

1 Overview – Project stages

The first three stages planned for the Julia Creek Project are as follows:

- **Stage I: Pilot plant** – approximately 1 tonne per hour of oil shale ore (expected to be equivalent to approximately 25 bopd when processing Julia Creek oil shale of average grade). The plant is intended to be built at Townsville and operated in the first instance on a bulk sample of oil shale ore taken from the Julia Creek tenement. Stage I has four main objectives:
 - to confirm laboratory-scale test results of the Rendall Process chemistry on a larger scale, and the operability of the principle items of process equipment;
 - to demonstrate operation of the Rendall Process in continuous mode;
 - to provide operating data to refine and optimise key process and engineering design parameters; and
 - and to provide bases for preliminary economic evaluations of the prospective first commercial scale plant proposed for Stage II.

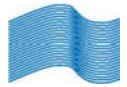
Stage I of the Project has two separate sub-stages:

- **Stage IA:** Refinement of the process design for the pilot plant to be built at Townsville in Stage IB, and operated on oil shale ore from QSO's Julia Creek tenement. As well as refinement of plant design parameters and specification of long lead time items, Stage IA will include completion of leasing and pre-project permitting arrangements for the proposed plant site within the Townsville State Development Area, 11 km south of Townsville.
- **Stage IB:** Detailed design, procurement, construction, testing and operation of the pilot plant. Stage IB will conclude with functional completion of the pilot plant test program.
- **Stage II: First commercial scale plant and mine** – rated at approximately 600 tonnes per hour of oil shale ore (equivalent to approximately 15,000 bopd when operating on Julia Creek oil shale of average grade) to be developed on or near the tenement at Julia Creek. Stage II of the Project has two sequential sub-stages covering preparation in all respects of detailed funding documentation and arrangement of funding for Stage IIB, followed by implementation of the Stage IIB project.
 - **Stage IIA.1:** Preliminary work for Stage IIA.2, entailing negotiations with Federal and State authorities.

The activities of longest duration in Stage IIA will be those required for environmental and pre-project permitting for the Stage IIB project. For that reason, they will be initiated within the scope of Stage IIA.1, directed first to definition of the scope of the EIS in conjunction with the relevant Federal and State statutory authorities, and then to commencement of acquisition of environmental baseline data at Julia Creek. The majority of Stage IIA activities will be undertaken in Stage IIA.2.
 - **Stage IIA.2:** The second sub-stage will be initiated only upon satisfaction of the functional completion test in Stage IB, as noted above, and will end when sufficient funds have been raised to enable the Stage IIB project to be carried through to completion.
 - **Stage IIB:** Detailed planning and scheduling, detailed engineering design, procurement, construction, testing and operation of the first commercial scale Rendall Process plant and associated mine, starting with completion of detailed process design, and concluding with commencement of commercial operations.
- **Stage III: First full scale commercial plant and mine at Julia Creek** – approximately 2,000 tonnes per hour (or approximately 50,000 bopd).

Stage III involves the scoping, detailed planning, funding, design, construction and operation of a full scale Rendall Process plant at Julia Creek, together with expansion of associated mining operations.

The Directors believe that the Rendall Process will deliver low operating costs per barrel of shale oil produced. If these expectations are realised, and if the crude oil price remains at or near the current levels, the Julia Creek Project has the potential to be highly profitable.



2 Overview - Project timing and capital costs estimates

The timetable and estimated cost for each stage of the Julia Creek Project are:

Project Stage	Estimated duration (months)	Estimated Cost (A\$ ²⁰⁰⁷ m)
Stage IA)		2.2
Stage IB)	16	31.7
Stage IIA.1)		2.2
Sub-total		36.1
Stage IIA.2	8	16.0
Stage IIB (process plant only, excluding mine and logistical infrastructure)	36	350
Stage III (process plant only excluding mine and logistical infrastructure)	36	720

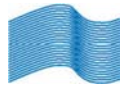
* Cannot be reliably estimated at this time.

The estimates of costs are based on economic conditions prevailing in the third quarter of 2007 and on a limited scope of engineering definition. It is not possible to forecast the rate of escalation of capital cost contributors (especially steel and other materials and skilled labour for fabrication and construction) which may arise over the period up to preparation of rigorous cost estimates.

