



June 26, 2003

Alberta Energy and Utilities Board

Applications Branch
640 – 5th Avenue S.W.
Calgary, Alberta
T2P 3G4

Attention: Mr. Terry Abel, P. Eng.

Dear Sir:

**Re: Alberta Energy and Utilities Board GB 2003-16 Submission
Athabasca Wabiskaw-McMurray Oilsands Area**

We would like to take this opportunity to provide the following Submission relating to the important matters and issues addressed in General Bulletin 2003-16.

As a result of General Bulletin 2003-16, substantially all of ISH's Wabiskaw-McMurray gas production is affected either by virtue of being within the Application area or in an identified pool overlapping the Application area. Gas production of 5,000 mcf/d net to ISH is affected. Production is obtained from 25 "grandfathered wells", 11 wells which have been previously approved for production by the AEUB under ID 99-01 and 3 for which applications have previously been submitted for approval under ID 99-01 but have not been processed by the AEUB. Attached to this submission is a map detailing ISH's concurrent holdings of gas leases and heavy oil leases within the Application Area as well as affected wells and a "pool outline" of the two bitumen deposits under development by ISH Energy Ltd. at the current time.

In preparation for this submission, ISH Energy Ltd. has worked with Fekete Associates Inc. to provide the AEUB with a comprehensive technical report pertaining to all of our Wabiskaw-McMurray gas production and reserves in the affected area. Reservoir characteristics and recommendations are included. This report is appended to this submission.

ISH Energy Ltd. has also worked with Fractical Solutions on the development of our bitumen reserves located within the Application area and have concentrated on two prospects referred to as Glover and Kirby. A copy of the Fractical Solutions letter pertaining to the Gas/Bitumen Issues in the Glover/Kirby Area is appended to this submission.

A) ISH's comments on General Bulletin 2003-16.

ISH recognizes that conservation is within the mandate established for the AEUB and believes that the issue is of great importance to the Board, the Province and to the oil and gas industry. Formulating a conservation policy, given the lack of technical information and scientific data, is a daunting task. It is not known with any scientific certainty that the ultimate bitumen recovery will be affected by the production of natural gas. As well, it is not known if technical advances such as submersible pumps and repressurizing schemes will be able to mitigate any possible negative impacts of gas production in the Application Area.

In light of these uncertainties, the Board seems to be suggesting taking a very aggressive position to deal with the bitumen conservation issue. The position of the Board requiring the shut-

in of all Wabiskaw-McMurray gas production in the Application Area far exceeds any of the shut-in requirements determined at hearings involving the Surmont and Chard/Liesmer applications. The Board's position remains very confusing and difficult for industry to respond to. The Board has, in the recent past, indicated that the technical requirements as set out in ID 99-01 continue to be valid yet are still proposing to shut-in gas wells which have already been approved by meeting the requirements of ID 99-01. The Board has indicated that the admittedly broad approach to the issue will result in the shut-in of gas which would otherwise be allowed to produce. However, the criteria to determine whether gas can or cannot be produced appears to be unknown. If the requirements as set out in ID 99-01 remain valid, why are wells which have met this test being shut-in? If new requirements have been predetermined, why has industry not been consulted or advised of the new requirements?

ISH Energy Ltd. has the following specific concerns with respect to General Bulletin 2003-16.

- 1) The time frame is much too short for any meaningful response from the oil and gas industry or meaningful dialogue between all interested stakeholders to resolve this issue.
- 2) Compensation must be addressed as part of the process. In the Surmont and Chard/Liesmer applications there were parties requesting the shut-in of gas and different parties producing the gas and the issue of who would pay compensation was narrowed. Clearly, with the proposals contained in GB 2003-16 the bitumen owners will not be willing to pay compensation since they are not "demanding" the shut-in of the gas. Ultimately, if the proposals contained in GB 2003-16 proceed, the cost of compensation will be borne by the Alberta government and taxpayers and will be substantial.
- 3) The Board has cited a lack of resources necessary to complete all mapping, economic and technical reviews of the Gas/Bitumen issue. With a blanket shut-in order and the Board's predisposition to "conserve" the Bitumen, ISH has serious concerns whether applications to return gas to production can be dealt with in a timely manner.

B) ISH's comments on GB 2003-16 as it relates specifically to ISH wells

ISH has invested over twenty-four million dollars to develop and produce gas within the Application area. In addition, ISH has spent thirteen million dollars to maintain and evaluate its heavy oil leases and bitumen deposits within the Application Area. Canadian Natural Resources Ltd. ("CNRL") hold heavy oil leases and gas leases immediately adjacent to the ISH lands and have concurrently developed both the heavy oil leases (Pilot SAGD Plant) and gas leases. Spending by CNRL in the area on bitumen development is estimated at over thirty million dollars.

