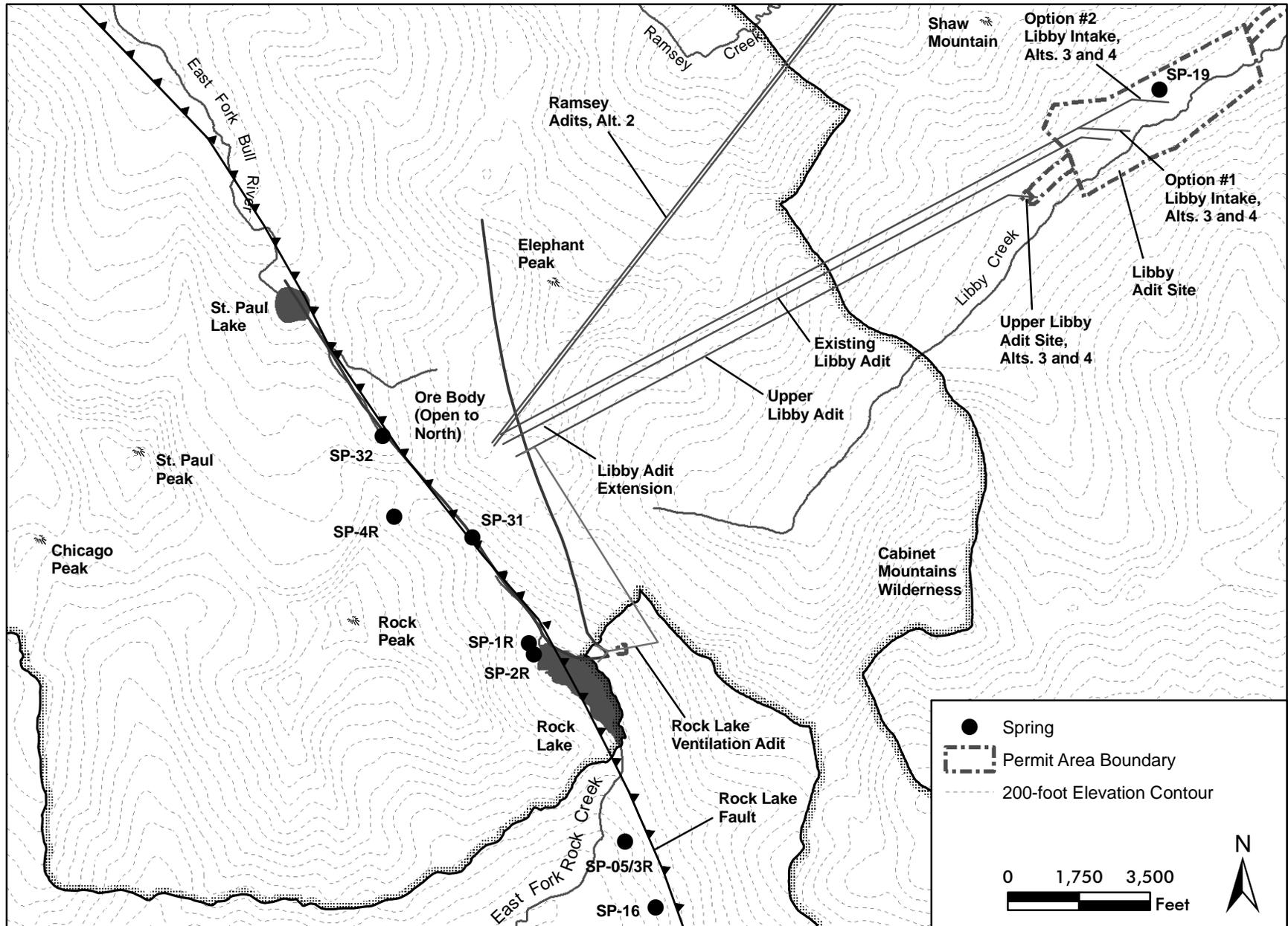


Figure 71. Identified Springs in the Mine Area

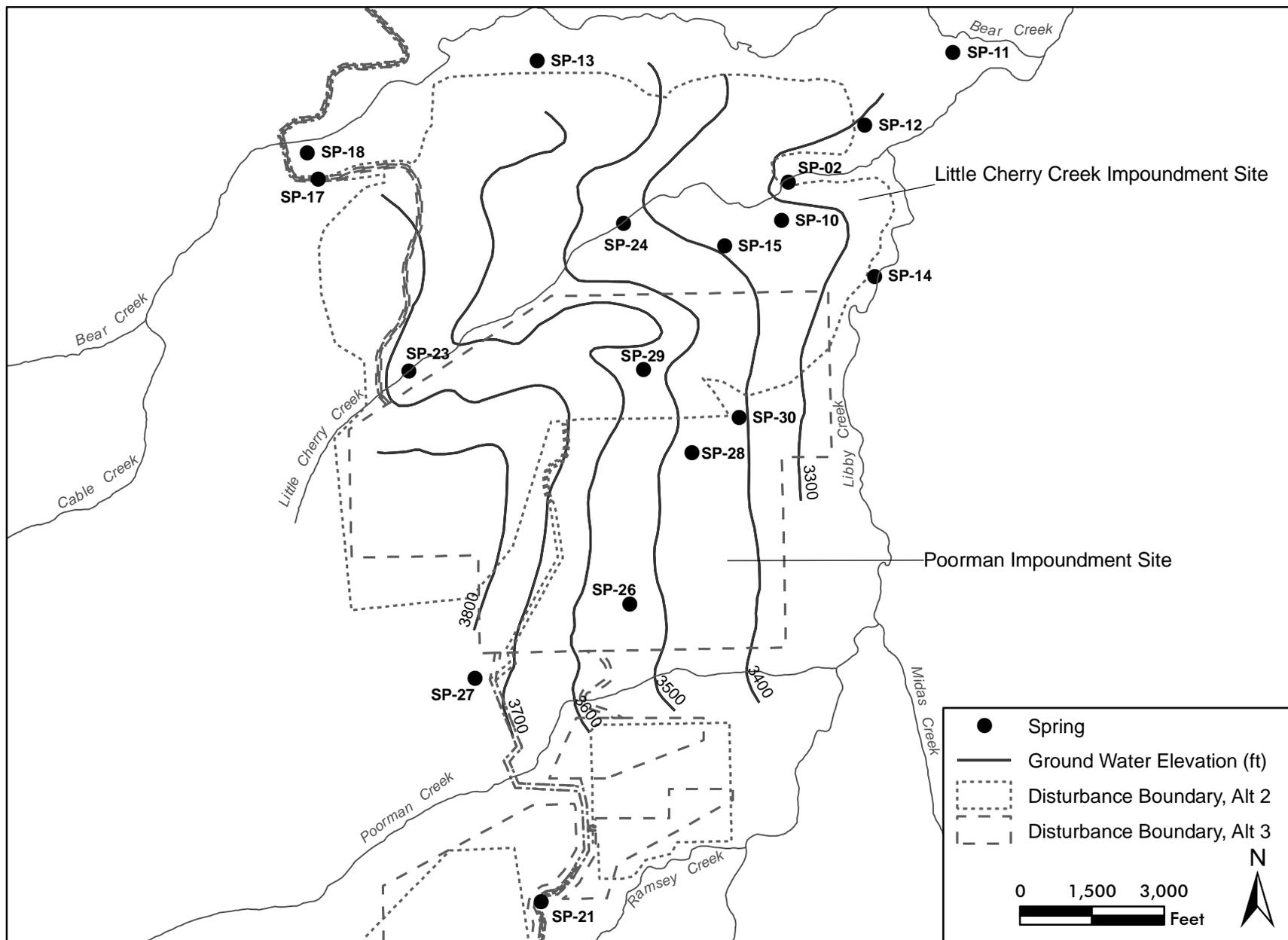


Figure 72. Identified Springs and Ground Water Levels in the Tailings Impoundment Sites

