



Principal Resource Geologist

Project: Stibnite Gold Project - Stibnite, Idaho, USA

Work Location: Stibnite, Boise, Donnelly offices, with remote work flexibility as appropriate

Salary: Competitive

Employment Type: Full-Time, Regular Employee

Application Deadline: Position open until filled

About Perpetua Resources

Perpetua Resources is an Idaho-based company committed to responsible mining and environmental stewardship. Our mission is to restore the abandoned Stibnite Mining District while responsibly developing its rich resources of gold and antimony—an essential mineral for national defense and sustainable technologies.

Why Join Us?

- Environmental Restoration: Be part of a team dedicated to restoring ecosystems and improving water quality in historically impacted mining areas.
- Innovative Projects: Contribute to the Stibnite Gold Project, designed to responsibly develop critical mineral resources while rehabilitating the environment.
- Community Engagement: Work with a company that values transparent partnerships and actively invests in local communities.
- Professional Growth: Join a diverse team of scientists, engineers, and environmentalists committed to excellence and innovation.

At Perpetua Resources, we believe in balancing resource development with environmental care to create a sustainable future. Join us in making a lasting, positive impact on Idaho and beyond.

 [Learn more at www.perpetuaresources.com](http://www.perpetuaresources.com)

About The Position

Reporting to the Technical Services Superintendent, the Principal Resource Geologist is the senior-most technical authority responsible for geological modeling and resource estimation for the Stibnite Gold Project. This role leads the development, maintenance, validation, and governance of 3D geological, geometallurgical, and mineral resource models that support mine design, production forecasting, and SEC S-K 1300 compliant reporting.

The Principal Resource Geologist integrates exploration, production, metallurgical, geotechnical, and reconciliation datasets into coherent geological interpretations and estimation frameworks. The role sets technical standards for the geology function, provides expert internal review and sign-off, supports cross-disciplinary integration, and may serve as a Qualified Person for mineral resource estimation and technical disclosure

Essential Duties and Responsibilities

1. EH&S

- Demonstrate and uphold Perpetua's commitment to safety and environmental stewardship.
- Ensure geological and modeling activities comply with MSHA, environmental regulations, and internal company standards.
- Promote data integrity, transparency, and responsible resource reporting practices.

2. Technical Leadership – Geologic Interpretation & Modeling

- Lead the development and maintenance of 3D geological, structural, lithological, geometallurgical, and resource models for all deposits.
- Define modeling workflows, domaining logic, and estimation strategies consistent with best practice geostatistics and geological understanding.
- Conduct or oversee data validation, compositing, variography, estimation (OK, IDW, MIK, conditional simulation), and resource classification processes.
- Document all assumptions, methodologies, and validation outputs to ensure audit-ready models.
- Provide technical review and sign-off on geological interpretations, domains, and estimation inputs produced by junior and intermediate geologists.
- Lead internal peer reviews and participate in external technical due diligence.

3. Resource Estimation & Governance

- Maintain a formal resource model governance framework, including version control, documentation, and model release protocols.
- Establish and apply resource classification criteria (Measured, Indicated, Inferred) consistent with SEC S-K 1300 requirements.
- Ensure resource model outputs appropriately support modifying factor assumptions for reserve estimation workflows.

- Prepare mineral resource statements for internal and external disclosure.
- Coordinate with external Qualified Persons or consultants during annual updates, audits, or project reviews.

4. Technical Report Summary (S-K 1300) Responsibilities

- Capable of serving as a Qualified Person for mineral resource estimation and related technical disclosure, if designated by Perpetua.
- Review, approve, and sign off on resource models, estimation methodologies, and supporting documentation.
- Ensure all geological, drilling, sampling, QA/QC, and estimation data used for reporting meet industry-recognized standards and demonstrate defensible data quality.
- Contribute to the preparation of the Technical Report Summary (TRS), including authoring or co-authoring relevant sections.
- Provide clear, defensible explanations of geological and estimation assumptions for regulators, investors, auditors, and other stakeholders.

5. Data Management & Integration

- Oversee geological databases including drilling, assays, density, geotechnical, and metallurgical datasets.
- Implement and maintain robust QA/QC procedures for drilling, sampling, and analytical workflows.
- Ensure complete, traceable data lineage from raw data through compositing, domaining, estimation, and final model products.
- Integrate operational data (grade control, production drilling, blast holes, surveys) into long-range resource models.
- Collaborate with the Production Geology team to maintain alignment between resource models and operational grade control models.

6. Collaboration with Engineering, Metallurgy, Exploration & Operations

- Support mine engineering with reserve-ready resource models, dilution and recovery assumptions, ore control boundaries, and grade distribution forecasts.
- Partner with metallurgy to refine geometallurgical domains, recovery functions, and mineralogical controls on processing outcomes.
- Provide geological inputs to mine planning, scheduling, equipment selection, and stockpiling strategy.
- Lead root-cause analysis for reconciliation variances and recommend operational or modeling adjustments.
- Participate in multi-disciplinary planning and continuous improvement initiatives.
- Work closely with exploration team to develop, evaluate targets within SPG area to support ongoing operations and future expansions

7. Technology & Systems Development

- Utilize industry-standard modeling and estimation platforms (Leapfrog, Vulcan, Surpac, Datamine, or equivalent).
- Develop automated workflows (Python, R, SQL, Leapfrog/Vulcan APIs) to streamline model updates, QA/QC, and reporting.
- Ensure geoscience datasets are integrated with mine planning, GIS, digital geology systems, and corporate data platforms.