ISH and CNRL have had no disputes whatsoever relating to the Gas/Bitumen issue as contemplated by GB 2003-16. Based upon compelling technical evidence, ISH believes that the Gas over Bitumen issue in our particular site-specific situation, is a non-issue and will not affect the ultimate recovery of bitumen from our heavy oil leases. Gas in the Wabiskaw-McMurray formation in our site-specific area is mostly located in small isolated pools which will have no effect on bitumen recovery. The three large pools (Lower Mannville L, Upper Mannville J and Upper Mannville V2V) have had numerous applications for production submitted under ID 99-01 all of which have been approved by the Board. Our position that the Gas over Bitumen situation in this area will not affect ultimate Bitumen recovery has previously been accepted by the AEUB given that all of our previous applications for production of gas from the Wabiskaw-McMurray zone submitted under ID 99-01 have been approved. With respect to "grandfathered" wells within the Application Area, ISH believes that if the criteria as set out in ID 99-01 was applied to these wells, all grandfathered wells would be approved for continued production. The Fekete report appended to this submission supports this position.



ISH believes that Encana, who have concurrent SAGD heavy oil production and gas production south of the ISH and CNRL holdings, are in a similar position to ISH and have further demonstrated that proven technology exists to produce both the natural gas and bitumen concurrently.

SPECIFIC RECOMMENDATION: THE APPLICATION AREA SHOULD BE AMENDED TO EXCLUDE ALL LANDS SOUTH OF TOWNSHIP 76 W4M. Sufficient technical evidence exists to support the position that production of the gas over the bitumen reserves in this site specific area will not affect the ultimate recovery of bitumen. Regional gas concerns are not applicable south of township 76 W4M and should not be subject to a blanket shut-in order.

C) ISH's Recommendation on the process surrounding GB 2003-16.

- 1) The blanket shut-in proposal should be rescinded.
- 2) The AEUB should reaffirm that the technical criteria set out in ID 99-01 remains in effect and will be used to evaluate applications to process gas from the Wabiskaw-McMurray formation. All unprocessed applications should be evaluated by the AEUB in a timely manner.
- 3) With respect to Grandfathered wells within the Application Area, oil and gas Operators should be required to submit an application for continued production which would be subject to the technical criteria set out in ID 99-01. If an application is not received by the AEUB by the end of 2003, the well would be subject to a shut-in order.
- 4) The Government of Alberta should provide the AEUB with sufficient resources to properly evaluate the Gas/Bitumen issue in a timely manner. Given that the Government of Alberta is a major stakeholder in this issue and would be faced with a major compensation liability, ISH would expect that they would be amenable to providing additional resources so the AEUB could meet its mandate.
- 5) A collaborative effort involving all stakeholders should be adopted to facilitate the AEUB studying the Gas/Bitumen issue and developing a policy based upon technical evidence. We view the proposed applications for grandfathered wells as a good first step in providing the information needed for the AEUB to meet its mandate. In addition, there should be an open sharing of information with respect to technical details of SAGD production techniques.
- 6) Industry should be encouraged to use the existing "Dispute Resolution Mechanisms" to deal with conflicts arising out of the Gas/Bitumen. Notwithstanding the Board's obvious frustration with the hearing process, ISH believes that the current regime has worked quite well and has balanced the wishes of both gas producers and bitumen developers within the context of the AEUB's conservation mandate. ISH believes that Dispute Resolution Mechanisms would lessen the time required to resolve issues and with the AEUB being "at the table" for all negotiations as an interested party, it would be in a position to fulfill its mandate.

Thank-you in advance for your consideration of this submission. We appreciate the magnitude of the task at hand and wish to emphasize that ISH Energy Ltd. is prepared to participate in a meaningful way with the AEUB and all other stakeholders to develop an appropriate strategy to deal with the Gas/Bitumen issue.

Yours truly,

ISH ENERGY LTD.

David A. Neshine, CA
Vice President



Heavy Oil Recovery
Consulting

Mr. Dave Neshine
ISH Energy.Ltd.