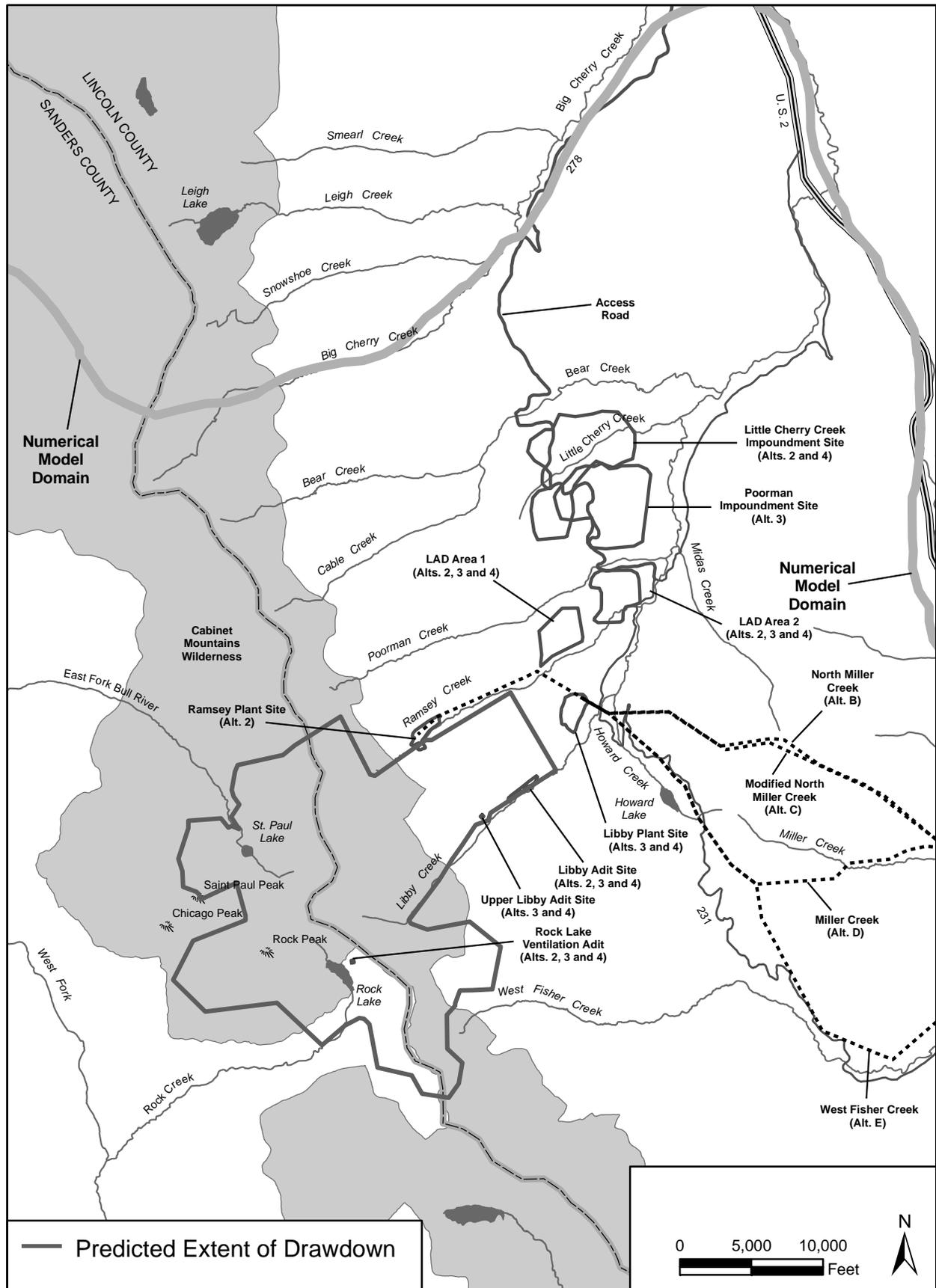


Figure 73. Predicted Area of Ground Water Drawdown During Mining

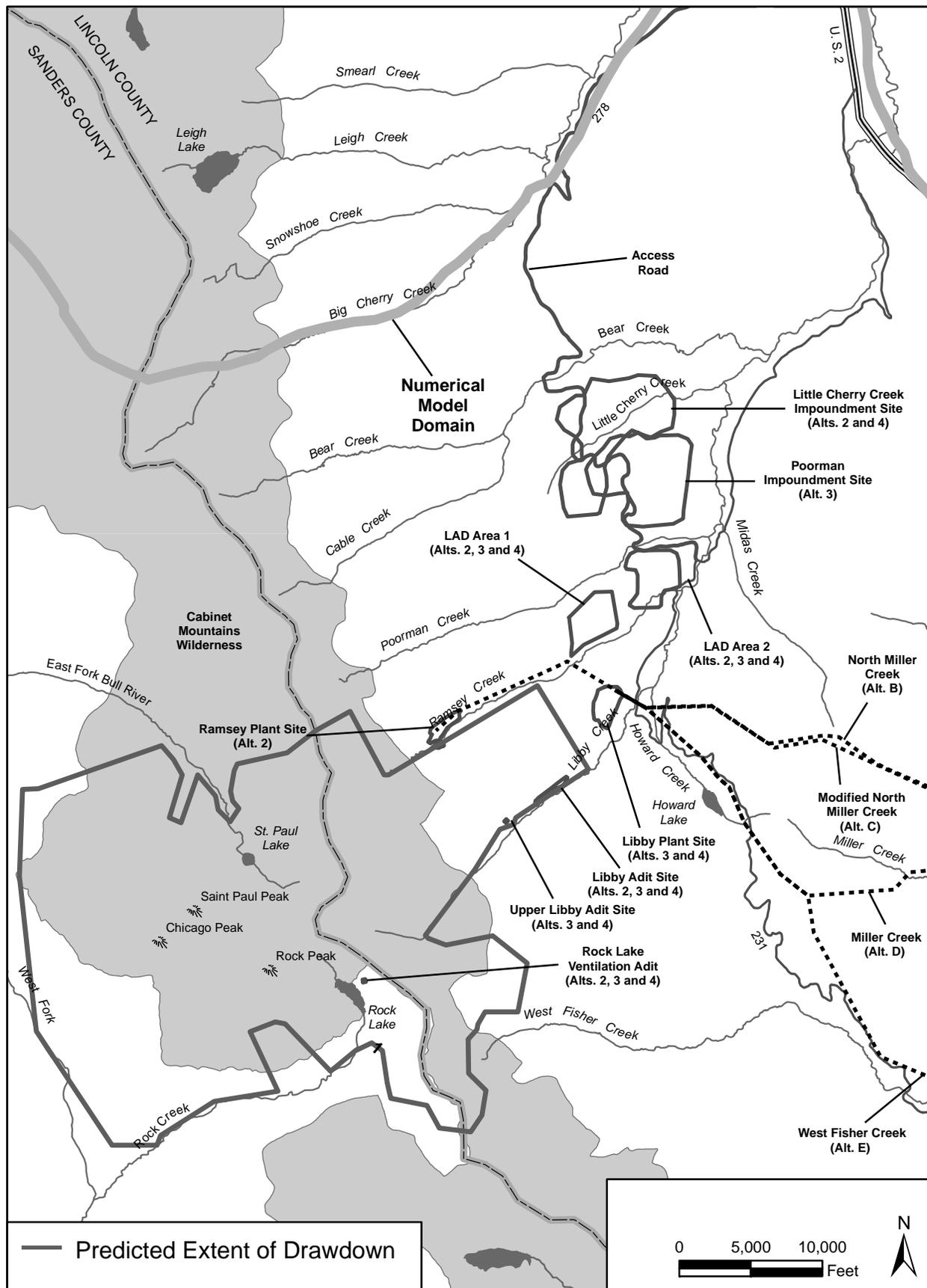


Figure 74. Predicted Area of Cumulative Ground Water Drawdown During Mining

