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POTASH DEVELOPMENTS IN UDON THANI, THAILAND

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Potash Developments in Udon Thani, Thailand

by
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Introduction

This paper provides an update on recent developments for the Udon potash project, including the results of evaluation studies, Government approval process, financing and equity arrangements, and the project development schedule.

Asia Pacific Potash Corporation (APPC) is 90% beneficially owned by Asia Pacific Resources Ltd (APR), a company listed on the Toronto Stock Exchange. The balance is owned by the Thai Government. The management of the project is undertaken via APPC although the senior staffs are all officers of APR who provide the management. All staff is based in Thailand.

The Udon potash project, owned by Asia Pacific Potash Corporation is located 25 km East from the city of Udon Thani in Northeast Thailand and 50 km from the Thailand-Laos border. During the 1990's, exploration by APPC defined two separate, large potash deposits: Udon South (255 million tonnes @ 23.5 % K₂O) and Udon North (665 million tonnes @ 17.2% K₂O).

Detailed evaluation studies on the Udon South potash deposit were completed by APPC during 2000-2004. These studies were recently revised to reflect increased potash prices and shipping rates. Results confirm the strong commercial fundamentals and development options of the Udon South potash project. Additional investment funding was readily raised to support APPC's administration of the project whilst awaiting final Government approvals for 'go ahead' of the Udon South project. Initial potash production is planned to be 1 million tonne per year (Mt/a), while a second stage expansion will double production to 2 Mt/a with current mine life of 22 years.

Approval of the mining licence for the Udon South potash project has progressed slowly yet steadily, due to careful consideration by the Thai Government of the country's first, large underground mining project and potash production. The research and public debate on such a "vital economic and social decision" has been well directed to the benefit of Thailand. Subject to final Government approvals and project financing, the Udon South potash project is scheduled for development commencing during 2005 with initial production by mid 2008.

APPC is well advanced in negotiations for a favourable outcome with the Thai Government regarding their exclusive right for ongoing evaluation and later development of the Udon North potash deposit.

The Kingdom of Thailand will play an important role in meeting the future demand for potash in Asia. Development of the Udon potash project by APPC will provide customers in the fertilizer industry an alternative choice and important security of supply from a regional producer.

Definitions used in this paper include:

- *Asia* refers to the geographic area of China, East Asia (Japan, Korea), Southeast Asia and South Asia (India, Sri Lanka).
- *APPC* is the acronym for Asia Pacific Potash Corporation, the owner of the Udon potash project under the Concession Agreement with the Thai Government.
- *ASEAN* is the acronym for the Association of South East Asian Nations.
- APPC's Udon potash project should not be confused with the ASEAN Government potash project located at Bamnet Narong, Thailand.
- Sylvinite is a mixture of the minerals sylvite (KCl) and halite (NaCl or rock salt).
- Carnallite is a mineral containing potassium and magnesium chloride with waters of hydration.
- Potash product is muriate of potash (MOP) with a chemical formula KCl.
- All product tonnages are measured in metric tonnes and expressed in terms of KCl.
- Cfr is an international trade term (Incoterm) for product price including cost and freight.
- USD/t is United States of America dollars per metric tonne.
- CDN9m means Canadian dollars nine million.

Evaluation Studies and Commercial Viability

Detailed evaluation studies on the Udon South potash deposit were completed by APPC during 2000-2004. International consultants, recognized by resource lending banks, conducted these feasibility studies in accordance with existing agreements and foreign investment policy and guidelines of Thai Government agencies. Studies involved the use of international best practice, especially regarding issues of environmental and social management. The success of the studies was important in establishing and maintaining goodwill with the Thai Government, non-government organisations and the local community. Positive results confirmed the commercial value of the Udon potash project and ensured the ongoing support of the investment community throughout the evaluation studies and the Government approval process.

