

GNPC JUBILEE GAS

INFRASTRUCTURE DEVELOPMENT

PROJECT CONCEPT

INTRODUCTION

Ghana National Petroleum Corporation (“GNPC”), which is Ghana’s State owned oil and gas company, has the mandate to explore, develop and produce the hydrocarbon resources of Ghana either alone or in association with international petroleum companies. Pursuant to the execution of the Deepwater Tano and West Cape Three Points petroleum agreements in 2005 and 2006 and successful exploration drilling, significant oil and gas discoveries have been made by the GNPC and its partners - Anadarko WCTP Company, Kosmos Energy Ghana HC, Tullow Ghana Limited, Sabre Oil & Gas Holdings Limited and the E.O. Group. The most significant of these discoveries was made through drilling of the Mahogany-1 well in June 2007. Subsequent appraisal wells drilled so far in the two blocks have confirmed reserves of oil and gas which rank the field (subsequently named Jubilee Field) as a world class giant field. The field straddles the two blocks and has been declared commercial. It will be developed as one unit and has been unitized on the current basis of 50% of the field in each block. (This is subject to refinement from future drilling). Capital costs of approximately US\$4.3 billion are required for the Phase 1 development of the field.

GNPC holds a 10 percent carried interest and has the option to acquire an additional 3.75 percent interest. GNPC is seeking financing to enable it fund its share of the development of the field (limited to funding the 3.75% additional participation) and to commercialize all of the associated gas, independent of the upstream partners.

PROJECT CONCEPT

Simulation studies conducted with data that was collected when **only** Mahogany-1 and Hyedua-1 Wells were drilled yielded STOOIP value of 1,814 million barrels of oil (mmbo). Based on analogous deepwater turbidite fields which have typical recovery factors of 30 – 50% when fully developed, a recovery in the order of 544 – 907 mmbo is expected.

The phase 1 development plan aims at exploiting reserves of 278 mmbo with seventeen wells which will be tied back via subsea infrastructure to the FPSO to be moored in the Jubilee Field area. Total phase 1 development cost is estimated at US\$4,288 million. A 3-year plateau production of 120,000 barrels of oil per day and 140 mmscfd of associated gas is expected to be reached over a 9-month ramp-up period beginning second quarter 2010. The Gas:Oil ratio ranges between 1,100 to 1,200 scf/bbl. Production is expected to double in the subsequent development phase. 20 mmscfd of the associated natural gas produced will be used as fuel on the FPSO, leaving 120 mmscfd for export. If reinjection is determined to enhance oil production, up to 30% of this will be re-injected with 70% supplied to GNPC at the flange of the FPSO.

GNPC plans to commercialize the Jubilee Field associated natural gas, in furtherance of the objectives of:

- Producing natural gas liquids which can be sold on the international market and delivering dry gas for power generation in Ghana,;
- Sizing the gas infrastructure to enable the monetization of Jubilee field gas and other indigenous natural gas reserves in its vicinity;
- Ensuring that infrastructure is in place to coincide with first oil to avoid gas flaring and;
- Facilitating the economic development of Ghana with the availability of reliable supplies of natural gas.

GNPC intends to establish gas infrastructure capable of processing natural gas from Jubilee and other nearby fields and delivering about 300 mmscfd of gas in one or more phases to existing power plants. This will include:

- an 80km dense phase pipeline from Jubilee to a location near Effasu;
- a 300 mmscfd capacity onshore gas processing plant at a location near Effasu;
- a 38km lean gas pipeline from a nearby location to Effasu
- a 123km lean gas pipeline to Takoradi and;
- The infrastructure should also enable the natural gas liquids to be sold in Ghana as well as on the international market through storage, LPG Buoy and export pipeline facilities.

FINANCING

GNPC is seeking proposals to finance its equity in the oil development and to support the gas infrastructure development. The equity requirement in the oil development project is about US\$161 million.

Additionally, GNPC is seeking its equity financing for the gas infrastructure development from various sources including development and commercial banks. Debt and equity participation are welcome for the rest of the financing.

An escrow of the robust cash receivables, of which about 80% will be in foreign exchange, in amounts sufficient to cover the next 12 months debt service requirements, will offer the basis for a bankable security structure to be created that provides priority payments to lenders.

PROPOSED DEAL STRUCTURE

A portion of proceeds from GNPC's interest in the Jubilee field will be paid under offtake agreements into an escrow account. The escrow proceeds will then be distributed in priority to GNPC's Lenders. Similarly, under the gas project portions of all liquids and natural gas sales will be deposited into an escrow account under offtake agreements between buyers and a special purpose gas commercialization JV vehicle, in which GNPC will have equity interest. The proceeds of the escrow will be distributed to lenders of GNPC and the project in an agreed priority formula.

Excess proceeds from the oil escrow will be distributed to GNPC. Excess proceeds from the gas commercialization escrow will first be distributed to the special purpose gas commercialization joint venture company which will pay dividends to the equity partners accordingly.

CONCLUSION

The natural gas project, especially, will generate employment and create new infrastructure as the foundation for a vibrant petroleum and petrochemical industry to evolve, thereby providing a new economic growth pole for Ghana in the Western Region.

The relatively more competitive pricing of indigenous gas will be the basis for generating much lower cost power than Ghana currently has, thereby securing the competitiveness of Ghanaian industry for accelerated economic development. It will also provide the basis for Ghana to achieve its strategic objective of becoming a petroleum processing hub and to resume its strategic role as preferred exporter of power in the sub-region.

As a first step in ensuring wider Ghanaian participation in petroleum activities, a substantial portion of GNPC's participation in the oil and gas projects will be floated by means of an IPO on the Ghana Stock Exchange within three years of financial close. There will be economic and social benefits from broadening ownership in the country's natural resources. The resulting capital gain for GNPC would be considerable and could be used to fund petroleum related investments including refining and securing crude oil and petroleum products availability for the country. GNPC's dividends to Government will support general economic development and could be invested in the proposed future generations fund to help achieve the Government of Ghana's core objective of transforming the proceeds from a depleting resource into sustainable benefits for the country.

GNPC OIL AND GAS DEVELOPMENT PROJECT - DEAL STRUCTURE