Stages IA, IB and IIA – schedule of activities and estimated costs

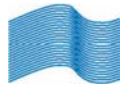
The indicative schedule and estimated costs of the principal project activities (excluding corporate expenditures) are contained in the summary Gantt chart on the next page.

Actual durations of project activities and the timing of milestones will be governed by many factors, some of which will lie outside the control, or even influence of Blue Ensign. For example, external factors may include governmental responsiveness to planning and permitting applications, timeliness of completion of contractual obligations by suppliers of equipment and services, and adverse effects of unfavourable weather.



2 Overview - Project timing and capital costs estimatescontinued

Activity Name	Project cost \$m	First Q	Second Q	Third Q	Fourth Q	First Q	Second Q	Third Q	Fourth Q
Stage IA	\$2.2								
Site and permitting negotiations for pilot plant	\$0.3								
Testwork and process engineering for refinement of pilot plant design parameters	\$1.1								
Basic engineering design and purchase negotiations for long lead time items	\$0.6								
Core sample drilling; detailed planning for bulk sample program	\$0.2								
Stage IB	\$31.7								
Placement of orders for long lead time items									
Completion of process design	\$1.1								
Detailed engineering design	\$2.9								
Equipment purchasing and modular skid fabrication	\$9.8								
Site preparation, on-site construction and skid installation	\$10.5								
Bulk sample: trial drilling; extraction and transport to pilot plant	\$0.6								
Plant testing, commissioning and operations	\$6.8								
Stage IIA.1	\$2.2								
Government negotiations: Stage IIB status & EIS requirements	\$0.2								
Environmental baseline data and EIS preparation	\$2.0								
Arrangement of Stage IIA.2 funding (funded from working capital)									
Stage IIA.2	\$16.0								
Stage IIB geological, mining, commercial and logistics studies, preliminary engineering, cost estimating and financial modelling	\$15.5								
Detailed financing documentation for Stage IIB	\$0.5								
Arrangement of Stage IIB financing (funded from working capital)									



3 Stage I: Pilot plant

The preliminary design of the pilot plant has been derived from the preliminary design of the larger Stage IIB plant prepared by Blue Ensign, scaled down to the smallest practicable size consistent with operability of the complete Rendall Process scheme in continuous mode. However, unlike a commercial plant, the pilot plant will be designed to operate on a wide range of types and grades of oil shale ores, catering for substantial variations in process-critical parameters. It will be designed to maximise workshop fabrication of skid mounted modules, to minimise the scope and duration of site works.

A short test program in Stage IA will refine definitions of the ranges of the key process parameters for design of the plant. The test program will be based on a detailed review of the preliminary process design, taking account of relevant laboratory work by John Rendall in 1999 and 2000 (in connection with the Cb Lease in Colorado) and by QSO during 2006. The program will involve bench scale laboratory testwork, but may also include trials by equipment vendors to guide selection of proprietary equipment.

Key issues for Stage I

Plant site

Townsville has been selected as the location for the Stage IA pilot plant on the principal grounds of immediacy of access to the range of technical and professional support facilities and services of the types likely to be called upon during plant commissioning and operations, ease of access by road, rail and air to Julia Creek and by air to Brisbane and the southern states.

The total area required for the process plant and all auxiliary and support facilities is less than 1.5 hectare. At a maximum of not more than 15 m high, the tallest equipment items will be the distillation column and the vents for the flare stack and fired process heaters.

Blue Ensign has reached preliminary understanding to lease a site within the Townsville State Development Area, some 12 km south of the city of Townsville. In order to cater for future additional facilities, such as pilot scale development of process facilities for recovery of mineral values from the spent shale residue, the area under lease will be approximately 2 hectares.

Permitting

The Queensland Department of Infrastructure and Planning will be the principal planning and permitting authority for the Stage IB pilot plant. In the first instance, it will be necessary to apply for a Material Change of Use of the parcel of land in question. The plant will be classed as an Environmentally Relevant Activity under the Integrated Planning Act; accordingly, the Environmental Protection Agency ("**EPA**") will act as a concurrence agency, advising the Department of Infrastructure and Planning on matters pertaining to environmental protection, planning and operational management.

The requisite subdivision for the lease area will also require approval by the Townsville City Council. Subsequent permitting processes will relate to the Building Approval by the City Council before the start of site works and construction, and to the EPA's Environmental Licence prior to plant operations.

