

# Mineral Exploration Mining Consultants Investor's Guide to Mining Projects

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Mining investment is more often than not understood by investors and public at large as mere extraction of ores and minerals from within the earth to extract elements listed in the periodic table but it doesn't happen that way. Mining entails a sequence of geotechnical studies and planning. We have come across mining projects across geographies and commodities ranging from exploration to those under care & maintenance in my 30 years career as a professionally qualified mineral exploration and mining geologist practicing in the mining & metal industry. Knowing about the different types of mining project helps in understanding the intrinsic

risks before taking a go/no go decision. The five types of mining projects range from low price high risk to high price low risk in the descending order. Smart investors get the mining project evaluated by experienced geologists, mining engineers, mineral processing engineers and mining finance professionals to ascertain the risks. This article is primarily intended for existing or new mining companies, asset level investors, banks venturing into mining business or fresh geoscience graduates joining mining industry or senior mining professionals keen to educate non mining professionals.



The qualitative understanding about the five types of mining projects on basis of Mining Value Chain (Fig.1) viz: Exploration Project,

Advanced Exploration Project, Development Project, Operation Project and Care & Maintenance Project are described in brief below.

Fig 1. Mining Value Chain



**1. Exploration Project**

A Project that does not have a reported JORC (or equivalent classification code) Resource, a Bank Feasibility Study in progress or completed and is not in production.

**2. Advanced Exploration Project**

A Project that has a reported JORC (or equivalent classification code) Resource, but does not have a Bank Feasibility Study in progress or completed and is not in production.

**3. Development Project**

A Project that has a reported JORC (or equivalent classification code) Resource, a completed Bank Feasibility Study or one in progress but is not in production.

**4. Operation Project**

A Project that has a reported JORC (or equivalent classification code) Resource, a completed Bank Feasibility Study and is in Production.

**5. Care & Maintenance Project**

A Project that has a reported JORC (or equivalent classification code) Resource and has been in Production but is no longer in Production and is currently on care and maintenance or closed.

**Failed Mining Project Investment Live Example**

Recently, two major companies (names withheld) having 20 years' experience in mining business ended up winning their bid on iron ore mining project but later on decided to surrender the mining project and ended up losing 10 to 15 million USD bank guarantee because they realised the risks involved. Had these companies conducted proper due diligence and technical evaluation before participating in the auction they could have avoided the loss and media attention. The 4 levers of mining project evaluation (Figure 2) enables investors towards successful mining business ventures

Fig 2. 4. Levers of mining project evaluation



So, look before you leap.

Brief bio of the writer.



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**Saurabh Priyadarshi** is a professionally qualified mineral exploration & mining geologist with over 30 years' field and management work experience in world class mining companies and in international consulting.across Asia, Africa and Latin America mining value chain and mining business development of ores and minerals used across Steel,Cement,Power,Ferroalloys Electronics and Automotive industries. He is the Founder Director of Geoxplorers Consulting Services an independent group of geoscientists that provides consulting & advisory services to global clients and asset level investors not having professionally qualified geoscientists on their rolls.