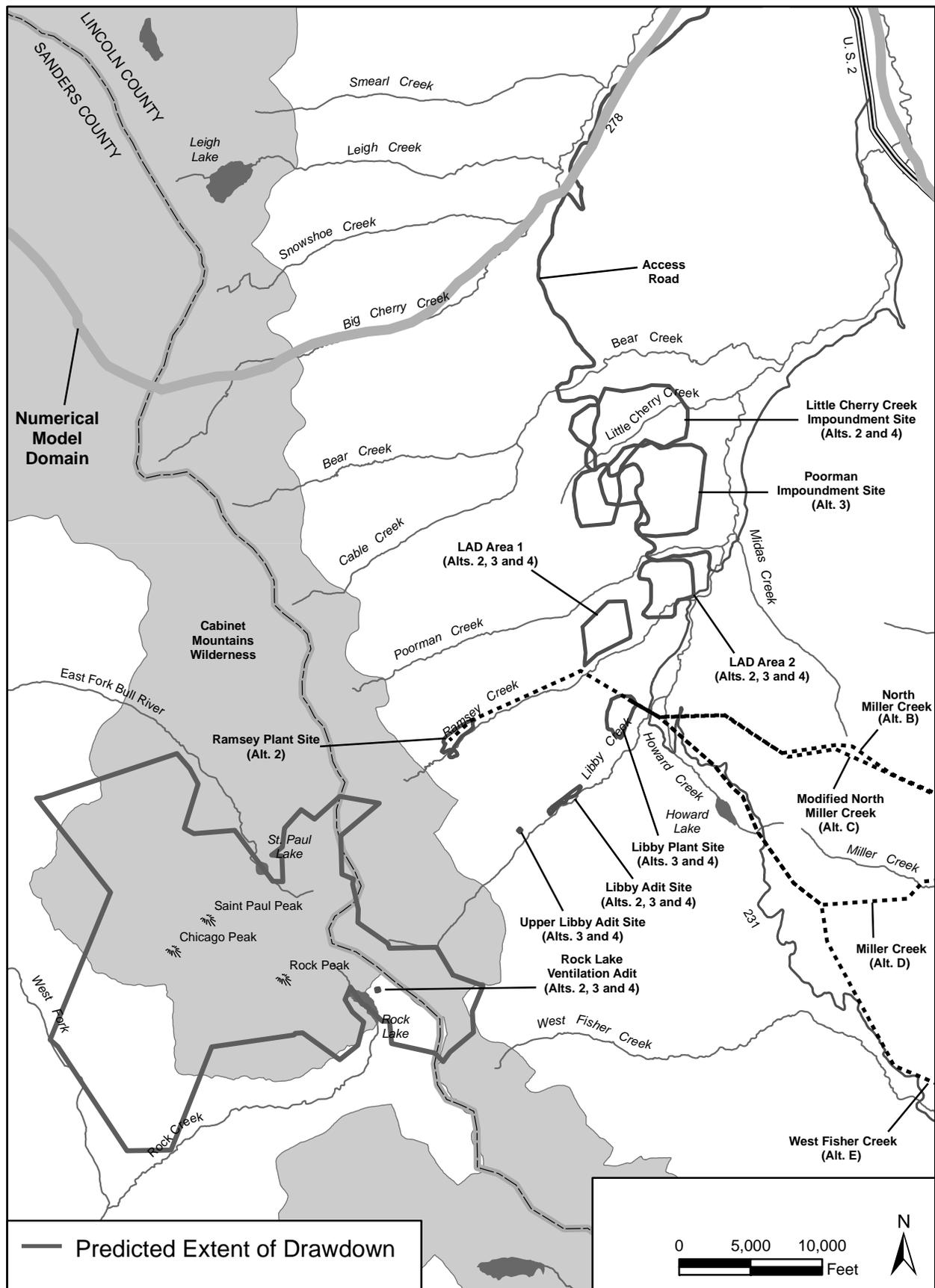


Figure 75. Predicted Area of Cumulative Ground Water Drawdown Post-mining

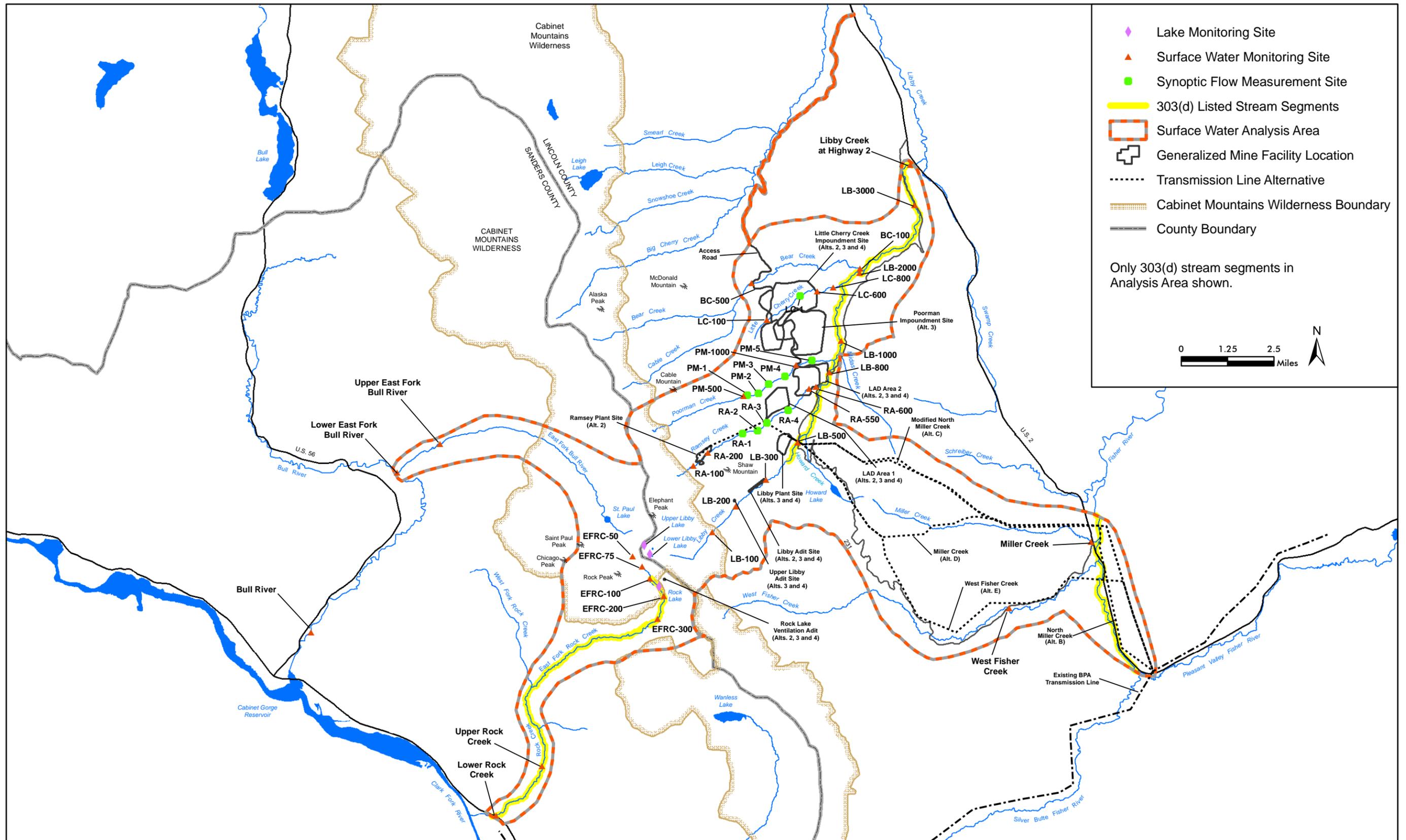


Figure 76. Surface Water Resources in the Analysis Area

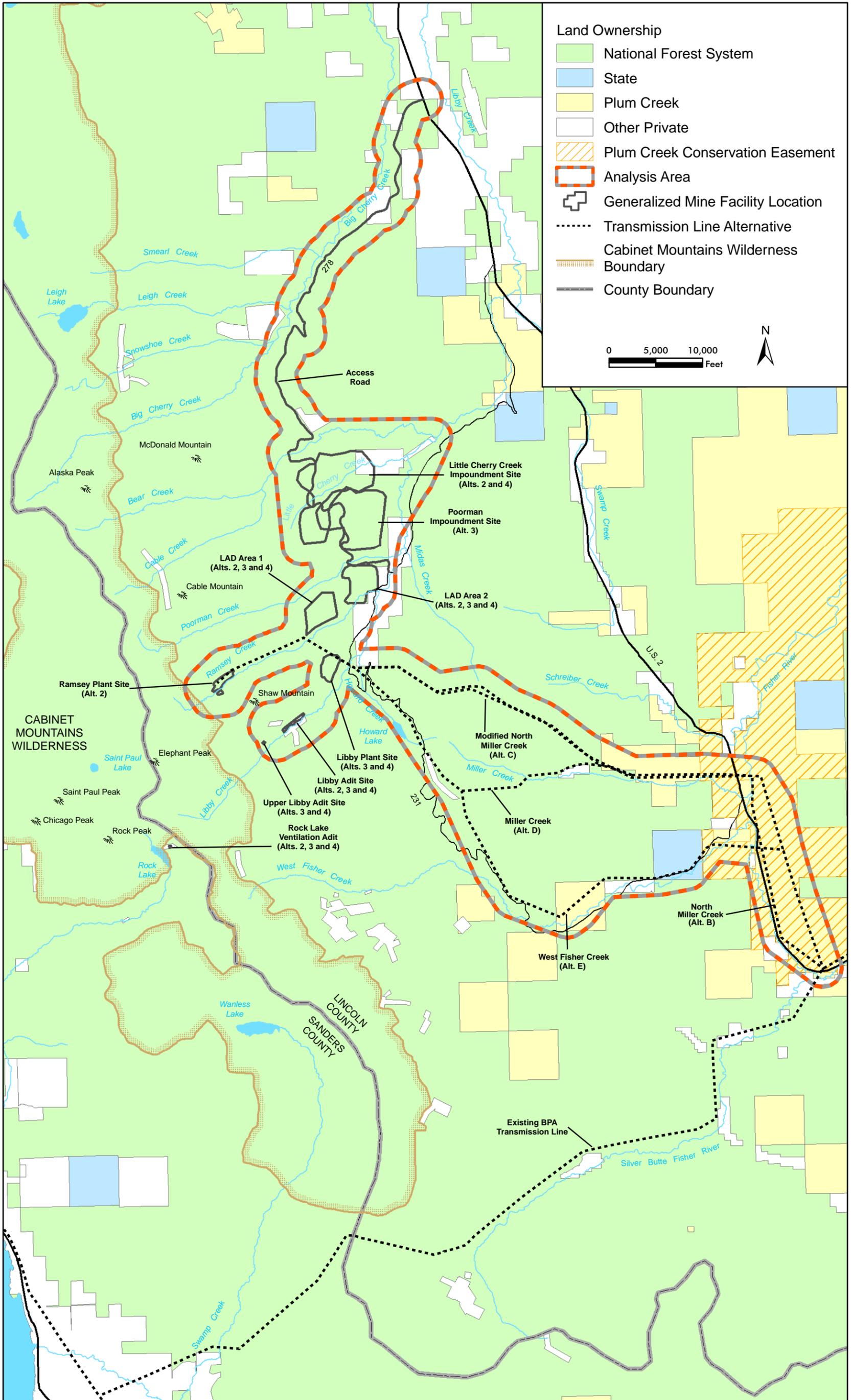


