

# EXPLORE TOMORROW KNOC



2014 Jan-Mar  
**Vol.017**

## Bonanza! Hawler Block Commercial Discovery 260 million barrels of crude oil



### Obtaining the highest ever reserves from a single structure in the company's history

In a ceremony held in Erbil, Iraq on April 1, 2014, Korea National Oil Corporation (KNOC) officially announced that it had discovered oil at Iraq's Hawler Block. On hand were KNOC President & CEO Suh Moon-kyu, company executives and top management from Oryx Petroleum\*, which holds the mining rights to the block, as well as representatives from the Kurdish regional government.

\* Oryx Petroleum : Oryx Petroleum is a petroleum company of Switzerland. It was founded in September 2010

[NEXT PAGE >>](#)

## CONTENTS

### E&P Project ..... 01

Commercial Discovery of 260 million barrels of crude oil in the Hawler Block in Iraq.

Reinforcing Friendly Relations with Abu Dhabi

Meeting with the Chief Growth Officer (CGO) of the U.A.E.'s Mubadala Petroleum

Joint Exploration Technology Seminar with Dana Petroleum PLC

### Oil Stockpile Project ..... 05

KNOC sells land in Ulsan to S-OIL

Joint venture signals smooth sailing for Northeast Asian Oil Hub Project

Expanding collaborative efforts with Dana Petroleum PLC

Safety Check on Stockpile Facilities

### INWARD COOPERATION ..... 06

New Year's First Day Ceremony

35<sup>th</sup> Anniversary Ceremony

2014 Strategic Meeting of Overseas Office Heads

Recruitment & Education

### BUSINESS COOPERATION ..... 08

CEO Suh Delivers a Lecture at Korea University

Meeting with the Seychelles' Ambassador

KNOC-KEE : Moving Forward Hand in Hand

New Year's Greeting and CEO Meeting of the Energy Sector

Trading Industry Forum

GASTECH 2014

### 2014 Creative Awards ..... 10

CEO Suh is awarded the grand prize

### SUSTAINABILITY MANAGEMENT ..... 10

Oil Development Scholarships

Visit to a Welfare Center for the Disabled

Kazakhstan Office and KHMC Joint Medical Service

Preventing Oil Leakages

Safety Management



### Hawler Block Overview

#### Location

Hawler\*, Kurdistan, Northern Iraq

\* The Hawler Block includes Erbil, the capital city of the Kurdish regional government

#### Size

1,643km<sup>2</sup>

#### Ownership structure

Oryx 65%, Kurdish government 20%,  
KNOC 15%



## Commercial Discovery of 260 million barrels of crude oil found in the Hawler Block in Iraq.

The operators of the project officially announced the commencement of the commercial production at the Hawler block. This discovery at the Demir Daggh Structure, which is one of four structures operators are exploring in the Hawler Block, came into the news when it succeeded in drill stem testing of 10,000 barrels per day (bpd) of crude oil back in 2012. According to the announcement, the official reserve amounts to 258 million barrels.

For KNOC, it was the largest reserve discovered from a single structure since its establishment. Of the proven reserve of 258 million barrels, KNOC is entitled to a 15 percent share, or 39 million barrels of crude oil.

The company also found 4,320 bpd of crude oil at the Hawler Block's Banan Structure in January 2014. The Banan-1 drill hole, which hit oil bed, is the fourth exploration hole in the Hawler Block. Drilling reached a final depth of 4,153 meters and produced 4,320 barrels of light crude oil a day in a drill stem test in January 2014. This marked the fourth of the company's exploration efforts at the Hawler Block's four structures, realizing a 100 percent success rate of discovering crude oil there.

There are four structures at the Hawler Block: the Demir Daggh Structure, which officially announced commercial discovery of crude oil, Ain Al Safra, Zey Gawra, and Banan, where test drills are underway on appraisal wells. The gross reserve amount of the entire Hawler Block is expected to further grow when the results of the ongoing test drills are added to the Demir Daggh Structure's reserve, which is estimated at up to 600 million barrels on its own.



