



# **Production Technologist Rosebank, Johannesburg**

## **Company**

Sasol Petroleum International (SPI) is the E&P division of Sasol, one of the top 50 global energy companies. SPI has operations in Mozambique and Papua New Guinea and Exploration/Production interests in South Africa, West Africa, and Australia.

SPI's main strategic focus is exploration and monetisation of gas, leveraging Sasol's downstream technology differentiators in Gas-to-Liquids and Chemicals. Its current equity production is 40,000 boepd and it is in the middle of an expansion project to increase production to 55,000 boepd by 2011. The company strategy is to achieve 150,000 boepd equity production by 2025, mainly via exploration-led organic growth.

## **Department**

The Technical Services function of SPI consists of Petroleum Engineering, Geoscience, Projects & Engineering, and Value Assurance and is made up of a team of 50 professionals, split between Johannesburg and London. The department is headed by General Manager of Technical Services, who sits on the Executive Committee of SPI and reports directly to the Managing Director.

The role of Technical Services is to ensure that SPI's strategic, exploration, tactical and operational decisions are well founded on sound technical study and analysis in line with good oilfield practice. This is achieved by maintaining a well-resourced function of skilled staff provided with the necessary technology and applying appropriate practices and processes.

## **Position Summary**

To provide high quality production technological support to the appraisal, development and reservoir management of the Company assets as assigned by the Manager, Petroleum Engineering from time to time. The incumbent will also be required to assist with new business development activities, functional initiatives, training and managing technical work carried out by specialist consultancies.

## **Job Requirements**

### **Qualifications and Capabilities**

- Bachelor degree in a mathematical or physics-oriented subject is required.
- MSc or PhD in Petroleum Engineering is desirable.
- Excellent written and spoken communication skills are required. Fluency in written and spoken use of the English language is required. Knowledge of other languages would be an advantage.
- Current and up to date software capability using office and collaborative applications is required.
- Ability to work alone under own initiative, or in close collaboration with geoscientists, reservoir engineers and drilling engineers as part of a team is required.
- Ability to perform analysis, interpretation and problem solving at all levels of complexity with varying volumes of data is required.
- Ability to work in a geographically dispersed virtual team is required. This will include the recognition of the need for regular inter-continental travel.
- Understanding of and willingness to work in a matrix organisation is required
- Understanding of the importance of Sasol Values and other Sasol Group working policies is required.

## **Specific Technical Expertise and Experience**

- Expertise in well performance prediction, artificial lift selection and design, well completion design (gauges, sleeves, gas-lift valves, sand control), production chemistry issues and flow assurance modelling is required.
- Experience in planning, selection, and specification of completion fluids and equipment along with operational procedures is required. Specific experience relating to horizontal wells and multi-fraced well completions would be an advantage.
- Experience in creating proposals for interventions to increase production such as work-overs, rig-less interventions, acid jobs and hydraulic fracture treatments is required. Knowledge of well intervention techniques (setting plugs, hydraulic fracturing of producers and injectors, chemical stimulations, sidetracking from old wells, slick-line and electric-line cased hole logging) is required.
- Good knowledge of flow assurance matters, both practical and theoretical, reservoir chemistry and fluid compatibility, corrosion & erosion modelling, surveillance and prevention is required. Experience in providing solutions for sand management including, sand production prediction, sand control design and sand monitoring is required.
- Expertise in planning, acquisition and interpretation of well logs, routine and special core analysis for rock mechanical and compatibility purposes is required.
- Understanding of the physical constraints applicable to well/reservoir/field production (e.g. sand, water, gas production, scaling potential, corrosion potential) is required.
- Experience in aspects of water management such as water treatment, disposal, water shut-off, thermal fracturing during water injection, souring prediction and prevention, produced water injection and scaling prediction is desirable.
- Experience of new technologies (down-hole separation, sub-sea inline separation, multi-lateral wells, smart wells) would be an advantage.
- Current expertise using the latest well modelling software is required. Experience with flow assurance modelling software and fracturing design and simulation software would be an advantage.
- Experience of the design and operation of wells in a variety of different international regions and environments is desirable. Study and operational experience in both onshore and offshore environments is required.
- Experience in well design for CO<sub>2</sub> EOR or carbon sequestration applications would be an advantage. Experience of unconventional resources (coal bed methane, shale gas, tight gas sands) operations and studies would be an advantage.
- Experience in working in integrated sub-surface evaluation teams is required.
- Experience of participating in data room evaluations would be an advantage
- Experience in partnership/JV operations would be an advantage

## **Required Outputs: Functional (The core content and deliverables of the position)**

- Participate in detailed and integrated study, design and monitoring of wells located in SPI's operated and non-operated fields
- Provide sound production technology input during the multi-discipline well planning process to ensure a safe, optimal and cost effective well design and construction programme.
- Act as the SPI knowledge centre for all matters related to near-well effects, completion fluids, sand-face completion, lower completion and upper completion.
- Build SPI knowledge of horizontal well completions in gas shales and coal beds, particularly relating to multi-fraced wells.
- Build SPI knowledge of design, construction and operation of CO<sub>2</sub> injection wells.
- Carry out studies and provide production technological input into acreage evaluation, prospect evaluation, appraisal planning, reservoir development studies and field development plans