The Udon South feasibility study was completed in June 2003 based on initial potash production of 1 Mt/a and second stage expansion to 2 Mt/a with current mine life of 22 years. Using June 2003 potash prices, APPC calculated the net present value (NPV) for its 90% share of project cash flow to be USD 100 million and the internal rate of return (IRR) in a range of 16% to 20%. This conservative base case confirmed the robust fundamentals of all key project parameters along with favourable commercial returns and limited financial risk. As such, solid investor support was forthcoming, especially from major shareholder Olympus Capital.

The current economics for the Udon South potash project are obviously more favourable due to significant increases in potash prices in Asia and higher transportation costs of international shipping (bulk sea freight).

Recently, APPC revised its commercial evaluation of the Udon South potash project to reflect increased potash prices and shipping rates, especially for potash delivered to APPC's expected primary market in Southern China. Potash prices in China are estimated to have increased from USD120/t cfr in June 2003 to USD145/t cfr in January 2004, and in the most recent revision early this year to USD163/t cfr.

Based on estimated January 2004 prices of \$145/t cfr, recent exchange rates and shipping quotes ex-Bangkok, APPC has calculated the net present value (NPV) of its 90% interest in the project's cash flow to be approximately USD186 million and the internal rate of return (IRR) of 22.6%. Using the more recent delivered potash price of USD163/t cfr, the corresponding NPV increased to USD 291 million, while the IRR rose to 27.8%.

Indications are that potash prices will not retract to 2002-2003 levels in the near future and this encourages the early development of the Udon South potash project.

Positive results from the evaluation studies have reinforced the competitive advantages and low risk profile of the Udon potash project to both APPC shareholders and the wider investment community.

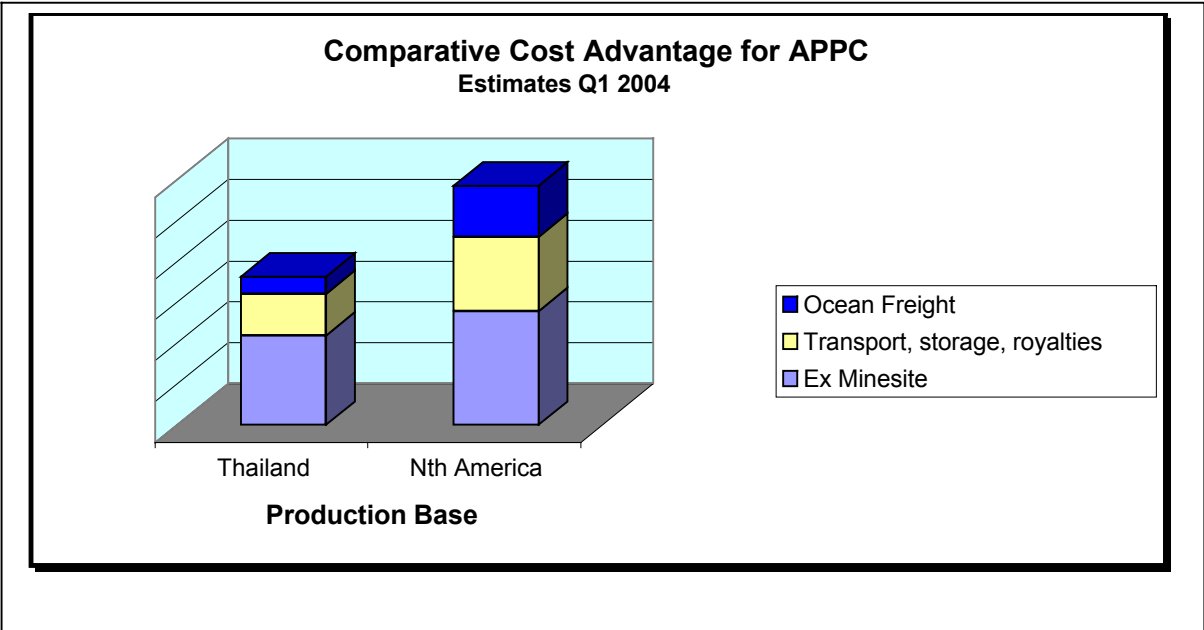
These key competitive advantages include:

1. Technical
 - a) Large, high grade resources and shallow mining depth (~350 metres)
 - b) Conventional mining and processing methods with proven technologies
2. Environmental and Social
 - a) Underground waste disposal = “world best practice” compared to many other potash producers
 - b) Economic stimulus and employment opportunities for regional and local communities
3. Domestic Logistics and Infrastructure
 - a) Availability of local semi-skilled workers during construction & operation
 - b) Good utilities (water, power) and several transport options to high quality port facilities
4. Low Production Cost
 - a) Technical factors ensure low capital & operating cost and can readily be up-scaled
 - b) Long project life >20 years, with high potential of additional operations for >50 years
5. International Transport
 - a) Flexibility in smaller more frequent shipments to all Asian ports or direct to customer
 - b) Lower inventory stock cost for customers and no transshipment charges
6. Market
 - a) Strong demand in domestic and Asian fertilizer markets with forecast growth >5% per year.
 - b) Two-stage development provides for orderly market entry and ability to deliver
7. Value and Profitability
 - a) Robust commercial fundamentals and strong returns for shareholders
 - b) Strategic value as new supply source for fertilizer customers in Asia
 - c) Financial and economic returns for local community and Thai Government

Recent increases in delivered price of potash in Asia largely reflect the steep rise in international shipping costs eg. Baltic Panamax Ocean Freight Index rose by 260% during 2003. Because the Udon potash project lies in the heart of the Asian market, APPC has a significant advantage in both the greater availability and lower cost of regional shipping compared with long-haul international cargoes.

APPC’s production cost is estimated to be comparable to other international potash producers, whereas the USD exposure is considerably less and freight costs are approximately 30% of our main competitors in the market. APPC’s potash will be delivered with a significant freight advantage against existing producers and this reduces customer exposure not only to shipping rates, but also to variations in foreign exchange rates. These cost advantages are highlighted in estimates of relative landed cash cost of potash in South China – refer Figure 1.

Figure 1: Cost Estimates for Potash delivered to South China (USD/t cfr)



Good commercial returns, low cost structure and sustainable competitive advantages are the main reasons for continued international investor support of APPC’s Udon potash project and increased investment interest from Asian companies, including customer groups. These are positive signs for the timely development of the Udon potash project.

Potential Benefits for Asian Fertilizer Customers

Currently, the Asian fertilizer industry and agriculture sector bear the brunt of disturbances in the potash supply chain. Due to large distances from production bases and lack of supply options, Asian potash consumers have a limited ability to negotiate on price and key delivery terms. Complaints by Asian potash consumers include that they are subjected to very long lead times for supply, they are dictated to on price and delivery schedules well in advance, and they have to make significant commitments to producers prior to understanding how the seasons will affect them.

As a consequence, Asian consumers suffer the most from transient price fluctuations. For example, when the shipping time is measured in the number of weeks not days and availability of large ships are limited, then the reality is that large and infrequent cargoes are the most economic alternative for the producer and supplier. Unfortunately, the reality of large cargoes means high working capital costs for Asian consumers in the requirement for purchase and storage of large inventory stocks or additional costs of transshipment.

Potash supply from a regional producer such as APPC will alleviate some of the supply issues for consumers in Asia. It will lessen the adverse effects of weakening USD production costs and the significant impact of transportation costs from point of production to export port to the consumer in Asia. The close proximity to the Asian market of a production base in Thailand will allow a wide range of shipping options including coastal barges for direct servicing an individual customer with 5,000 - 10,000 tonne cargoes to Panamax vessels moving large consignments.

APPC plan to build 270,000 tonnes of product storage at an export port in Thailand, which will facilitate shorter lead times and provide a buffer stock to meet fluctuations due to seasonal demands. Further, there is the potential for some of Thailand's closer neighbours to receive their product by road, thus reducing the amount of re-handling and lowering their costs.

A production base in Thailand will allow Asian consumers to enjoy greater choice on how and when they receive their potash.

The benefits of potash production in Thailand as an alternative source of supply are clear - the natural flow is the potential of a lower-cost structure for potash consumers in Asia.