Figure 77. Land Ownership in the Analysis Area

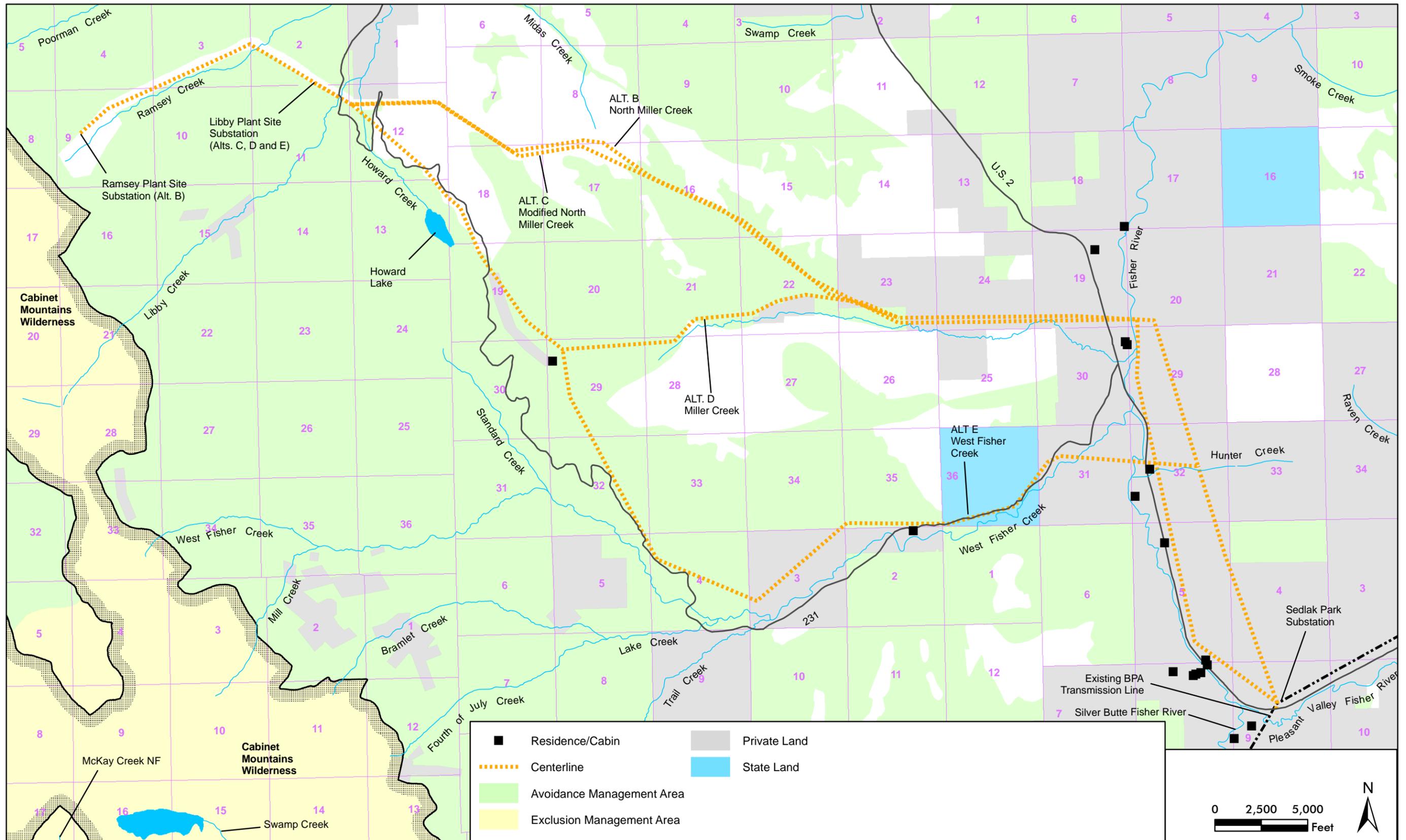


Figure 78. Residences, Corridor Exclusion Management Areas, and Corridor Avoidance Management Areas Along Transmission Line Alternatives