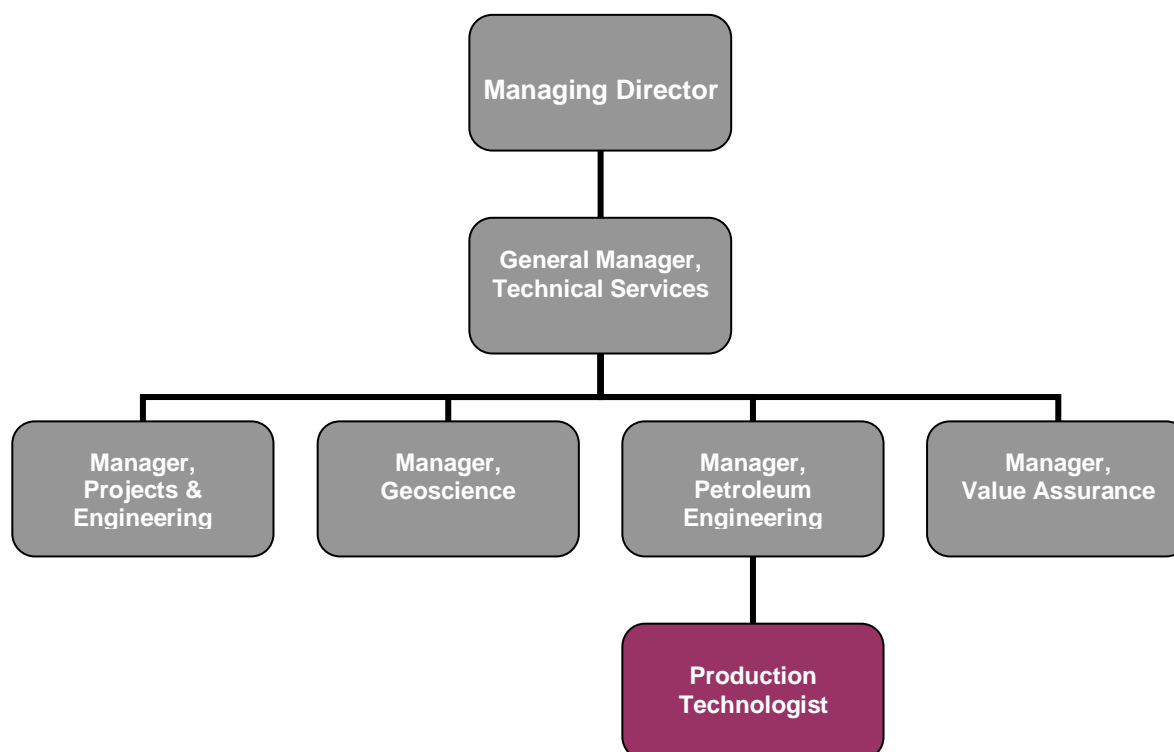
## **Required Outputs: General (Overall objectives/Key Areas of Performance)**

- Provide the highest standards of collaborative support to the Asset/Exploration Managers for SPI projects as required from time to time
- Represent SPI interests in external dealing with contractors, consultants and industry forums
- Support SPI interests on joint projects – influence the operator in non-operated situations
- Report to Manager, Petroleum Engineering on functional production technological matters

**Person Attributes: Competencies (Skills, Knowledge and Characteristics – Critical / Desirable)**

Competency	Must	Wish	Weight 1-10
Expert technical and analytical (petrophysical) skills	X		10
High technical and personal work standards	X		10
Technical report writing and presentation skills	X		8
Team working (virtual), collaboration and interpersonal skills	X		8
Ability to work on own initiative	X		8
Setting goals and achieving them	X		8
Meeting deadlines and targets	X		8
Ability to work with varying volumes of data		X	7
Ability to work at all levels of complexity		X	7
Embracing new ideas/strategies/technologies		X	6
Flexibility to adapt to changes		X	6
Innovation and creativity		X	5
Communication and influencing skills		X	6
Management, Leadership & Development of others		X	3
Motivating others to achieve targets		X	3
Project Management Skills		X	3
Managing diverse groups		X	3
Willingness to travel		X	7

**Organisational Structure/Position**



For further information and a confidential discussion please contact Liz Gardner at Simpson Crowden LLP on +44(0)7801 711372.

To apply please visit our website: [www.simpsoncrowden.com/sasol](http://www.simpsoncrowden.com/sasol) and follow the links, or email your CV and covering letter to [sasol@simpsoncrowden.com](mailto:sasol@simpsoncrowden.com) quoting reference **R201**.