### Hawler Block Test Drilling and Appraisal Results

- ▶ Appraisal results on the Demir Daggh Structure's reserve by NSAI, a Dallas-based appraisal agency
  - Contingent resource is estimated at 550 million barrels (250 million barrels of heavy oil and 300 million barrels of light crude oil)
- ▶ Ain Al Safra Structure succeeded in producing 675-850 bpd of crude oil
- ▶ Zey Gawra Structure successfully produced 4,800 bpd of crude oil

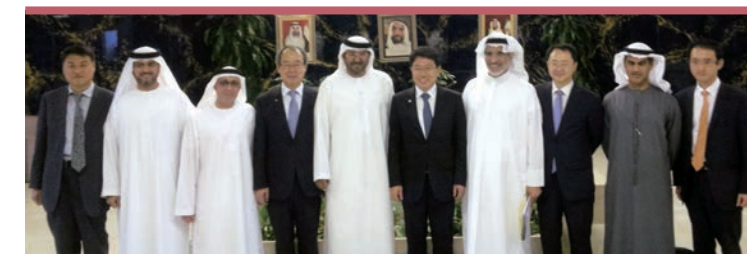
## Reinforcing Friendly Relations with Abu Dhabi



### Official Visit of Crown Prince of Abu Dhabi

South Korean President Park Geun-hye welcomed the official visit of Crown Prince H.H. Sheikh Mohamed bin Zayed Al Nahyan, who stayed in Korea from February 26 to 28, 2014, and discussed ways to enhance cooperation between Korea and Abu Dhabi in nuclear power generation, oil field development and medical services. Also, CEO Suh attended a reception dinner for the crown prince of Abu Dhabi held at the Blue House on February 27.

### Meeting with Khaldoon Mubarak, Chairman of the Abu Dhabi Executive Affairs Authority and Chairman/CEO of the ADNOC (Abu Dhabi National Oil Company)



CEO Suh accompanied Ministry of Trade, Industry and Energy (MOTIE) Minister Yoon Sang-jick to Abu Dhabi on January 23 to meet the chairmen of the Abu Dhabi Executive Affairs Authority and the Abu Dhabi National Oil Company (ADNOC). Topics of the meeting with the head of the Abu Dhabi Executive Affairs Authority included joint storage of six million barrels of crude oil and three block development projects, as well as the ways to increase collaboration in new projects such as human resource exchanges between the two countries. The meeting with the chairman of ADNOC was to discuss progress on the development plans of three blocks that are scheduled to commence with a minimum amount of production starting in 2016, and also about bilateral collaborations in oil field development projects. The two companies also exchanged information about the Northeast Asia Oil Hub project.

### Friendly Soccer Match with ADNOC

KNOC's soccer team had a friendly match with ADNOC on February 9 and 12, 2014 in Abu Dhabi. To return the courtesy for the previous match held by KNOC in Korea in November 2013, ADNOC invited the KNOC soccer team for another game to strengthen bilateral ties. Led by the head of the Petroleum Stockpile Group, the 20 KNOC delegates visited their counterpart in Abu Dhabi. KNOC believes that the friendship established from the soccer match will serve to further reinforce the partnership between the two companies.





## Meeting with the Chief Growth Officer(CGO) of the U.A.E.'s Mubadala Petroleum



CEO Suh met the CGO of Mubadala Petroleum, Musabbih Helal Al Kaabi, on February 6, 2014 and exchanged opinions on bilateral cooperation in such projects as exploring joint oil development opportunities in a third-party country. The two companies concluded a memorandum of understanding (MOU) on strategic alliance for pursuing diverse business opportunities in gas field development & exploration, LNG plant/transportation & sales, and development of shale gas in North America.

\* Mubadala Petroleum was established as a wholly owned subsidiary of Mubadala Development Company, a wholly owned investment vehicle of the Government of the Emirate of Abu Dhabi, in June 2012.