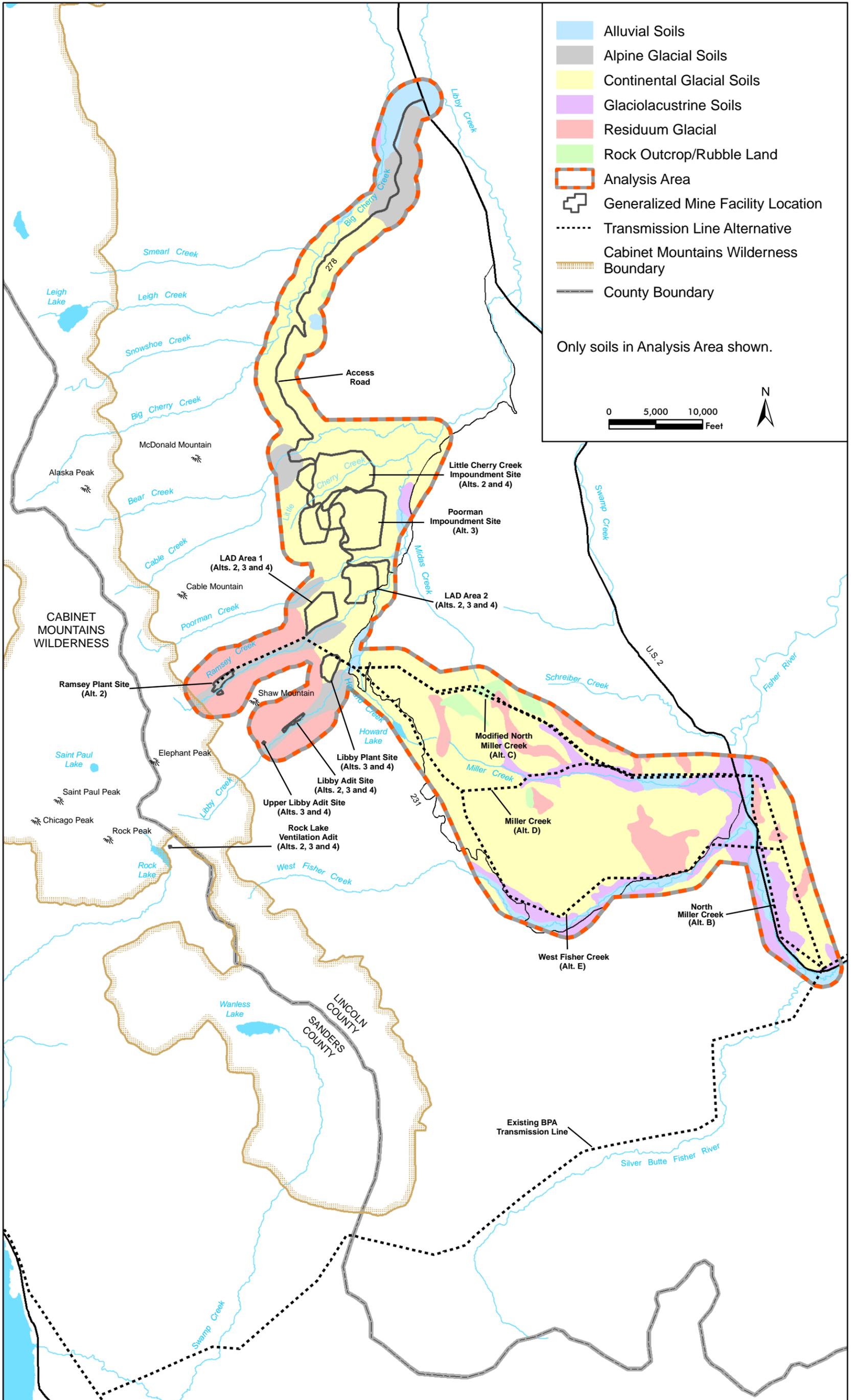


Figure 81. General Soil Types in the Analysis Area

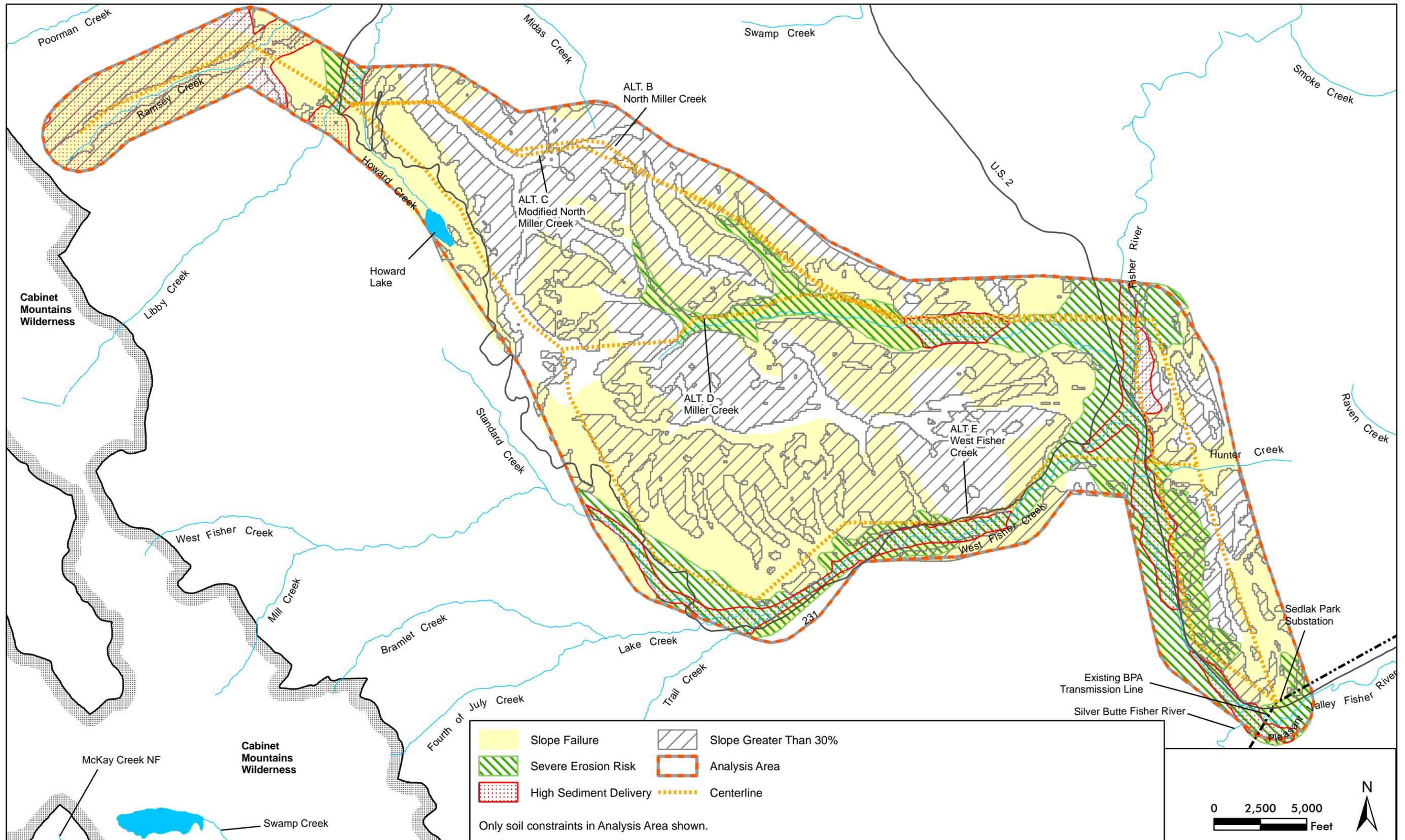


Figure 82. Soil Constraints Along Transmission Line Alternatives