The benefits to the people of the project area and to the country as a whole are vast. The balance of trade will improve the balance of trade by some USD 6 billion over the mining life of Udon South. It is anticipated there will be some 800 jobs in the mine and associated operations together with 5000 indirect jobs created in the local area in support industries. Taxes and the government's share of the profits will be in excess of USD one billion. Royalties of about USD 180 million will be distributed in accordance to Thai law to the provincial government and local Councils of the area as well as to the national government. The northeast of Thailand, where the Udon project is the located, is considered to be one of the poorest areas of the country with a large percentage of the population having to move out and work in other Provinces or other countries and repatriate earnings home. The combination of jobs and local allocation of royalties will make a very substantial difference to this area.

Government Approval Process

The Government of Thailand accepted APPC's mining lease application for the Udon South potash project in May 2003. The Mining Law was amended to permit practical underground mining in December 2002 while the Regulations under that Law were passed in March 2004. The Mining Lease Application has been in the review process by the Government since May this year.

APPC has assisted the Government of Thailand in sourcing information on mining lease conditions and operating practices in the coal and potash industries worldwide. This comparative information will be used to assist the Government of Thailand in its approval process of the Udon South mining lease.

APPC submitted an Environmental Impact Assessment, which was approved in January 2001. The subsequent work on optimizing the project required some minor supplementary changes to be submitted under the Mining Law, rather than the Environment Law, together with the Mining Lease application. The main change is the proposal to speed up the backfilling of tailings such that no tailings will be left on the mine site at the end of the mine life enabling complete rehabilitation of the area occupied by the development. This “environmentally sustainable procedure” will mitigate the risk of subsidence and significantly lessen the surface impact of the operation. This is viewed as an extremely positive change. APPC understands that most underground potash mining operations around the world do not return their tailings back underground but leave them on the surface.

This proposal in Thailand could set a new precedent in underground potash mining operations worldwide.

Government approval of APPC’s Udon South mining lease application has been slow due mainly to the project being the first large-scale underground potash mine development in Thailand, such that no standard protocols or precedents existed. As a pioneer project, the Udon potash project will set the country's standard for underground mine development and pave the way for other international mining companies to view Thailand as an attractive exploration target.

Thailand’s Mining Law has been reviewed by an international expert following the changes to permit practical underground mining. The expert found that the Thai Law was very strict on mining companies when compared to legislation in other countries in the region or in countries where underground mining was a well-established industry. A key feature of the legislation was that permission of surface landowners was required for mining down to 100 metres below the surface. The Udon potash mine will generally be 350m below the surface and the access from the surface to 100 metres down will be under land already owned by the company.

APPC is working towards approval of the Udon South mining lease by late 2004 although the timing is obviously dictated by the Government. This approval will allow APPC to complete the minor report work required to bring the current feasibility study to final bankable level and to arrange financing to initiate project development.

All exploration drilling, laboratory test work, engineering, environmental and commercial studies have essentially been completed with the remaining work being minor optimization of access and transport arrangements followed by updating of the cost estimates.

APPC has experienced a period of Government misunderstanding in regards to the Special Prospecting Licence and ongoing evaluation of the Udon North deposit. However, APPC anticipates a favourable outcome with the Government that will ensure their exclusive right for ongoing evaluation and later development of the Udon North potash deposit.

Thailand is a politically stable country that is keen to build on its strong business relationships with China and other Asian countries. The present Government actively promotes foreign investment in development of new industries, so given China's large demand for potash there are natural synergies to build upon. Recently, Prime Minister Taksin announced an "unlimited budget" upgrade of the rail network in Thailand to make it a logistics hub of Southeast Asia and the gateway into southern China.

Such political and financial support of strategic infrastructure bodes well for the successful development of the Udon potash project as a viable alternative supplier to the fertilizer industry in Asia.

Financing and Project Equity

Asia Potash Resources Ltd, the parent company of APPC, has spent approximately CDN 55 million to date on exploration and evaluation of the Udon potash project.