## Joint Exploration Technology Seminar with Dana Petroleum PLC

KNOC held a joint exploration technology seminar with Dana Petroleum PLC in Seoul March 20-21, 2014. The purpose of the seminar was to initiate efficient collaboration through technology and information exchanges in exploration projects. In-depth discussions took place during the two-day seminar on 11 topics, including joint research on the Zagros Mountains in the Middle East, which is thought to have approximately 8-15 percent of the world's oil/gas reserves, and how to select an appropriate exploration area and evaluate the total resource amount.

The seminar was part of KNOC's human resource exchange program to utilize the advanced technologies and know-how of its global subsidiaries, establish a global technological support system and enhance technological synergy between the head office and its global subsidiaries. In addition, KNOC plans on assigning Dana's HSE experts and senior geologists to its head office in Seoul as part of its global mobility program.



## KNOC sells land in Ulsan to S-OIL



Yoon inspected the construction site of oil stockpile facilities and KNOC's existing underground caverns. During his visit to Ulsan, Minister Yoon applauded the sale, saying, "The sale of this land by KNOC to S-OIL is quite significant, as it's a mutually beneficial example of a sale between the private and public sectors."

KNOC sold 92m2 of its Ulsan stockpile site to S-OIL in March 2014. The sale allowed the company to replace the old storage tank with underground caverns without additional investment, saving on maintenance expenses worth USD 1.9 million annually. S-OIL plans on expanding its plant on the land it purchased, expecting a USD 2.5 billion increase in annual exports.

MOTIE Minister Yoon visited KNOC's Ulsan branch on March 3, 2014 to view the sold site and received a report on the progress of S-OIL's investment plans. Minister Yoon asked Ulsan's Deputy Mayor for Economic Affairs for cooperation with the storage terminal investment project, especially when it comes to red tape with regards to permission and authorization. KNOC CEO Suh, Senior Vice President of S-OIL Kim Dong-chul, and Deputy Mayor of Ulsan Jang Man-seok were present at the time. Following the report, Minister

## Joint venture signals smooth sailing for Northeast Asian Oil Hub Project



The launching ceremony for Korea Oil Terminal, a joint venture for transforming Ulsan's northern port into a hub for Northeast Asian oil distribution, was held at the Westin Chosun Hotel in Seoul on January 8, 2014. Present were Korea's Minister of Trade, Industry & Energy, Yoon Sang-jick, CEO of Royal Vopak Eelco Hoekstra, CEO of S-OIL Nasser Al-Mahasher, and 40 other high-profile people from related organizations. The project of building oil stockpile facilities with a capacity of 36.6 million barrels of oil and an international oil exchange market in Yeosu and Ulsan was first outlined in 2008 with the goal of making Korea one of four major oil hubs, along with the U.S., Europe and Singapore. A storage facility of 9.9 million barrels of petrochemical products and berth facilities will be completed at Ulsan's northern port by 2016.

The operator of this project, Korea Oil Terminal, is a joint venture among KNOC, S-OIL (from Korea) and the Vopak Group (from the Netherlands). Kang In-goo took office as the first CEO & president of the company in March 2014. Previously, Kang had served as the CEO of Isu Chemical.

## Expanding collaborative efforts with Dana Petroleum PLC



Three delegates from the U.K.'s Dana Petroleum PLC, a subsidiary of KNOC, visited KNOC's head office on January 15 and 16, 2014. Led by Chief Financial Officer (CFO) David Crawford, the U.K. subsidiary's delegates (deputy CEO Ahn Yong-sun and the Group Treasurer, Roy Shearer) met their

counterparts at the head office in Seoul on January 15 to discuss ways to elevate marketing activities on crude oil produced in the North Sea. The attendants reached an agreement on the direct marketing of the oil produced from the blocks where the U.K. subsidiary holds management rights and the direct sale of the product from the Wester Isles Block, which is scheduled to initiate production in 2015. On the following day, the U.K. delegates visited KNOC's Yeosu office to listen to abriefing on the company's stockpile facilities and technologies.

