For each of the points listed below, provide a detailed description. You may use diagrams and maps to illustrate your response.

**Exploration:** Discuss **two** exploration techniques which are used to locate this resource. Relate the techniques used to the properties of the source rock. (6 marks)  
 **Mining or extraction:** With reference to an actual resource site, discuss the type of mining taking place and relate this to the depth, size of the resource deposit and grade of the deposit. Include a diagram showing the deposit. (7 marks)  
 **Environmental issues:** Discuss **two** impacts of this mining on the environment, and any measures that are being taken to minimise this impact. (6 marks)  
 **Social and heritage issues:** Describe **two** possible effects of mining or processing on the surrounding community or on traditional owners of the land. (4 marks)  
 **Economic significance:** Discuss the importance of this resource to the Western Australian   
economy – export dollars, markets, jobs, construction of infrastructure (roads, ports,   
railways etc.) and longevity of the operation. (6 marks)

**Provide a reference list.** (2 marks)

|  |  |  |
| --- | --- | --- |
| **Section** | **Possible mark** | **Allocated mark** |
| **Exploration** |  |  |
| Names two techniques used to locate the resource | 1–2 |  |
| Describes the exploration processes in detail relating them to the properties of the source rock | 1–4 |  |
| **Total** | | **/6** |
| **Mining or extraction** |  |  |
| Includes a geological map or labelled diagram of the resource site | 1–2 |  |
| Describes main method of extraction, e.g. open cut/underground | 1–2 |  |
| Relates type of mining to characteristics of ore deposit | 1–3 |  |
| **Total** | | **/7** |
| **Environmental issues** |  |  |
| Discusses two environmental impacts of mining such as:  land clearing, due to transporting, due to waste, due to processing of ore | 1–4 |  |
| Describes issues arising in relation to traditional land owners | 1–2 |  |
|  | | **/6** |
| **Social and heritage issues** |  |  |
| Describes two effects on the community or traditional owners in detail | 1–4 |  |
| **Total** | | **/4** |
| **Economic significance** |  |  |
| Describes the economic significance to Australia (dollars, markets) | 1–2 |  |
| Discusses current and future job opportunities | 1–2 |  |
| Estimates the longevity of the resource i.e. the timeframe for exhaustion of the resource | 1–2 |  |
| **Total** | | **/6** |
| **References** |  |  |
| 1–2 references  Three or more references | 1  2 |  |
| **Total** | | **/2** |