Detailed engineering design and project management

The design of the plant maximises workshop fabrication in skid mounted modules, so as to minimise the scope and duration of site works, thereby minimising the overall cost.

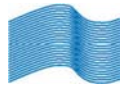
The detailed project schedule and control budget for the entire pilot plant program will be established at the outset of the detailed design phase. These control documents will provide for systematic time and cost management procedures; regular reporting of variances against the schedule and budget will identify needs for corrective measures as required.

The team for technical and commercial project management will be led by Cole Nelson, supported by additional members drawn from existing Blue Ensign Group technical personnel. They will be supplemented by qualified and experienced full and part-time specialists drawn from a major process plant contractor.

Equipment procurement

Long delivery items of equipment, notably the pressure pumps, will be ordered after specifications have been determined during Stage IA. Otherwise, procurement of equipment and construction materials will be ordered as required to meet the overall project schedule in Stage IB.

Expediting and inspection functions will also fall within the overall procurement function.



3 Stage I: Pilot plantcontinued

Site preparation and infrastructure

Onsite facilities will include a warehouse for storage of the bulk sample of oil shale ore from the Julia Creek tenement. Basic site preparation (including roadways, parking and hard standing) is planned for early completion. The site will then be weatherproof ahead of subsequent construction works, which will not be impeded by rain.

Other site facilities will include offices, laboratory, personnel amenities, workshop, storage of consumable materials and spare parts, product oil storage and load out, buffer storages for process liquids, LPG and hydrogen storage, flare stack, plant utilities and firewater system.

Construction

The scope of plant construction works on site will be limited by maximising workshop fabrication of the bulk of the process plant on skids. The benefits of this approach are expected to be a shorter completion period and generally higher quality of workmanship than would be the case with site construction and installation of equipment and materials supplied directly to the site.

Fabrication may be undertaken in Australia or offshore, depending on quotations of delivery periods and costs submitted by qualified tenderers.

Bulk samples from the Julia Creek tenement

A short geological field program on QSO's Julia Creek tenement will confirm the preferred location of the bulk sample pit and provide the requisite geotechnical data for the pit.

Bulk samples totalling 3,000 tonnes of oil shale from the Julia Creek tenement will be acquired under a single contract covering mining and temporary stockpiling of the required oil shale ore in a single campaign of less than a month. The contract will include overburden and topsoil replacement and rehabilitation of the area of the small pit. Segregated bulk samples from different horizons of the oil shale section will allow for blending at the pilot plant to ensure a consistent grade of feed.

A total area of the order of 2 ha will be required for the 30 m deep pit, stockpiling of topsoil and overburden, and stockpiling of the oil shale ore prior to transport to Townsville. Stockpiled ore will be transported by road to the warehouse at the pilot plant, for storage until required for plant operations.

Commissioning and operations

The commissioning team will be drawn from personnel of Blue Ensign, reinforced as required by technical personnel of the engineering contractor and plant technicians retained under short term contracts. In addition, it is intended that specialised process design engineers will participate so as to provide continuity through to preparation of the detailed process design for the Stage IIB project.

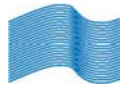
Operations are expected to require a total of 12-15 people to cover 24 hour shift operations, minor maintenance, materials handling, laboratory and administration. It is intended that major maintenance and plant modifications be contracted out to local workshops.

As noted above, the first priority for operation of the pilot plant is to demonstrate the Rendall Process in continuous operation. The second is to provide for refinement and optimisation of operating parameters for optimisation of the preliminary process design, and to establish engineering design parameters for the Stage II plant design, especially those that can be determined only from continuous operations.

In addition, the mechanical performance of different equipment types will be monitored, and alternatives tested where appropriate, to determine optimum specifications for the Stage IIB project.

Assessment of pilot plant results

Assessment of Stage IB pilot plant results will focus principally on preliminary economic modelling, based on expectations pertaining to order of magnitude cost estimates and the preliminary project implementation schedule.



4 Stage II: First commercial scale plant and mine

Stage IIA

The objectives for Stage IIA of the Julia Creek Project are:

- to complete the engineering design for Stage IIB to the degree necessary to arrange its funding;
- to prepare capital and operating cost estimates to the level of confidence required to support the proposed funding option;
- to prepare the documentation required to arrange the funding; and
- to arrange the funding.