## Safety Check on Stockpile Facilities

On January 21, 2014, MOTIE's Energy Resources Director Kim Jun-dong, accompanied by KNOC's Executive Vice President for Petroleum Stockpile Group Shin Kang-hyun, visited KNOC's Ulsan branch and gas field administrative office to check on the safety controls of major energy supply facilities on the site. After their visit, they reiterated the importance of safety vigilance. KNOC's Ulsan branch has 17 million barrels of crude oil in its 18 storage tanks and 2 underground caverns. Furthermore, its buoy mooring can handle up to 53,000 barrels of crude oil per hour.

MOTIE's second deputy minister, Han Jin-hyun, paid a visit to KNOC's Pyeongtaek branch on January 23, 2014 to support workers on their vigilance to safety accidents during the New Year's Day holidays.



## New Year's First Day Ceremony

KNOC held its first day of the New Year event in the main hall of the head office on January 2, 2014. In his first speech of the year, CEO Suh set forth his plans for the new year: building a foundation for sustainable growth with technology-centered explorations, maximizing profits and asset values by effectively managing our existing assets, and enhancing management efficiency by establishing a globally integrated management system, while putting top priority on enhancing financial soundness with appropriate debt management.

On the same day, Lee Jae-woong and Choi Byeong-goo were inaugurated as the Executive Vice President for Administration and Chief of Institute for Exploration & Production Technology, respectively. From January 2 to 13, 2014, KNOC Offices in Yeosu, Gokseong, Seosan, Yongin, Ulsan, Geoje and Pyeongtaek inaugurated new heads.

As of January 28, 2014, three new non-executive directors were appointed by the government (CEO of the Creativity & Innovation Foundation Shin Won-shick, Vice President for industry-academic cooperation of Dankook University Lee Gye-hyung, and Adjunct Professor of the Graduate School in Business Administration Studies of Kongju University Ahn Byung-ok).



## 2014 Strategic Meeting of Overseas Office Heads

From January 27 to 28, 2014, the 2014 strategic meeting was held for heads of KNOC overseas offices in Seoul. The nine heads of KNOC overseas offices and executive officers from the headquarters sat down together for a presentation on the 2013 performance and 2014 business plans. During the two-day meeting, the nine offices from the U.K., Canada and the U.S. presented their respective performances and plans in turn, followed by a special lecture from an outside person on leadership. The attendants also discussed ways for achieving qualitative growth through financial stability, technology-oriented exploration and a sustainable growth platform.



## 35<sup>th</sup> Anniversary Ceremony

KNOC held its 35<sup>th</sup> anniversary ceremony at its head office on February 28, 2014. Present were the CEO, the leader of the labor union, and executive officers. At the ceremony, KNOC handed out commendations to honorary employees, meritorious services, the 2013 Challenge Prize, and the 35<sup>th</sup> Anniversary Slogan contest winner. In his congratulatory speech, CEO Suh reaffirmed his determination for greater success in the run-up to the company's new Ulsan Era and for overcoming the current difficulties in the business environment.

Additionally, the company's historic records and exhibits were exhibited for two weeks in the lobby of the head office building, and the company also made a special posting on its Facebook page.

The company has plans for more PR events by the end of the year in celebration of its 35 anniversary. This includes seminars on the petroleum industry and drilling technologies as well as a symposium on petroleum stockpile operational techniques. The company will also publish a compiled corporate history book.

## Recruitment & Education

In February 2014, KNOC hired 71 new employees (including those hired through internship). Finalists were selected through two rounds of screening in December 2013 and intensive interviews were held from January 21 to 24, 2014. The interns received an orientation session at a training center near Seoul from March 4 to 7, 2014 on the company's vision and core value as well as basic competencies as members of KNOC. Interns who applied in the E&P business will receive additional competency-building training courses from March 10 to May 30, while office workers and technicians are receiving education from March 10 to April 18. Based on their performance, the interns will be considered for regular employment after a five-month internship.





