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Professional Development of Exploration Geologists: Perspectives from a Field-Based Major Explorer

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There is limited published literature addressing the professional development of exploration geologists, despite its critical importance to discovery success. As a broad and multidisciplinary field, exploration requires a diverse set of technical, operational, and leadership capabilities. This raises a fundamental question: what criteria define a successful exploration geologist? Is it making a discovery? Operating in a safe and responsible way? Advancing a project to production? Creating value for shareholders? Defining robust geological models and mineralization controls? Rapidly generating and testing targets? Prioritizing exploration focus? Leading teams and developing other geoscientists? In practice, it is all of the above.

For us, a successful exploration geologist is a highly skilled professional who is driven, intellectually curious, collaborative, resilient, and, above all, passionate about fieldwork. “Boots on the ground” is not a cliché; it reflects the fact that meaningful geological understanding is built in the field, not at a desk. This cultural alignment is essential, as high-performing teams are the foundation of safe, responsible, and successful exploration.

Professional development begins early and continues throughout a geologist’s career. Upon joining -and periodically thereafter- individuals complete a structured self-assessment aligned with defined career pathways and critical competencies. Together with their manager, a tailored Individual Development Plan focused on strengthening capabilities and addressing gaps is developed. Development is supported through formal programs (“Compass Program”), mentorship programs, team-based learning initiatives, and individualized plans structured around the 70-20-10 model: 70% through hands-on, field-based experience; 20% through coaching, mentoring, and peer learning; and 10% through formal training and courses.

Exposure to diverse mineral systems, geological settings, and scales of exploration (regional to deposit scale), combined with technical mentoring and collaboration across teams and cultures, accelerates pattern recognition and geological intuition. This combination - field experience, strong teams, and disciplined thinking - turns ideas into exploration models and discoveries.