GAANG

Session ***2001***

ANGLAIS

GROUPE 11

BTS GÉOLOGIE APPLIQUÉE

Durée : 2 heures *Coefficient : 2*

L'usage d'un dictionnaire bilingue est autorisé.

Avant de composer, le candidat s'assurera que le sujet comporte bien 3 pages numérotées de 1/3 à 3/3.

Traiter les deux questions suivantes :

I - **RÉDIGER EN ANGLAIS** (en 250 mots, à ± 10 % près) **un compte-rendu** du texte :

"BP Operations in Alaska"

(Indiquer le nombre de mots utilisés).

15 points

II - **TRADUIRE EN FRANÇAIS**, l'extrait suivant *(lignes 59 à 64)* :

"But there are other potential options as well. One is changing natural gas into synthetic crude oil and transporting it down the existing pipeline. Gas-to-liquids technology would increase the flow through the trans-Alaska pipeline helping to keep the tariffs low and maintaining revenues to the people of Alaska. BP has pioneered a number of new technologies to reduce the cost of changing gas to liquids, so this may also become a viable option."

5 points

BP Operations in Alaska

Today and Tomorrow

Today...

While some North Slope fields are mature and in various stages of decline, such as Prudhoe Bay, Kuparuk and Endicott, the area remains an ideal area for new oil exploration for today's high-tech engineers and drillers. Industry is using new drilling technologies, sophisticated enhanced oil recovery programs and new, innovative well maintenance techniques to coax more oil from the reservoir and extend its life.

About 13 billion barrels of oil will be produced from the Prudhoe Bay field with current technology. But 12 billion barrels will remain in the ground - a huge target for petroleum engineers and geoscientists. Even if a small fraction of that oil can be produced, it could be the equivalent of a major new oil field.

Prudhoe Bay offers several advantages in the application of advanced technology: it is a relatively young field, a wealth of data exists to help understand the reservoir, and sophisticated computer simulation models have been created. Armed with these tools and information, reservoir engineers can plan development programs with high degrees of certainty and reduced risk.

Several satellite developments have been identified in and around the Prudhoe Bay field that could yield upwards of 300 million barrels of recoverable oil. BP, ARCO and Exxon continue to appraise and delineate these satellites.

Technical exchanges, joint projects and other co-operative efforts among BP Exploration, ARCO, Exxon and others have helped industry reduce costs and add hundreds of millions of barrels of recoverable reserves to the Prudhoe Bay oil field.

In addition to huge oil resource targets at Prudhoe Bay, there are massive gas resources. Producers continue to explore opportunities to maximise the value of this natural gas, and eventually bring it to market.

And Tomorrow

Several fields have been discovered on the North Slope, but some are marginally economic because the cost of producing them is so high. Some contain billions of barrels of oil. Development will depend on world oil prices, a stable tax and regulatory climate and, in some cases, technological breakthroughs.

BP has interests in a large area bounding the Kuparak Unit, about 25 miles west of Prudhoe Bay. Development of resources in this area could yield more than a billion barrels of reserves.

Meanwhile, a pilot project by BP in the Schrader Bluff area, south of the main Milne Point field, is currently yielding about 6,200 barrels per day of this viscous oil.

The oil industry continues to actively explore prospects[1] on the North Slope both near existing fields and in more remote frontier areas. Some companies also are exploring offshore prospects in the Beaufort Sea.

In early 1997 BP and Chevron announced the discovery of Sourdough about 45 miles east of Prudhoe Bay in the south-east corner of the Pt. Thomson Unit. It's believed the field contains about 100 million barrels of recoverable oil. The prospect lies along the Staines River, bordering the Arctic National Wildlife Refuge (ANWR).

ANWR is one of the nation's most promising onshore areas, but it will remain off limits for drilling until the U.S. Congress grants access. Federal geologists believe the region could contain a Prudhoe Bay-size accumulation of recoverable oil. The National Petroleum Reserve, Alaska, to the west of Prudhoe Bay, also offers potential for new discoveries. BP acquired several NPRA tracts in a May 1999 lease sale[2].

With a stable tax and regulatory climate, continued co-operation among federal, state and local governments and industry, as well as reasonable world oil prices, industry will continue to invest to maximise oil recovery from existing fields, and will be encouraged to take the risks necessary to explore for and develop new sources of oil.

Alaska's Gas : What is the Next Move?

Developing Alaska's proven 26 trillion cubic feet of natural gas reserves is a huge challenge but also a potentially great prize in terms of jobs, investment and revenues for the citizens of the state.

Liquefied Natural Gas (LNG) has been the most discussed process to bring North Slope gas to the market but this would entail constructing a gas pipeline parallel to the trans-Alaska oil pipeline, with a liquefaction plant to be built near Valdez, at the southern terminus of the pipeline.

But there are other potential options as well. One is changing natural gas into synthetic crude oil and transporting it down the existing pipeline. Gas-to-liquids technology would increase the flow through the trans-Alaska pipeline helping to keep the tariffs low and maintaining revenues to the people of Alaska. BP has pioneered a number of new technologies to reduce the cost of changing gas to liquids, so this may also become a viable option.

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[1] prospects : *régions en cours de prospection*

[2] lease sale : *vente de concession*