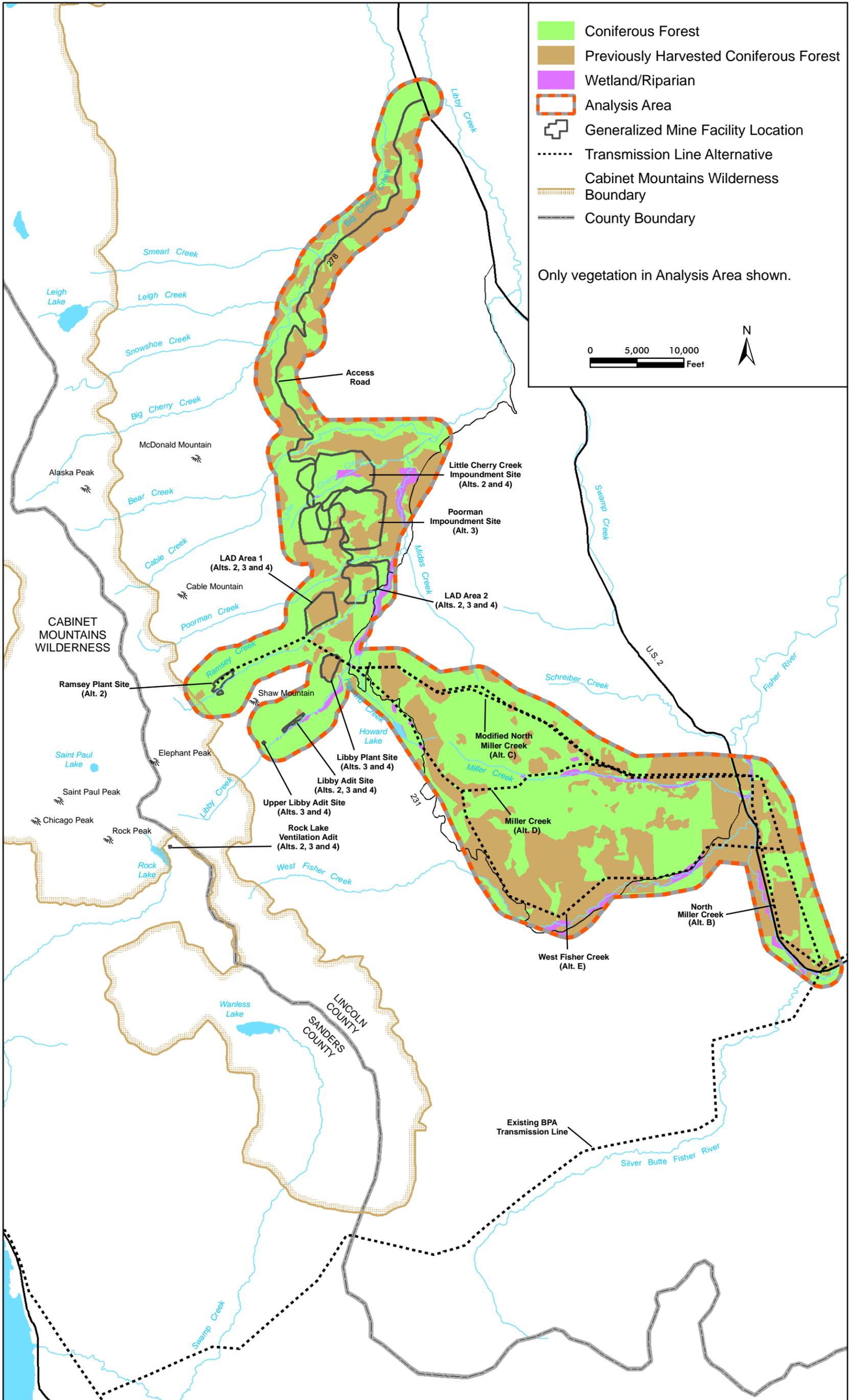


Figure 83. Vegetation Communities in the Analysis Area

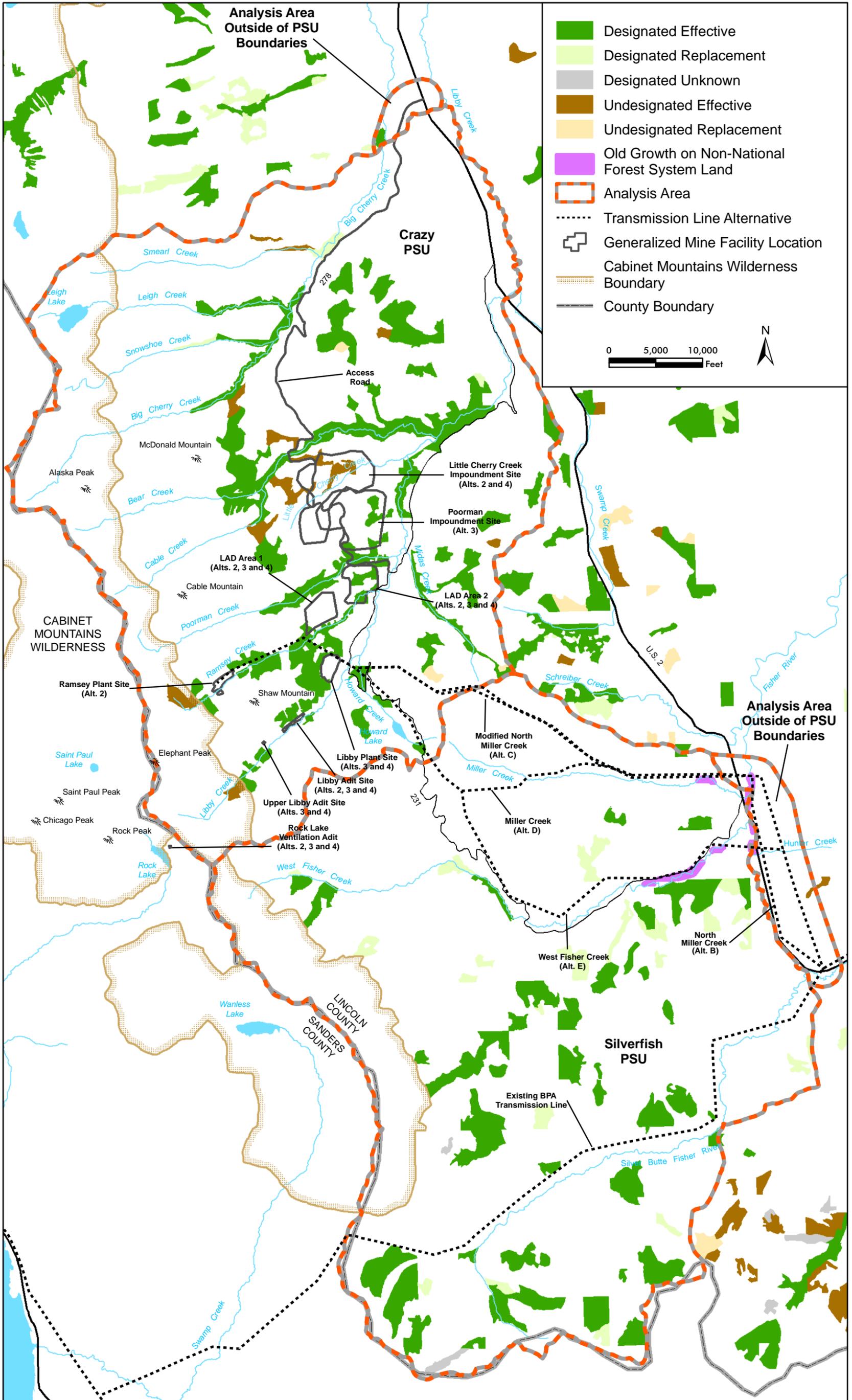


Figure 84. Old Growth Forest in the Analysis Area

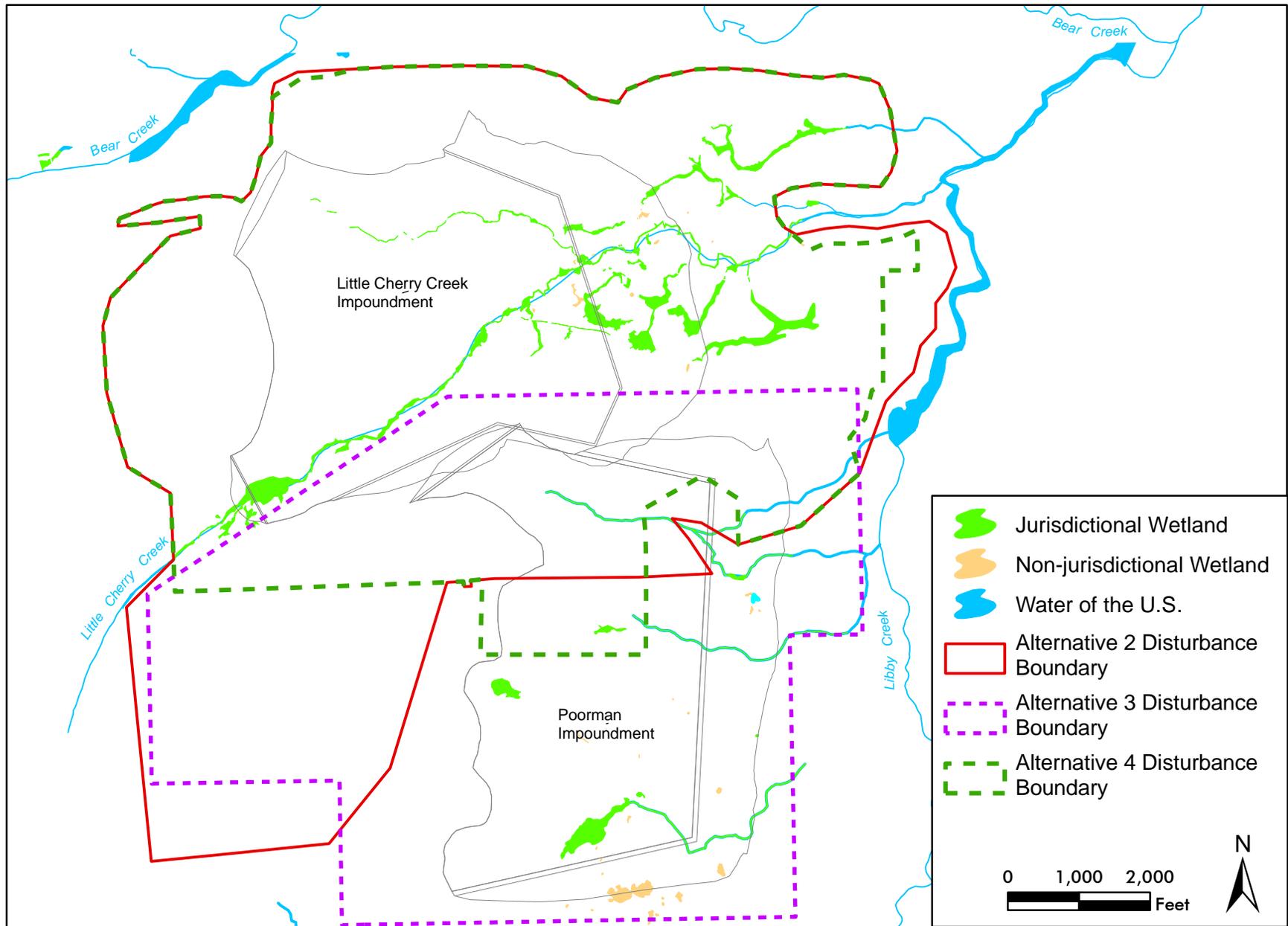