The majority of the activities in Stage IIA will be initiated after the functional completion of the pilot plant program in Stage IB, as noted above. Stage IIA will then continue with preliminary engineering and estimation of capital and operating costs for Stage IIB, together with all the ancillary project studies and investigations which, collectively, will form the basis of the detailed funding documentation. These studies and investigations will include:

- field geology and assays of core samples from the Julia Creek tenement to improve definition of the oil shale resource and to support mine planning;
- studies of product oil quality, and investigation of potential markets and optimal approaches to product marketing;
- project logistics; and
- completion of the draft EIS and proposed environmental and safety management program, followed by the statutory processes of public consultation and assessment by the regulatory authorities.

Stage IIB

Stage IIB comprises the entirety of the implementation of the first Rendall Process commercial scale project at Julia Creek, expected to be rated at approximately 15,000 bopd.

Project implementation is expected to start as soon as financing arrangements are in place, commencing with finalising of the process design, and culminating in commercial operations.

Key issues for Stage II

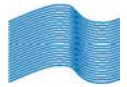
Project of State Significance

QSO intends at the outset of Stage IA to apply to the Director General of the Department of Infrastructure and Planning (formerly the Office of the Coordinator General) for designation of its Stage II first commercial scale oil shale project as a "Project of State Significance". While there is no certainty that such designation will be forthcoming, it appears probable that the Stage II project would be considered to satisfy the required criteria. The benefits of such designation would be that the Department of Infrastructure and Planning would appoint a senior officer as project manager to provide liaison and co-ordination among the various Federal, State and Local Government authorities that will become involved in the project, and between Blue Ensign and these authorities.

Base line environmental studies

Base line environmental studies provide the basis for establishment of environmental management plans and licences and for determining post facto the actual environmental effects of a proposed major development. By their nature, the studies need to provide for a minimum of twelve months observation of seasonal effects on the flora and fauna of the area in question. The studies also include acquisition of data pertaining to aboriginal and heritage areas of significance, and pre-existing socio-economic parameters of townships and commercial enterprises that will or may be affected by the proposed development.

Insofar that no base line studies have been carried out previously in the region of Julia Creek, they will be initiated in accordance with terms of reference to be determined jointly by Commonwealth Department of the Environment and Water Resources and the EPA, under the coordination of Department of Infrastructure. The base line studies are expected to be conducted over a period of 15-18 months, and will be managed by a suitably qualified environmental consultancy with specific experience in the preparation of base line studies and integrated environmental impact statements in accordance with Commonwealth and State law.



4 Stage II: First commercial scale plant and minecontinued

Draft environmental impact statement and safety case

The fundamental purpose of the draft environmental impact statement and safety case is to identify the envelope of environmental and safety performance within which the entire project and its related infrastructure will be required to operate.

The terms of reference for the draft environmental impact statement will be determined largely by the Commonwealth Department of the Environment and Water Resources, as noted above.

The nature of the Stage IIB process plant and infrastructure, and the prospective inventories of hazardous gases and liquids in storage and in process will be such as to bring the plant under the ambit of the National Standard on Major Hazard Facilities.

Resource definition

As described in Chapter 8, the JORC Code compliant category of the oil shale resources will be upgraded from Inferred to Measured status, taking account of the prospective performance of the Rendall Process applied to Julia Creek oil shale. The program of drilling, sample assaying and geological studies for this purpose will also allow for acquisition of data for the geotechnical studies required for preliminary mine planning for the Stage II project.

The preliminary mine design will provide the bases for inviting tenders from contract mining companies for mine development and operation (including ore crushing and delivery to the process plant).

Mining and rehabilitation planning

The open cut mine plan for the Stage IIB will be derived from the drilling and geological data developed for upgraded resource definition, together with the requisite geotechnical data.

Integration of provisional mine costing studies and process plant costing studies will provide bases for determination of economic cut off oil shale ore grades. The overall mine development and operational plan will take account of statutory requirements for stockpiling of topsoil and overburden for later replacement in mined out areas, to be followed by surface rehabilitation.

Mining Licence application

Application for the requisite Mining Licence for Stage II will be based on data arising from the resources and mine planning studies, in conjunction with findings of the base line environmental studies. Submission of the draft EIS will be a prerequisite, and will involve formal public release of the EIS and a statutory process of community consultation.

