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Oil Again Drawing Explorers To The Norman Wells Area
By Pat Roche

While most of the recent exploration in Canada's north has focused on natural gas, a few players are also looking for oil.

In the central Mackenzie Valley, the prospect of a major oil discovery has tantalized explorers since 1920, when Imperial Oil Limited found the Norman Wells field with an estimated 660 million bbls of original oil in place.

While a second Norman Wells has yet to be found, prolonged high prices make the prospect of a big discovery more attractive than ever.

Another big plus is available capacity on Enbridge Inc.'s Norman Wells pipeline, which stretches 870 kilometres from just south of the Arctic Circle to Zama in northwestern Alberta.

The 12-inch pipeline is capable of shipping 34,000 bbls a day and expandable to 50,000 bbls a day. Last year, Norman Wells production averaged 23,200 bbls a day, down from 30,000 bbls a day at peak.

Norman Wells production in recent years has been declining at an average rate of about six per cent a year. The pipeline is expected to transport natural gas liquids from Mackenzie Delta gas production by the end of the decade. Meanwhile, the line continues to operate far below capacity.

Many observers are awaiting news on the Summit Creek B-44 wildcat well drilled last winter by Northrock Resources Ltd., a unit of Unocal Corporation. The well's primary target was in the Devonian, the same age as the Norman Wells reef.

The well, located 80 kilometres south of Norman Wells, was logged, drillstem tested and production cased in March to total depth of 3 035 metres.

Northrock and its partners haven't commented on the $18-million well. But rumours of an oil discovery drove up the share price one small partner, International Frontier Resources Corporation, to $1.52 on May 31 from about 30 cents in mid-March. The stock has recently been trading in the $1 range.

Other participants include Husky Energy Inc., EOG Resources Canada Inc. and Pacific Rodera Inc.

Last month, the partners acquired 90 632 hectares of nearby land with a $24.8-million work commitment. Exploration License 423 was awarded to Northrock (32.5% interest and operator), Husky (29.48%), EOG (26.3975%), Pacific Rodera (6.63%) and International Frontier (five per cent).

Northrock hopes to shoot 200 kilometres of two-dimensional seismic in the area this summer.

In its 2003 annual report, Husky said oil exploration in the central Mackenzie area would be an area of focus for its upstream division.

Devlan Exploration Inc. will drill a 700-800-metre exploratory oil well this summer if regulatory approval can be obtained by early August, said Martin Cheyne, Devlan's president. If not, the well will be drilled next year.

If it proceeds this year, equipment -- including an AKITA Drilling Ltd. rig -- would be barged in

during the later half of August. The drilling location is about 500 metres from the bank of the Mackenzie River.

Cheyne said this would be the first summer drilling north of Norman Wells in several years. Elsewhere in the central Mackenzie Valley in recent years, Devlan downed three shallow gas wells to retain licences and drilled a deeper well, which had oil shows.

Norman Wells Central Processing Plant

Also in the central valley, EnCana Corporation drilled the Begadeh J-66 exploration well searching for oil. The well, which was rig-released in February, was listed as standing at 1 425 metres. Far North Oil & Gas magazine said the well was dry, which EnCana couldn't immediately confirm. The company currently has no further plans for the area, said Almas Kassam, an EnCana spokeswoman.

Petro-Canada, meanwhile, committed to $22 million in work commitments on a 27 488-hectare block between Colville Lake and Norman Wells, but is searching for gas, not oil, said Susan Braungart, a Petro-Canada spokeswoman.

Since the Norman wells discovery more than 75 exploration wells have been drilled in the Mackenzie Plain, the accessible middle section of the Mackenzie Valley north and south of Norman Wells.

Meanwhile, the Norman Wells field is far from depleted.

"We expect production to continue for at least another 15 to 20 years, but exactly how long it will continue will depend significantly on the future profitability," said Pius Rolheiser, an Imperial spokesman.

Imperial has done no drilling at Norman Wells since 2001, when four wells were drilled. The company has no plans to drill at Norman Wells or in the surrounding area this year.

Future development drilling will depend on the commodity price outlook and internal spending decisions, said Rolheiser.

As for potential future discoveries by others in the area, Imperial clearly wouldn't mind sharing the cost of the pipeline on which it is now the sole shipper.

"It's to everyone's advantage to keep it as close to capacity as possible," Rolheiser said. "So obviously if there was another major oil discovery in the area, it would be good news for us."

Although the huge light oil (47-degree API) discovery was made in 1920, there was minimal production until 1985 when Imperial completed a massive expansion and the present pipeline was built.

Since much of the Norman Wells reef complex is under the Mackenzie River, the majority of the wells were drilled from six artificial islands. These were built by Imperial at a point where the river is about five kilometres wide. Wells were also drilled from a natural island and from shore.

Imperial expects to ultimately recover slightly more than 40% of the original 660 million bbls of oil in place.

Today there are 362 wells at Canada's most northerly producing field, of which 176 are oil producers and 172 are water injectors. A handful are shut in or suspended.

About 61,000 bbls of water a day are injected into the reservoir to enhance oil recovery. Of that amount, about 26,000 bbls a day are drawn from the Mackenzie River. The rest -- about 35,000 bbls a day -- is recycled produced water.

Most of the associated gas is re-injected to enhance oil recovery, though some is used to generate electricity and provide gas service to the town of Norman Wells.

As oil production from Norman Wells declines, natural gas liquids from the Arctic may pick up some of the slack in the pipeline.

Under the “base case” scenario for the proposed Mackenzie gas project, NGL would be separated from the gas stream in the Inuvik area and shipped to Norman Wells via a separate pipeline. From there it would be shipped down the Norman Wells oil pipeline.

The Mackenzie gas project is expected to produce 15,000-20,000 bbls a day of NGL from the three gas fields that will initially be brought onstream in the Mackenzie Delta.

The project, for which Imperial is the lead operator, is expected to come onstream by 2010. Imperial hopes to file regulatory applications by September, but this depends on reaching agreement with all the participants.