

SEG 100 Conference: Celebrating a Century of Discovery

ST.053

Seven Discoveries - Seven Insights

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I have been involved in the discovery of seven mineral deposits during my career. I wish to share my seven relevant insights for future mineral exploration activities.

The **seven discoveries** in which I was involved and from which I gleaned some relevant insights are as follows:

- **Wodgina** – World-class tantalite deposit, discovered in 1969 in Western Australia.
- **Jabiluka** – The largest uranium deposit in the world, discovered in 1971 in the N.T., Australia.
- **Paddington** – Discovered in Western Australia in 1982 and still in production.
- **Munni Munni** – A significant PGE deposit, discovered in 1984 in Western Australia.
- **Ernest Henry** – A world-class IOCG deposit, discovered in 1991 in Qld, Australia, and still in production.
- **Isortoq** – A world-class TVM deposit, discovered in 2007 in southwest Greenland.
- **Maniitsoq** – A world-class nickel/copper/cobalt/PGE camp, discovered in 2011 in western Greenland.

The **seven insights** which are relevant to these seven discoveries are as follows:

Efficient Corporate Management - It is essential that public and private company management understand the following:

- The country in which exploration work will be carried out, considering their rule of law, Aboriginal rights, infrastructure, and security in the exploration project area;
- The management requirements for corporate stability, integrity, and financial development.

The Rule-of-Law - Mineral exploration is a high-risk endeavour and risks should not be increased by exploration in countries that do not have a true and effective Rule of Law and legal system, including the following:

- Genuine legal rights for exploration and exploitation, as finance can be compromised without such rights;
- An assessment of aboriginal and environmental rights, surface rights and access to infrastructure.

Finance - Exploration requires essential finances.

- Using Joint Venture (JV) funding can result in the incoming JV party managing the field exploration and ongoing exploitation.
- The financiers providing funding must understand that they are part of the discovery team.

Exploration Team - The exploration team must have the unique skills required to carry out requisite exploration.

- Team and corporate management must communicate effectively and respect and inspire all team members.
- Annual review of projects gives team members an opportunity to give their advice for ongoing teamwork and project selection.

Pattern Recognition - An assessment is required of the best geological mode of occurrence for a commodity prior to obtaining exploration rights.

- Ensure that the exploration team utilizes effectively the exploration techniques in geology,

geochemistry, geophysics, and drilling to implement the requisite field work.

Lateral Thinking and Positive Exploration -

- Continue to review the selected target area. Understand that **Lateral Thinking** of the mode of occurrence is required to adapt and expand the field work to find alternate targets.
- All projects are always uniquely different and therefore exploration should not be carried out simply to ensure that there is no discovery of the targeted mode of occurrence.

Full Exploration Rights - Once the target area for exploration has been selected, the company should acquire 100% of the exploration rights for early-stage exploration.

SEVEN DISCOVERIES	SEVEN INSIGHTS						
	Efficient Corporate Management	Rule-of-Law	Finance	Exploration Team	Pattern Recognition	Lateral Thinking & Positive Exploration	Full Exploration Rights
Wodgina	✓✓	✓	✓	✓✓	✓✓✓	✓	✓
Jabiluka	✓✓		✓✓	✓✓✓	✓✓✓	✓✓	✓
Paddington	✓✓	✓	✓✓	✓✓	✓✓	✓✓✓	✓
Munni Munni	✓✓	✓	✓	✓✓	✓✓✓	✓	✓
Earnest Henry		✓	✓	✓	✓✓✓	✓✓	
Isortoq		✓	✓	✓	✓	✓✓✓	✓
Maniitsoq	✓	✓	✓✓	✓	✓✓	✓✓	✓✓

Seven Discoveries, Seven Insights