Shale oil product appraisal

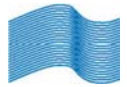
The crude oil and product markets in the Asia-Pacific region are typically based on Singapore pricing. The benchmark crude is generally Tapis, a light (46° API), low sulphur (0.03 %) Malaysian crude oil; most Asian crude oils are traded on a floating price relative to the Tapis benchmark.

The value of any individual crude to a particular refinery depends on the configuration of the refinery, prevailing product market prices, product specifications, and its supply and demand requirements. Typically, a crude oil value can be estimated with reasonable reliability by comparing the API gravity, percent sulphur, and Total Acid Number to other traded crude oils. The next level of estimation requires an assay of the bulk properties, and the properties of the various crude oil cuts.

Product oil will be characterised, and product properties correlated with specific plant operating conditions and parameters. Oil assay data will be developed with particular reference to API gravity and levels of impurities critical to subsequent refining processes, including oxygen, nitrogen and sulphur. Product value will then be estimated based on current market conditions and forecasts.

Market planning

Appraisal of domestic and readily accessible regional markets will follow product evaluations. Preliminary discussions with selected oil refineries will provide bases for negotiation of product off take contracts or other commercial arrangements for the Stage IIB project.



4 Stage II: First commercial scale plant and minecontinued

Logistics studies

Logistics studies will be required to optimise the means, routes and costs of supply of external utilities and of product transport to oil refineries.

External supplies of utilities will be required for first start up and restart after a shutdown and, in some cases, for normal operations as well. The former will include natural gas, treated bore water and communications links.

Major studies will concern product transport to the market. Options will be identified in the light of the market planning studies, with particular reference to prospective buyers' locations within Australia or overseas.

Solid sulphur and any mineral by-products will be transported to their markets by road or rail.

Preliminary engineering and estimation of capital and operating costs

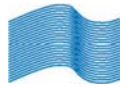
Preliminary engineering and estimation of the costs of Stage IIB will be derived from the preliminary process engineering in Stage IIA. These will involve:

- preliminary engineering designs of the process plant, all site infrastructure and the associated mine development and mining operations; and
- preparation of estimates of capital and operating costs of the accuracy required for economic and financial modelling and the detailed financing documentation.

Funding arrangements

Options for the funding of Stage IIB will be evaluated on the basis of the economic modelling and the detailed financial documentation for Stage IIB and an assessment of the residual project risk. Options may include:

- traditional debt and equity fund with the debt maximised. It is possible that an equity fund raising will also be required; and
- a joint venture (incorporated or unincorporated) with one or more suitable companies.



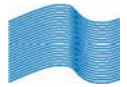
5 Stage III: Full scale commercial plant and mine

Stage III will involve scoping, detailed planning, funding, design, construction and operation of a full scale Rendall Process plant rated at approximately 50,000 bopd at Julia Creek, together with associated expansion of mining operations.

Detailed technical and economic studies of Stage III will commence as soon as the Stage IIB plant has attained commercial production.

Operating results from the Stage II plant will be used to determine the optimum stream size and then to optimise process and engineering design parameters for the investment program in Stage III.

The oil shale resource in the Julia Creek tenement appears to be capable of supporting aggregate production of 200,000-250,000 bopd, which could be built up in modules.



6 Potential production of by-products

There is potential for production of mineral by-products from the spent shale residues at Julia Creek, notably vanadium and molybdenum oxides. Considerable bench and pilot scale work was undertaken by John Rendall in the late 1980s and early 1990s on recovery of mineral values from oil sand residues in Canada. In addition, similar work in 1999-2000 on oil shales from the Cb Lease in Colorado confirmed the flowsheets and process conditions for recovery of alumina and soda ash from the spent shale residue, and also confirmed the suitability of the final residue as a feedstock for manufacture of portland cement.

Much of this work is expected to be relevant to further processing of the finely divided and clean spent oil shale residues from the Rendall Process at Julia Creek. Initial experimental work to investigate technical and economic feasibility of processing these residues to recover vanadium and molybdenum values will be undertaken during Stage IB of the development program.

One of the recent patent applications pertaining to the Rendall Process contains specific provisions for hydrometallurgical recovery of mineral values, and may therefore contribute to the investigation of further processing of Julia Creek oil shale residues.

Blue Ensign currently regards production of mineral by-products by whatever means as offering potential for adding value to a commercial scale Rendall Process shale oil facility in due course, rather than as an assured additional income stream from the outset.