

David Murja

Senior Principal Engineer

AREAS OF EXPERTISE

- Abandoned Mine Reclamation
- Construction Management
- Bid Specification Development
- Coal Fire Control
- Litigation Support

EDUCATION

B.S. Mining Engineering, Montana College of Mineral Science and Technology.

PROFESSIONAL HISTORY

2015 – Present. Senior Principal Engineer
Spectrum Engineering and Environmental LLC,
Billings, MT

1984 – 2015. Principal Engineer
Spectrum Engineering Inc., Billings, MT

1979 – 1984. Mining Engineer
Billings office of IntraSearch

1977 – 1979 Mine Planning Engineer
W.R. Grace & Company, Construction Products Division,
Libby, MT

BACKGROUND

Mr. Murja has an extensive background in mine operations and computerized mine planning. His forte is to create accurate 3-D models and cost estimates of these projects. These skills are invaluable when optimizing mining and reclamation projects.

He has more than 3 decades of engineering experience specializing in mine and reclamation design. His consulting services have been used in mine permitting, mine optimization, litigation support, utility audits and in the administration of a variety of mined land reclamation projects.

He has an extensive background in computerized mine planning related to the design of dragline and truck/shovel surface coal mines. He has completed the detailed mine engineering and optimization of several phosphate mines in Israel. For utility clients, he has undertaken detailed examination of the permitting and operational histories of many of the coal mine in Montana and Wyoming.

REPRESENTATIVE EXPERIENCE

Montana Abandoned Mine Reclamation

Mr. Murja has provided reclamation designs and performed construction management for abandoned mine sites throughout Montana. The sites have included surface and underground coal mines and coal fires as well as open pit and underground base metal hardrock mines. Work included conducting drilling programs and bid packages for remediation.

- Zortman/Landusky Mine Reclamation Project required numerous grading designs and construction bid packages, as well as surface water control site plans and the design and construction documents for a groundwater capture facility and for lime treatment settling ponds;

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- Collection and review of variety of documents to find locations of mine sites throughout the state;
- Conducting drilling programs for several sites to evaluate location of shafts, evaluation of shaft closure methods. Bid packages for remediation were prepared based on the documentation;
- Construction management of coal fires extinguishment;
- Complete site investigations, preparation of construction specifications and construction management of a variety of mine openings;
- Reclamation of a vat leach gold processing facility;
- Construction and operation of a cyanide destruction system; maintenance of an evaporation system to remove water from a tailings pond. Prepared bid package and selected earthwork contractor to breach the dam, and mix and cap the tailings;
- Assisted in the development of the reclamation plans for the Golden Sunlight Mine Supplemental EIS.

Wyoming Abandoned Mine Reclamation

Mr. Murja has provided reclamation designs and performed construction management for abandoned mine sites throughout Wyoming. The sites have included surface and underground coal mines and coal fires; and open pit and underground base metal hardrock mines. Work included conducting drilling programs and bid packages for remediation:

- In the Big Horn Basin, 111 abandoned mine sites were inventoried and assessed, of which 39 had construction plans developed and construction completed;
- Coal outcrop fires and underground mine fire sites were inventoried throughout the state of Wyoming and remediation designs and construction management services completed on 20 of the sites;
- Design closure plans and custom fencing/grates for large group of mines at Sunrise, Wyoming.

Utah Abandoned Mine Reclamation

- Design and provide construction management for grouting project at Maclean Mine;
- Inventoried, mapped, and prepared bid package for remediation of subsidence hazards associated with abandoned underground phosphate mines;
- Inventoried active coal fires and develop survey control using GPS equipment;
- Develop a Health and Safety Plan for the site assessment and closure of uranium mines around Marysvale, Utah;
- Complete field inventory, site assessment, and closure designs for abandoned mine sites in various counties.

Management Consulting/Litigation Support

Mr. Murja has assisted utility customers in cases involving disputes with their long-term coal supply agreements. This work was performed for Detroit Edison, Commonwealth Edison, Northern States Power, Kansas City Power, Idaho Power and LCRA. He provides technical expertise, economic evaluations, and assistance in discovery. Tasks have included:

- Coal contract cost pass-through analyses for coal mines including analysis of equipment costs and productivities; prepare production of documents request; discovery document review; critique of mine and reclamation plans; and, examination of historical and projected equipment productivities, costs and requirements.

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- Evaluation of six proposals from coal mines for a long term utility coal supply agreement. Work included mine permit review, ownership verification, and detailed economics.

Mine Design & Mine Economics

- Feasibility study for a twenty-eight million tpy oil shale mine in southern Israel with tasks of subsurface mapping; preliminary mine design; mining equipment selection; volumetrics; economic studies; and, final report presentation in Israel to the Executive Board and Government Officials.
- Economic evaluation of several existing Israeli phosphate mines for Negev Phosphates Ltd., including equipment costs and productivities, and resource evaluation.
- Feasibility study for a proposed six million tpy mine in Israel's Negev Desert with tasks of subsurface mapping; exploration recommendations; volumetrics; preliminary mine design; equipment selection; and, economic studies.

Environmental & Hazardous Waste

- Worked with a project team on the Bunker Hill Super Fund in Idaho. Reviewed the Record of Decision and computed earthwork quantities and prepared cost estimates.

TRAINING AND CONTINUING EDUCATION

- OSHA 29CFR1910.120 40-hour hazardous material handling training (Hazwoper) and yearly 8-hour refresher training.
- OSHA 29CFR1910.120 8-hour supervisor training (Hazwoper).
- 24-hour MSHA training and annual 8-hour refresher training.
- Geostatistics, University of Nevada, Reno
- Abandoned Mine Land Technology and Design Reclamation Workshop, Casper, Wyoming
- Corporate Ethics Plan, Code of Business Conduct, Training
- Harassment Prevention Training