- Identify and evaluate emerging technologies in structural modeling, machine learning, geometallurgy, and digital geology.

8. Team Leadership, Mentorship & Field Oversight

- Provide technical leadership, mentoring, and coaching to geologists and geological technicians.
- Lead internal training on geological interpretation, database management, geostatistics, and modeling tools.
- Define and maintain technical standards, workflows, and modeling protocols for the geology team.
- Promote a high standard of technical rigor, collaboration, and professional development.

9. Budget Management & Reporting

- Support development of budgets for drilling, sampling, modeling, and external consultant programs.
- Prepare technical reports, presentations, and supporting materials for management, regulators, and external stakeholders.
- Provide geological and resource inputs for mine planning, business planning, and long-range forecasting.

10. Compliance & Reporting

- Ensure compliance with internal and external standards for geological data, resource estimation, and technical reporting.
- Maintain complete, traceable, auditable documentation for all geological and modeling work.
- Support regulatory engagement, permitting processes, and technical submissions as required.

Schedule & Logistics

The Principal Resources Geologist may be based at one of Perpetua's offices in Boise or Donnelly, Idaho. However, this position has flexibility to locate where the work needs to be performed, i.e., Donnelly, Boise, or remote work may be applicable for the correct individual. The employee is required to provide his/her own transportation to the assigned office. Travel will be required to Stibnite, Donnelly, Boise and contractor offices as related to job needs.

Minimum Qualifications

- B.S. in Geology, Geological Engineering, or Earth Science (M.S. preferred).
- Professional registration (PG, P.Geo, CPG, or equivalent) required or attainable.
- Must meet (or be able to meet within 12 months) the qualifications of a Qualified Person for mineral resource estimation under SEC S-K 1300.
- Minimum 10+ years of geological experience, including extensive experience in geological interpretation, geostatistics, and resource estimation.
- Demonstrated expertise in QA/QC, model governance, and validation.
- Experience with intrusive-related gold systems, structurally complex deposits, or multi-commodity systems considered an asset.

- Experience supporting mine planning, feasibility studies, reconciliation, and technical reporting.
- Advanced proficiency in geological modeling software (Leapfrog, Vulcan, Datamine, Surpac, or equivalent).
- Strong practical understanding of geostatistics, estimation techniques, and resource classification standards.
- Proficiency with scripting/automation tools (Python, SQL, R, Leapfrog/Vulcan APIs).
- Excellent communication and cross-disciplinary collaboration skills.
- Strong analytical, organizational, documentation, and technical writing skills.
- Personal Leadership – Learning Agility
- Personal Leadership – Modeling Leadership
- Relationship Focus – Collaboration and Communication
- Strategic Integration – Problem Solving, Planning, Prioritization
- Drive Organizational Results – Performance Coaching, Results Focus

Physical & Environmental Requirements

- Ability to perform desk-based computer work for extended periods.
- Capability to conduct field visits, including rugged terrain and variable weather conditions.
- Flexibility to work on-site at the Stibnite Gold Project in a camp setting as required.

What We Offer

At **Perpetua Resources**, we are committed to supporting our employees with a comprehensive benefits package that promotes well-being, financial security, and career growth. We believe in fostering a workplace where our team members thrive personally and professionally.

What We Offer:

Health & Wellness

- Comprehensive medical, dental, and vision insurance
- Health savings account (HSA) available with eligible health plan choice
- Employee assistance program (EAP) for mental health and well-being
- Company-paid Life Flight membership for employees/immediate family
- Pre-tax Flexible Spending Accounts (FSAs) for medical and dependent care expenses

Financial Security

- Competitive salary
- Short-Term Incentive Plan (STIP) – Annual performance-based bonus program
- Long-Term Incentive Plan (LTIP) – Equity-based compensation for long-term success
- 401(k) retirement plan with company matching contributions
- Employee Assistance Program

Work-Life Balance

- Paid time off (PTO) and company-recognized holidays
- Parental leave
- Flexible work arrangements (role-dependent)

Professional Growth

- Career advancement opportunities within a growing company
- Industry conference attendance and networking opportunities
- Internal training programs and cross-functional learning

Additional Perks

- Company-paid professional memberships (e.g., industry associations, networking groups)
- Travel assistance and reimbursement for work-related conferences or site visits
- Commitment to sustainability and community engagement

At **Perpetua Resources**, we take pride in creating a workplace where employees feel valued and empowered. If you're looking for a career that combines purpose, growth, and a strong team environment, we'd love to have you join us!

What we Require

- Candidates may be required to pass a medical exam.
- Candidates must pass all required training and/or testing.
- Perpetua Resources Idaho Inc. promotes a drug/alcohol-free work environment using mandatory pre-employment drug testing and on-going drug and alcohol testing, as allowed by applicable laws.

Ready to Join the Perpetua Resources Team?

If you're passionate about making a difference in one of the most environmentally driven mining projects in the country, we'd love to hear from you!

 To apply: Send resume and cover letter directly to employment@perpetua.us

Perpetua Resources is committed to equal employment opportunity. All qualified applicants will be considered without regard to race, color, sex, age, religion, national origin, disability, or any other characteristic protected by federal, state, or local law.