Following strong interest in the project from a number of Chinese parties, in November 2003, APPC signed an MOU agreement with the Chinese State-Owned Enterprise Investment Corporation (CSIEC) to facilitate access to the Chinese market and, if required, Chinese debt and equity funding. The purpose of this agreement was to centralize and channel the diverse range of expressed interests from Off-take agreements through to possible contracts for underground potash mining. The primary focus was seen as raising USD 300 million to finance the development of the Udon South potash project and also to secure long-term off-take commitments to supply potash to agricultural markets of China, the Thai domestic market and across Asia. The negotiations are continuing with a broad spectrum of Chinese companies.

APPC has also commenced discussions with regional potash consumers to better understand their requirements and what options are available to resolve some of their present supply chain difficulties. These discussions have been well received by the consumers who advised that they see an alternative potash supplier from Asia as a welcome change.

Recently APR raised CDN 10 million through a private placement mainly in North America. In addition \$2 million in notes was converted into shares by Olympus Capital Holdings Asia, the principal shareholder in APPC. This capital raising has placed APPC in a debt-free position and strengthened its ability to progress approval of its mining lease application for the Udon South potash project. Subject to obtaining the mining lease, these funds will provide for completion of a bankable feasibility study and organising finance for project development. Up to CDN 18 million becomes available to the company on granting of the mining lease, or the two year anniversary of the raising, from warrants issued the subscribers of the private placement.

APR's success in raising capital is a clear demonstration of support for the Udon potash project from the international investment community as well as Olympus Capital. It shows that overseas investors remain optimistic and confident about the development of Thailand's first potash mine and that providing fertilizer to the world's most populous nations will bring substantial rewards to the region.

APR and APPC look forward to the opportunity and challenge of development of the Udon South potash project. Strong investor interest, especially from China, indicates the high likelihood of success for the “birth of a major new resource-based industry” in Asia.

Latest Developments and Ongoing Work

The Udon potash project remains under close scrutiny from interested parties worldwide and APPC is continuing its discussions with potential off take market customers and construction groups in China and Southeast Asia.

New equity partners and strategic market alliances are being considered, however APPC are determined not to compromise project returns or their competitive advantage by selling down their position. It remains sound business practice that new equity partners should be seen to add value to the project with technical expertise and/or market network.

On Monday 9 August the Minister of the Ministry of Industry announced that the Thai Government was withdrawing all financial support for the ASEAN project at Bamnet Narong. So, unless a private entity picks up the leases and attempts to develop the low-grade deposit, it is likely the primary supply of Potash from Thailand, and in fact Asia, will come from APPC’s mine at Udon South and then from Udon North.

Recently the Chinese State-owned company, Mingda, has announced that it is confident of being granted exploration leases for potash in the same geological basin as the Udon project.

Following Government approval of the Udon South mining lease, APPC will complete a bankable feasibility study and organise financing for project development. The bankable feasibility study will only involve a review of the key technical, market and commercial assumptions by international, bankable consultants. Organizing project finance will most likely involve negotiation of equity positions with selected key parties and sourcing debt finance from several financial institutions.

Future and Development Schedule

APPC’s aims and vision for the future:

- a) Develop a profitable potash operation with best environmental & social standards.
- b) Become the preferred potash supplier to the Asian market based on high quality products and customer service.
- c) Provide economic benefits (direct & indirect) to Thailand and the local community.
- d) Support healthy growth of the fertilizer industry in Thailand and Asia.

Asia Pacific Potash Corporation (APPC) anticipates receiving the final approvals for the Udon South mining licence towards the end of 2004. Completion of the bankable feasibility study and project financing are expected to take approximately 6 months. If so, site preparations and construction would commence in mid 2005 with the mine access decline and mine predevelopment having the longest lead-time of approximately 3 years. Assuming project development proceeds smoothly, initial potash production is expected by mid 2008.

The Udon potash project is reaching a very exciting stage after a long period of evaluation.

Thailand sits on the doorstep of the fastest growing potash market in the world and APPC is on the verge of entering the potash supply chain.