## CEO Suh Delivers a Lecture at Korea University

On March 28, 2014, CEO Suh gave a special lecture to 200 students of the Green School of Korea University on the subject of “The History of Korean Petroleum Development and the KNOC.” The Green School is a joint graduate school between Korea University and Korea Institute of Science and Technology (KIST) on energy and environment studies. During the lecture, CEO Suh briefly introduced petroleum development projects underway at home and abroad and the business environment of KNOC.



## Meeting with the Seychelles' Ambassador

CEO Suh received H.E. Barry Faure, Secretary of State for Foreign Affairs, Ambassador of the Republic of the Seychelles and the chairman of PetroSeychelles, at the reception room of the KNOC head office on March 13, 2014. They discussed oil resource exploration and mutual interests at the meeting. In the future, KNOC will review the feasibility of the proposal by the Seychelles, and when the findings are positive, the company plans on further inspecting the related data. The Republic of Seychelles is a 155-island country located east of mainland southeast Africa, and has been involved in exploration projects since the 1970s through its state-run upstream oil company.

## KNOC-KEEI : Moving Forward Hand in Hand

On February 28, CEO Suh signed an agreement with Korea Energy Economics Institute (KEEI) President Sonn Yang-hoon on bilateral collaboration for research activities to reinforce Korea's competitiveness in resource development projects and to promote the development of the Korean oil industry. As per the agreement, KNOC will invest USD 0.5 million annually for three years, which will be spent on research activities and bilateral collaboration projects.



## New Year's Greeting and CEO Meeting of the Energy Sector



CEO Suh attended the New Year's Greeting and CEO Meeting of the Energy Sector at the Intercontinental Seoul COEX Hotel on January 28, 2014. Present were 250 energy industry representatives, including MOTIE Minister Yoon, Second Deputy Minister Han, Korea Electric Power Corporation (KEPCO) CEO Cho Hwan-eik, Chairman of the Korea Energy Foundation Park Jong-keun, and GS Caltex Vice Chairman Hur Jin-soo. Following the ceremony, a meeting was held to share ideas for fostering growth engines for the government's creative economy initiative and for responding to changes in the external business environment.



## Trading Industry Forum

As chairman of the Energy & Mineral Resources Development Association of Korea (EMRD), KNOC CEO Suh attended the 2nd Trading Industry Forum, which was held at Seoul's COEX on March 18, 2014. During the two-hour forum, 40 panels were held, including one with the MOTIE minister, assistant secretary of trade, director-general for trade policy planning and others from the industry, all of whom shared thoughts on current issues of trade policy in 2013. They also discussed 2014 trade policy directions and how to make use of the summit diplomacy results.

## GASTECH 2014

From March 24 to 27, 2014, GASTECH 2014 was held at KINTEX in Ilsan. GASTECH is a world conference and exhibition for energy specialists in the LNG industry. High technologies in the LNG industry were introduced at the event and active discussions were held on a variety of subjects such as natural gas and the LNG value chain. A day before the event, on March 23, a GASTECH VIP Program was held at the Conrad Hotel, where 250 industry representatives from around the world, including Korea's MOTIE deputy minister and Ministry of Foreign Affairs deputy minister, KNOC vice president Kim Jung-hyun, and CEOs of Kuwait Petroleum Corporation (KPC), Qatar Petroleum and National Oil Corporation of Libya discussed the role of LNG in the development of Asian economies in the future.

\* GASTECH was first held in London in 1972 and changes its venue every year. It has been held in the United States, Germany, Malaysia and the U.A.E. in the past.







## 2014 Creative Awards

CEO Suh was awarded the grand prize in the global management category at the 2014 Korea Creative Awards held at the Grand Ballroom of the Millennium Hilton Hotel on March 13, 2014. Sponsored by the Ministry of Science, ICT and Future Planning and MO-TIE, JongAng Sunday gives this award to leaders who contribute to Korea's economy after an objective review of nominees.



