



Dr. Seong-Hoon KIM

Korea National Oil Corporation (KNOC) is a leading global upstream player involved in E&P activities in Kazakhstan, Uzbekistan, Vietnam, Indonesia, the UK, Canada, Venezuela, Peru, Russia, and the USA. In the Kurdistan Region, they are the leading player by number of exploration blocks (5) and the \$2.1Bn infrastructure agreement for capacity building construction projects it signed with the KRG on September 28th 2008.

Capacity builders

TOGY talks to

Dr. Seong-Hoon KIM,
Board Director & Executive Vice-President
New ventures & exploration
KOREA NATIONAL OIL COMPANY (KNOC)

The Oil & Gas Year: *The Korea National Oil Corporation is one of the biggest stakeholders in the Kurdistan Region of Iraq. How did the region come to the attention of your organisation?*

Dr. Seong-Hoon KIM: It started with the deployment of our troop called "Zaytun" to Iraq. With a mission for peacekeeping and reconstruction operations, Zaytun stationed in Erbil and became involved in a series of reconstruction projects. Through these efforts, Korea was able to establish goodwill with the Kurdish people. This in turn led to the people in the Kurdistan Region inviting Korean companies to participate in the burgeoning oil and gas exploration and development projects in the Kurdistan Region.

My first visit to Erbil took place in January 2007 when I accompanied my company president who, at the time, signed an MOU with Dr. Ashti Hawrami, the Minister of Natural Resources of the Kurdistan Regional Government. Pursuant to the MOU, we spent a good deal of time selecting the best exploration acreage and signed our first PSC for the Bazian block in November 2007.

TOGY: *With no seismic to speak of, the data available to exploration companies such as KNOC was extremely limited. As a geologist yourself, what were your first impressions when you saw the blocks, the surface geology and structures?*

S-HK: The usual evaluation practice involves the interpretation and assessment of seismic and, in some cases, drilling data. However, as you mentioned, there was very little seismic and drilling data in respect of the Kurdistan Region at the time.

But the high success ratio in the Kurdistan Region alleviated our initial fear. We reviewed the regional geology and, using a combination of satellite images and drilling results from various structures, ascertained that there was a good structure at the Bazian block.

TOGY: *Do the structures and surface geology of your Kurdistan blocks bear any similarities with other international operations?*

S-HK: The main reservoirs in Iraq and the Middle East are carbonate based. In this reservoir type, there is little porosity or permeability and one has to find the reservoir's fractured zones. This is something we are rather experienced at because we were at a similar situation when we worked on a fractured granite reservoir in Vietnam.

The methodology is very similar. First, you shoot seismic and establish structure modelling. Second, you analyse all the exploration data and find out where the hydrocarbons can flow.

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In addition, we also have a similar experience in Yemen where metamorphic rocks have served us well in this regard. At present, there is a structured basement reservoir where we are trying to find oil. We have drilled one well already and have seen some oil flowing. The principal technology to find a fractured reservoir, whether it be in carbonates of metamorphic rocks like granite, is very similar.

TOGY: *Since the beginning of your discussions with the KRG in 2007, the presence of KNOC in the region has been steadily increasing. What are the most attractive elements for KNOC when it comes to investing in Kurdistan?*

S-HK: South Korea imports more than 2.3 million barrels of crude oil every day and more than 25 million tonnes of LNG every year. This makes us the 7th largest oil and gas consumer, the 5th largest oil importer and the 2nd largest LNG importer in the world. Last year alone, this thirst for energy cost us 130 billion US Dollars to import oil and gas.

First of all, we think there is great potential to acquire more blocks in that area. Secondly, the Kurdistan Region has little pre-existing infrastructure. As a consequence, the possibility of an oil-for-development programme, where KNOC provide infrastructure in exchange for the oil supply from the region, is a winning combination for both sides.

Overall, Korea has almost everything that Iraq wants. We have world class companies for electricity, highway construction and management, IT technology, refineries, steel mills, etc. Korean technology offers the state of the art developments at an extremely attractive price.

After the Bazian deal, we spent another year to negotiate the oil for development programme and signed the second deal in November 2008, thereby becoming the largest investor in the Kurdistan Region.

TOGY: *What specific oil and gas related technologies can the Korean National Oil Corporation offer Kurdistan Region energy development efforts?*

S-HK: Worldwide we are involved in 56 projects in 17 countries outside Korea. KNOC has experience in Vietnamese oil and gas fields, North American oil fields and joint operations in countries from Yemen to Central Asia. With this wealth of knowledge, we have the experience, people and technology to offer the Kurdistan Region anything it needs to further its energy goals.

In addition to this, the Kurdistan Region is one of the easiest areas to find oil. With 2D seismic and a 4,000-metre well, success often follows.

TOGY: *KNOC has had some difficulties with the central government because of its investment in the Kurdistan Region. With this in mind, do you still consider the region as a possible stepping-stone for investment in the rest of Iraq?*

S-HK: First of all, the Kurdistan Region is a part of Iraq. In the beginning, we were concerned about working here. Experience has shown, however, that the 14-men team I have in the Kurdish Region are very pleased to work here.

Ideally, we want to expand our oil for development programme to the south of Iraq. The country has a huge amount of hydrocarbons but, again, infrastructure remains in a very poor state. If they give us a good opportunity, we are willing to provide what they want. We are confident that, once our success in the Kurdistan Region is recognised by Baghdad central government,

they'll be willing to welcome Korean investments in the rest of the country.

TOGY: *You are involved in Qush Tappa, Sangaw North and South, Bazian, and four Hawler blocks. Please introduce your work programmes so far and walk us through the licences, their differences and work programmes?*

S-HK: Amongst the five blocks, we are the operator in three of them. In respect of the remaining two, Norbest Ltd operates Hawler and the UK's Sterling Energy operates Sangaw North.

For Bazian, we already completed 2D seismic survey. We are now preparing a drilling programme, which will start sometime early October 2009. We have completed a 2D seismic survey at Sangaw South and will begin drilling next year, after we drilled in Bazian Qush Tappa is 40 percent through its 2D seismic programme. So, we'll see the result and then make predictions as to the type of drilling programme.

TOGY: *Does KNOC have ambitions to invest in the mid stream and downstream opportunities available here?*

S-HK: I certainly believe Kurdistan Region needs downstream projects. Some portion of the 2.1 billion US Dollars of infrastructure programmes may include a storage facility project proper for us. Once again, if the local authorities want downstream projects, then we are willing to invest in such.

We are ready to start building a power station with two 150-megawatt units and a power substation with a 400 kilovolt transmitter system as an initial SOC project. The MOU was signed on the 5th of June, 2009, with the initial investment worth about 600 million US Dollars.

TOGY: *Where would you like to see KNOC in Kurdistan in two to five years?*

S-HK: I believe that, within two years, we can drill all five blocks, making significant oil discoveries. Within five years, we will start production from the fields. Projecting ourselves further into the future, we may have a huge production profile within ten years.

TOGY: *Korea is the number one investor in this region, playing an essential role in developing this part of Iraq. What can be extracted from Korean history, culture and business ethos that fits the reality and the needs of the Kurdistan Region?*

S-HK: Kurdish people are very reliable and they want outsiders to respect the agreements and contracts. They want to rebuild their economy and this is something we have experience in after the war that ended in 1953. We built our country from nothing to today's current status, so we recognise that Iraq may make good use of our experience. Kurds and Koreans will be good partners for years to come, and there will be more opportunities in many business areas, in addition to the E&P business.