The following cases illustrate RWE’s expertise and experience in exploration and mineral deposit evaluation:

Case study 1
RWE produced a mineral resource model of a platinum/palladium deposit in the Bushveld Complex, South Africa. The expected grade distribution for the mining operation was effectively modelled, allowing the client to investigate the expected ore reserves as a function of commodity prices.

Case study 2
RWE re-evaluated the Wadi Sawawin iron ore deposit in Saudi Arabia. The services comprised of a critical review of the existing deposit data and the preparation of a project development master plan and a detailed exploration plan.

Case study 3
RWE prepared a study on the stress stability of the 25 Mio t per annum opencast coal mine in Kalimantan, Indonesia. In addition to the geotechnical valuation of the current design slopes, a groundwater model was developed to design a mine dewatering and surface water control scheme to allow the client to deepen the mine safely to a depth of 100 m.

Case study 4
For the Hongsa lignite deposit in Laos, RWE prepared a mineral resource study in 2008 which complies with the JORC reporting code.

Case study 5
RWE trained geologists and mining engineers from Bulgarian ministries and state companies in economic mine evaluation. The course covered the entire spectrum, from economic fundamentals to practical construction and interpretation of resource models. This enabled the participants to evaluate economic mine optimization and determine royalty rates.

Case study 6
As part of a mine feasibility study, RWE carried out an exploration drilling campaign and hydrological pump tests in the Thar Desert, Pakistan. The study defined 400 Mio t of proven lignite reserves according to JORC standard.

Case study 7
RWE is evaluating the Wall Sawawin iron ore deposit in Saudi Arabia.

Case study 8
RWE prepared a study on the slope stability of the 25 Mio t per annum opencast coal mine in Kalimantan, Indonesia.

Case study 9
For the Hongsa lignite deposit in Laos, RWE prepared a mineral resource study in 2008 which complies with the JORC reporting code.

Case study 10
RWE trained geologists and mining engineers from Bulgarian ministries and state companies in economic mine evaluation. The course covered the entire spectrum, from economic fundamentals to practical construction and interpretation of resource models. This enabled the participants to evaluate economic mine optimization and determine royalty rates.

Case study 11
As part of a mine feasibility study, RWE carried out an exploration drilling campaign and hydrological pump tests in the Thar Desert, Pakistan. The study defined 400 Mio t of proven lignite reserves according to JORC standard.

Case study 12
RWE is evaluating the Wall Sawawin iron ore deposit in Saudi Arabia.

Case study 13
RWE prepared a study on the slope stability of the 25 Mio t per annum opencast coal mine in Kalimantan, Indonesia.

Case study 14
For the Hongsa lignite deposit in Laos, RWE prepared a mineral resource study in 2008 which complies with the JORC reporting code.

Case study 15
RWE trained geologists and mining engineers from Bulgarian ministries and state companies in economic mine evaluation. The course covered the entire spectrum, from economic fundamentals to practical construction and interpretation of resource models. This enabled the participants to evaluate economic mine optimization and determine royalty rates.

Case study 16
As part of a mine feasibility study, RWE carried out an exploration drilling campaign and hydrological pump tests in the Thar Desert, Pakistan. The study defined 400 Mio t of proven lignite reserves according to JORC standard.

Case study 17
RWE is evaluating the Wall Sawawin iron ore deposit in Saudi Arabia.

Case study 18
RWE prepared a study on the slope stability of the 25 Mio t per annum opencast coal mine in Kalimantan, Indonesia.

Case study 19
For the Hongsa lignite deposit in Laos, RWE prepared a mineral resource study in 2008 which complies with the JORC reporting code.

Case study 20
RWE trained geologists and mining engineers from Bulgarian ministries and state companies in economic mine evaluation. The course covered the entire spectrum, from economic fundamentals to practical construction and interpretation of resource models. This enabled the participants to evaluate economic mine optimization and determine royalty rates.

Case study 21
As part of a mine feasibility study, RWE carried out an exploration drilling campaign and hydrological pump tests in the Thar Desert, Pakistan. The study defined 400 Mio t of proven lignite reserves according to JORC standard.

Exploration and Mineral Deposit Evaluation

Determining the worth of your mineral deposit
Power generation and mining experts.

RWE Power International’s specialist services cover every aspect of owning and operating power plant, from construction, commissioning, operations and maintenance, to eventual decommissioning. Our mining expertise covers minerals and solid fuels and spans exploration, development, operations and rehabilitation.

We have a great depth of operations and engineering knowledge and practical experience as an asset developer, owner and operator. As part of the RWE Group, we have a great depth of operations and engineering knowledge and practical rehabilitation.

With clients in more than 70 countries around the world, our expertise spans the full range of electricity generation technologies, fuel sources including hard coal, lignite, oil, gas, nuclear, and mining methods.

A shared history of innovation

RWE Power International is a collaboration between two companies within the RWE Group, RWE Npower plc and RWE Power’s consulting subsidiary, RE GmbH. We have a proud history of innovation, shared between RWE npower and RE. Our experience of transforming state owned power utilities into commercially focussed private organisations was achieved by adopting cutting-edge, innovative operating and engineering solutions. Our mining services are based on more than 40 years of developing and running lignite mines, and include large-scale groundwater management, reclamation and environmental services.

Market studies

The purpose of mining is to produce a mineral at a profit. In order to do this you need to understand:

- Your community’s worth
- How its value will develop
- What you can afford to do
- The competition
- The risk

Our mineral economics experts will provide you with the necessary information to enable you to make a commercial decision on exploration.