Figure 85. Wetlands in the Two Tailings Impoundment Sites

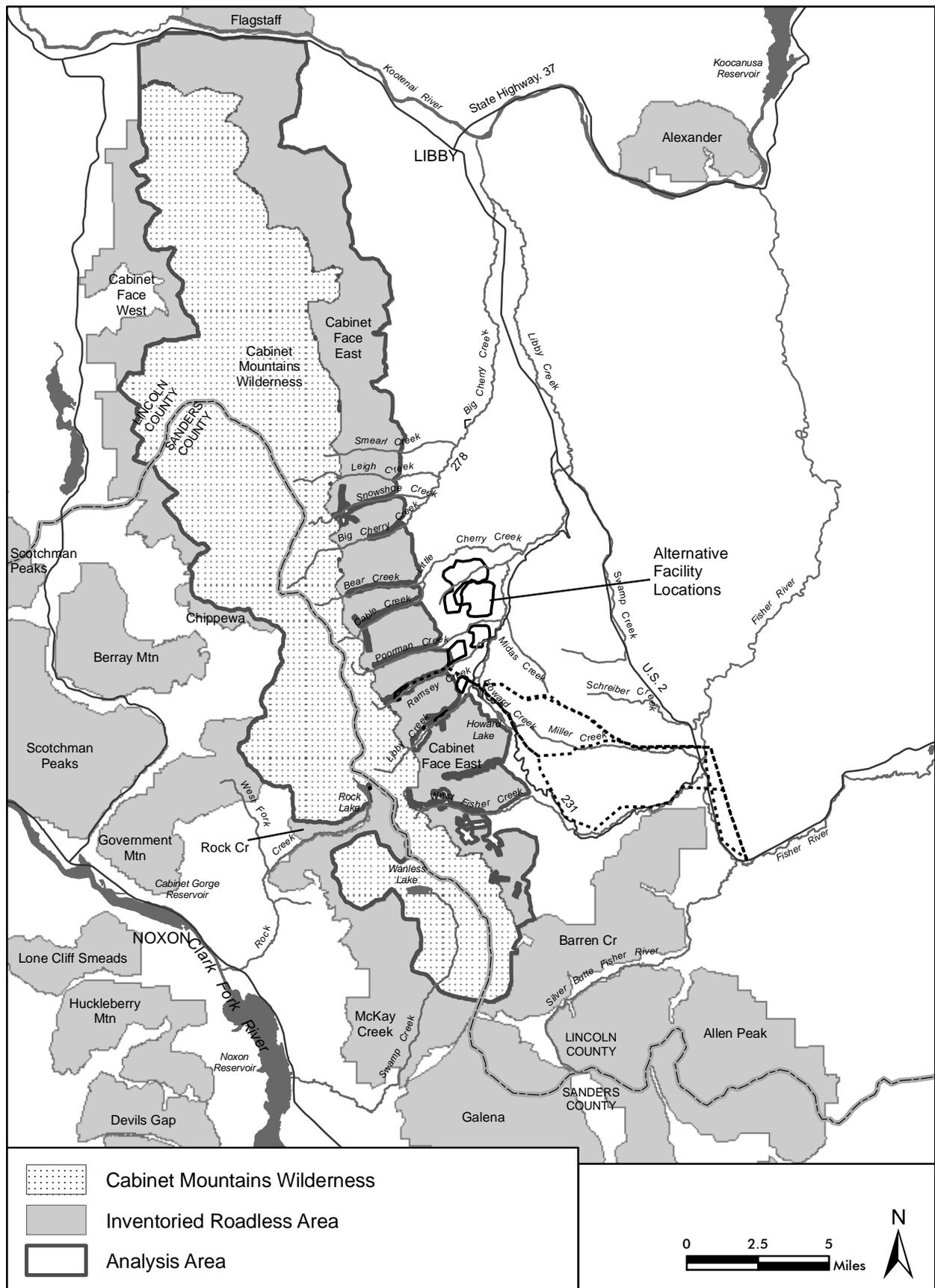


Figure 86. Cabinet Mountains Wilderness and the Cabinet Face East IRA



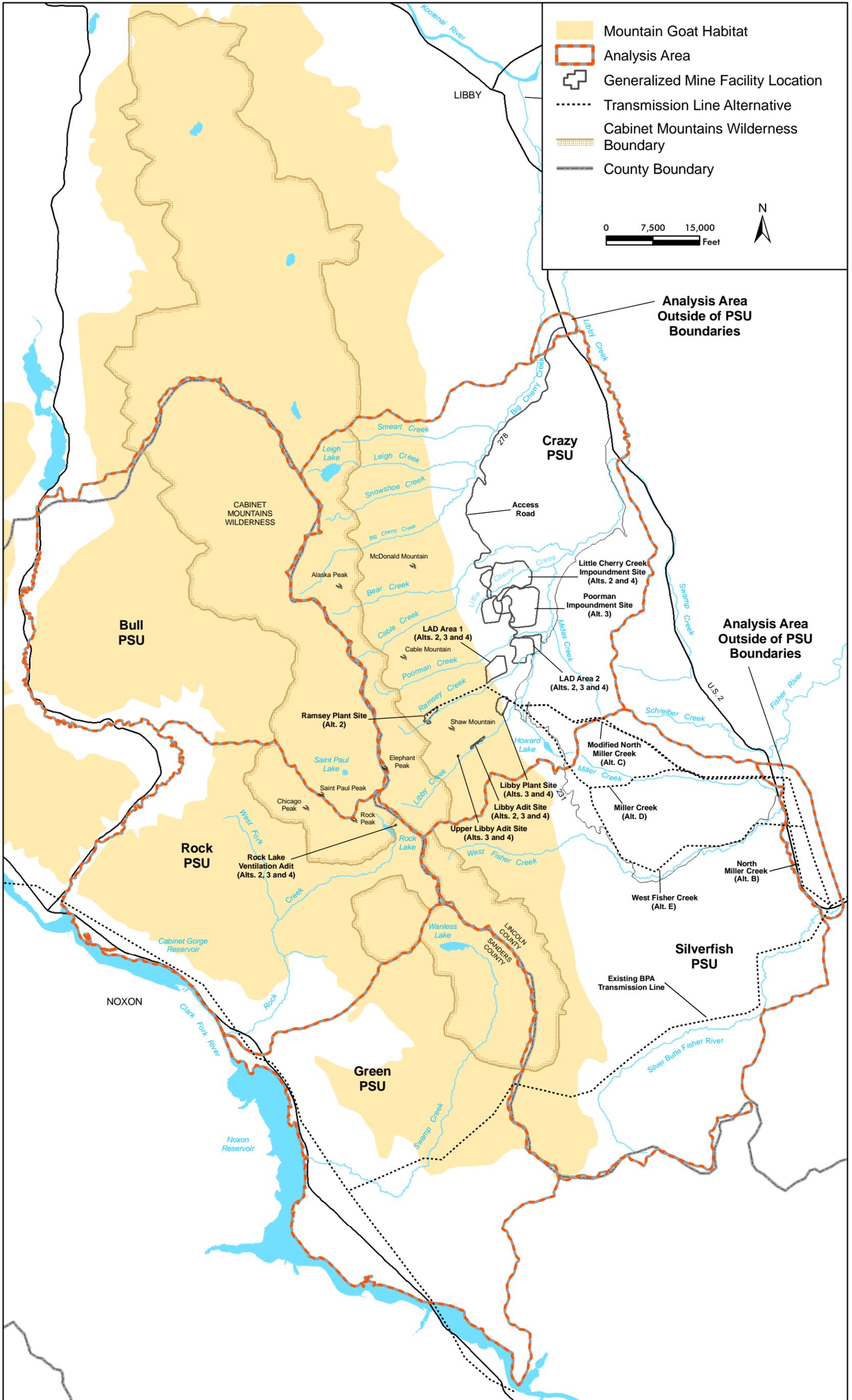