## Social Responsibility

### Oil Development Scholarships

KNOC held a ceremony to confer the 2014 1H Oil Development Scholarships at its head office on February 26, 2014. Celebrating its 17th anniversary at the ceremony, the company pledged a total of USD 80 thousand in scholarships to 28 students studying petroleum engineering and geology (USD 3 thousand each).

Attending the ceremony was KNOC vice president Kim Jung-hyun, who asked the students to "play a pivotal role in the nation's oil development projects by gaining profound expertise in their majors." In the future, the company plans on fostering human resources and infrastructure in the oil development area through diverse natural resource development and human resource development projects.\*

\*Natural Resource Development Human Resource Development Projects include sponsoring the establishment of universities specialized in natural resource development, operating E&P internships, accepting enrolled technical research personnel from the military, and supporting expert training programs.



### Kazakhstan Office and KHMC Joint Medical Service

From March 4 to 7, 2014, KNOC's Kazakhstan office (head: Shin Seok-woo) employees held a joint medical service along with Kyunghee University Medical Center personnel at the President Medical Center in Almaty, Kazakhstan.

Sponsored by KNOC, the event was put on for local residents, local high-profile officers, KNOC employees and their families, as well as Koreans living there. On the last day of the event, a joint seminar was held between doctors from the two countries.

### Preventing Oil Leakages

The KNOC Yeosu office convened all its employees on January 31, 2014 to extend a helping hand and clear up the oil leakage accident by GS Caltex during the Lunar New Year holidays. Volunteers unfolded the oil fence and oil absorbers and helped clean up the beach, while also offering hot coffee to others.



### Visit to a Welfare Center for the Disabled

Lee Jae-woong, EVP for the Administration Group, visited the Eastern Traditional Market in Seosan, with which KNOC has sisterhood ties, on January 23, 2014. After buying fruit and rice cakes there, he donated them to a welfare center for the disabled and a local community child center in the neighborhood. To revitalize the traditional market economy, KNOC entered into sisterhood ties with the market in July 2011, and has purchased rice and fruit for locally underprivileged people on every national holiday since then.

The company's 26 volunteer corps members and 9 regional offices visited welfare centers nearby to deliver presents for Lunar New Year as well.



## Safety Management

### Seasonal Safety Check

CEO Suh visited the Guri office on March 20, 2014 to check in person on the safety controls at the underground caverns and handling areas. While showing his support to workers at the site, he asked them to be more vigilant during the thawing season.



### Safety Check at Head Office

The EVP for the Administration Group, Lee Jae-woong, and the manager of the Emergency Planning Department, Shin Jae-shick, checked the protection and safety practices at the Seosanoffice on February 28, 2014. They reiterated the importance of training and air-tight vigilance of employees and outsourcers on duty to preemptively prevent industrial accidents.

### Construction Site Check

On March 6, 2014, EVP for Petroleum Stockpile Group Shin Kang-hyun checked the safety controls on the pipeline construction site between the Seosanoffice and Samsung Total, and on the nearby ports for handling oil. EVP Shin showed his support for workers at the Seosan office and construction site, and reiterated the company's air-tight safety controls at work.



### Special Joint Check on Offshore Facilities

KNOC's Seosan Office had a safety check on its offshore facilities on February 20, 2014. The office invited 14 experts from six related organizations (regional coast guard, regional maritime affairs and port office, Seosan municipal government, regional office of the Labor Ministry, and local fire station) to check on the safety controls of its operation sites.





# Turning Possibility into Reality

KNOC products natural gas & oil in the 'Donghae-1'  
the first commercial gas field in Korea.

We have nine oil stockpile facilities across Korea  
with combined capacity of 146 million barrels of oil.

Keenly aware of our responsibility for  
national future energy needs,  
we take full advantage of even  
the slightest energy possibility to  
bring out its full potential.



## "Creating Value Beyond Energy"

'Creating value beyond energy' is KNOC's new vision that embodies its commitment to reaching closer to the people by achieving growth for the bright future of Korea and the happiness of its people.