Mineral potential surveys

Any search for mineral resources begins with an assessment of the mineral potential. Our experts review the geology, assisted by the interpretation of satellite images and geophysical data, where available.

We review historical mining activity, including documentation of artisanal mining activities. As a result you have an inventory of potential mineral deposits to take the prospecting process further.

Mineral resource modelling

To estimate the tonnes and grade of your deposit from your exploration data involves more than just the average thickness and mineral content, especially if you have to mine to quality standards.

Our geological and geostatistical experts construct a 3-dimensional digital deposit model from your geological and geophysical exploration data using state-of-the-art software (DATAMINE and SURPAC). Our geologists can sign resource estimates as recognised Competent Persons under Australian, European and Canadian reporting codes following internationally agreed standards in compliance with the CRIRSCO family of ore reserve classifications and the ISRIC code.

Exploration management

Exploring a prospect is expensive. Most prospects are not economic so you need all relevant information to be able to make an effective investment decision. We manage this process for you, from reconnaissance surveys right through to detailed drilling campaigns.

We lay out your sampling and drilling campaigns and select the drillers and assay laboratories. We make sure that the samples are correctly taken and analysed and interpret the data to guide future exploration work. Our experts will manage your exploration programme efficiently, economically and transparently, with reported reviews and decision points along the way.

Mineral resource modelling

To estimate the tonnes and grade of your deposit from your exploration data involves more than just the average thickness and mineral content, especially if you have to mine to quality standards. We manage this process for you, from reconnaissance surveys right through to detailed drilling campaigns.

We lay out your sampling and drilling campaigns and select the drillers and assay laboratories. We make sure that the samples are correctly taken and analysed and interpret the data to guide future exploration work. Our experts will manage your exploration programme efficiently, economically and transparently, with reported reviews and decision points along the way.

Economic analysis

Regardless of the commodity, our multi-disciplinary team will be able to determine the full cost of producing minerals or coal from your deposit. This includes all investments, interest and cost of capital, depreciation, taxes and royalties. Our mining property valuations form the basis for price and royalty negotiations.

We manage this process for you, from reconnaissance surveys right through to detailed drilling campaigns.

We lay out your sampling and drilling campaigns and select the drillers and assay laboratories. We make sure that the samples are correctly taken and analysed and interpret the data to guide future exploration work. Our experts will manage your exploration programme efficiently, economically and transparently, with reported reviews and decision points along the way.

Our experts are sensitive to the impact the mine will have on the environment, the plants, streams and ground water and of course, the local population.

Our efforts go beyond simply determining the effect of the mine. We review the mine plan to maximise environmental impact, ensuring that environmental protection is an integral part of any project.

Feasibility studies

Our mining experts will determine whether your deposit has the potential to become a profitable mine, providing you with the level of detail required. Our studies range from simple concept studies, through pre-feasibility studies to fully bankable feasibility studies and include both technical and economic aspects for the life of the proposed mine.

Our experts are sensitive to the impact the mine will have on the environment, the plants, streams and ground water and of course, the local population.

Our efforts go beyond simply determining the effect of the mine. We review the mine plan to maximise environmental impact, ensuring that environmental protection is an integral part of any project.

Economic analysis

Regardless of the commodity, our multi-disciplinary team will be able to determine the full cost of producing minerals or coal from your deposit. This includes all investments, interest and cost of capital, depreciation, taxes and royalties. Our mining property valuations form the basis for price and royalty negotiations.

We manage this process for you, from reconnaissance surveys right through to detailed drilling campaigns.

We lay out your sampling and drilling campaigns and select the drillers and assay laboratories. We make sure that the samples are correctly taken and analysed and interpret the data to guide future exploration work. Our experts will manage your exploration programme efficiently, economically and transparently, with reported reviews and decision points along the way.

Our experts are sensitive to the impact the mine will have on the environment, the plants, streams and ground water and of course, the local population.

Our efforts go beyond simply determining the effect of the mine. We review the mine plan to maximise environmental impact, ensuring that environmental protection is an integral part of any project.

Feasibility studies

Our mining experts will determine whether your deposit has the potential to become a profitable mine, providing you with the level of detail required. Our studies range from simple concept studies, through pre-feasibility studies to fully bankable feasibility studies and include both technical and economic aspects for the life of the proposed mine.

Our experts are sensitive to the impact the mine will have on the environment, the plants, streams and ground water and of course, the local population.

Our efforts go beyond simply determining the effect of the mine. We review the mine plan to maximise environmental impact, ensuring that environmental protection is an integral part of any project.

Economic analysis

Regardless of the commodity, our multi-disciplinary team will be able to determine the full cost of producing minerals or coal from your deposit. This includes all investments, interest and cost of capital, depreciation, taxes and royalties. Our mining property valuations form the basis for price and royalty negotiations.

We manage this process for you, from reconnaissance surveys right through to detailed drilling campaigns.

We lay out your sampling and drilling campaigns and select the drillers and assay laboratories. We make sure that the samples are correctly taken and analysed and interpret the data to guide future exploration work. Our experts will manage your exploration programme efficiently, economically and transparently, with reported reviews and decision points along the way.

Our experts are sensitive to the impact the mine will have on the environment, the plants, streams and ground water and of course, the local population.

Our efforts go beyond simply determining the effect of the mine. We review the mine plan to maximise environmental impact, ensuring that environmental protection is an integral part of any project.