Figure 88. Mountain Goat Habitat in the Analysis Area



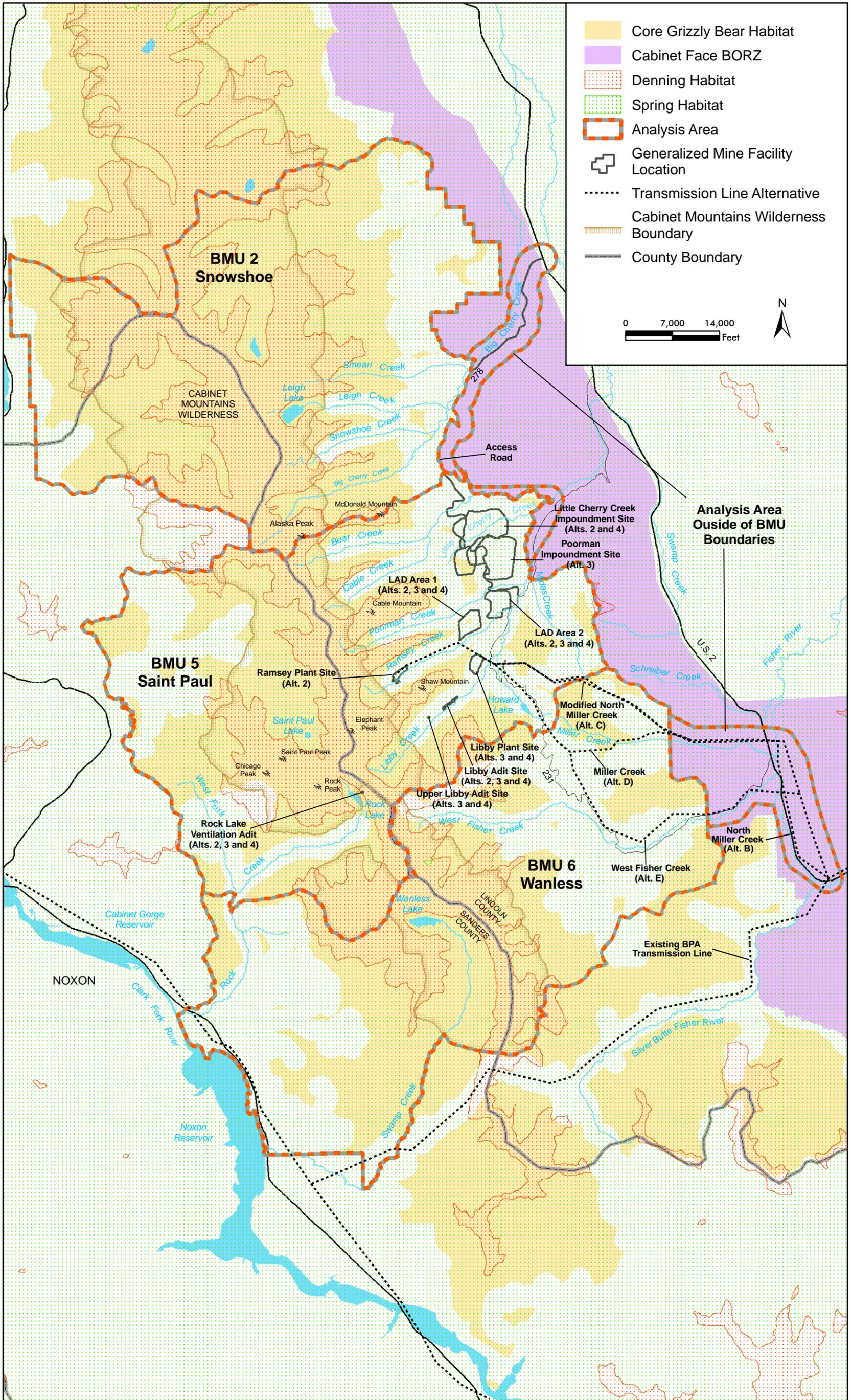


Figure 90. Grizzly Bear Habitat in the Snowshoe (2), Saint Paul (5), and Wanless (6) BMUs and the Cabinet Face BORZ