June 24, 2003

Dear Dave,

Re: Comments on Gas/Bitumen Issues in Glover/Kirby Area

As requested, the following comments provide an opinion on the gas/bitumen issues on the ISH lands in the Glover/Kirby region. These comments are based primarily on the work performed by Fractical Solutions Inc., as provided in reports dated September 14, 2000, March 13, 2001 and April 23, 2001. The scope of these reports was to conduct a preliminary evaluation of the bitumen reserves in the area with the objective of identifying potential commercial SAGD projects.

General Comments on Reserves and Prospective Plant Size

From the April 23, 2001 report the following summarizes the estimates the potential SAGD reserves.

Glover – centered on 12-075-09w4

- Prime SAGD – 116.4 MMbbls recoverable – 71 well pairs
- Possible SAGD – 143 MMbbls recoverable – 106 well pairs

Kirby – centered on 14-074-08w4

- Prime SAGD – 21.6 MMbbls recoverable – 20 well pairs
- Possible SAGD – 90.6 MMbbls recoverable – 120 well pairs

Subsequent to these reports further seismic and drilling activity on the Glover prospect suggest that the reserves projected for this area will be lower than the numbers provided in the report.

If both areas are combined, the current total estimate for the number of “prime SAGD” well pairs might be in the order of 40. (Note that the Glover area has a higher reserves/well estimate) This would correspond roughly to 54 MMbbls of recoverable reserves. Given a 15 year producing life this could result in an average production rate of 9800 bbls/day.

This plant size would be clearly below the economic limit for a grass roots facility with current technology. There would need to be a lead plant in the area or an improvement in technology to rank the ISH lands to be currently economically viable for SAGD development.

The heart of the Glover prospect has not yet been tested with delineation drilling. In this respect these estimates could change considerably.

Comments on Reservoir Quality – Gas Issues

Glover – The Glover prospect shows the best wells to have 17-24 m of clean high quality pay with no associated gas in the McMurray or Wabiskaw zones. Preliminary and somewhat incomplete mapping from April 23, 2001 shows the closest gas well to be over 1 mile from this prospect. There is a water sand in the lower McMurray throughout part of the Glover region. This is separated by 7-10 m of shale from the prospective pay interval. It is not expected that this water sand would have any major effect on the performance of a SAGD project. The current conclusion is that the Glover prospect would not be affected in any substantial form by continued withdrawal of gas in the surrounding region, conditional upon the more complete demonstration of isolation of the pay interval from the water sand. This assumes communication of the gas and water sands at some distant point.

Kirby – The best part of the Kirby prospect also has good high quality pay of 17 –24 m thickness. Some Wabiskaw gas exists within the SAGD potential project area with some gas wells on production. The gas interval is vertically separated by more than 10 m from the prospective pay interval. There is a moderate possibility that there would be sufficient pressure isolation between the gas interval and the prospective pay interval to enable a SAGD to be conducted without influence from the overlying gas zone. There are some water sands are present in the lower McMurray in the prospective SAGD project area. These water sands are vertically separated by over 20 m from the prospective pay interval. It is expected that there would be very limited communication with this water sand and the prospective pay. Pressure isolation tests and additional mapping work could be successful in confirming pressure isolation of the gas and water zones from the prospective pay interval.

“Gassy Pay” in SAGD interval - It has been observed that no wells with “gassy” type neutron porosity/density porosity well log curves in the SAGD pay interval have been found during any drilling in the Glover/Kirby region. The author considers such wells to be strong evidence that major gas evolution from the oil sands and/or gas movement from an underlying aquifer, is occurring. This provides some evidence demonstrating isolation of gas and water zones from the SAGD pay in the Glover/Kirby region.

Conclusions:

1. The ISH Glover/Kirby lands as currently delineated do not currently constitute a commercial SAGD prospect.
2. There is a very good possibility that the ISH Glover SAGD prospect is highly isolated from any surrounding gas production.
3. There is a moderate possibility that the ISH Kirby SAGD prospect is isolated from any surrounding gas production.
4. Pressure isolation tests might provide some support for predicting pressure isolation of gas and water zones from the prospective SAGD pay intervals.

5. The EUB should provide standards of the acceptable criteria that are to be used to determine the isolation of gas and water zones from prospective SAGD pay intervals.

Sincerely,

Mike McCormack
P.Eng.

HEAVY OIL EXPERTISE

SUMMARY OF CAPABILITIES

- Generation and evaluation of development opportunities.
- Design, implementation and performance evaluation of EOR projects.
- Design of thermal well completions, including sand control techniques and wellbore hydraulics.
- Evaluation of reservoir properties for successful heavy oil projects.
- Analysis of “wormhole” dynamics in conventional heavy oil production.
- Technical analysis of petroleum engineering problems.
- Development of new and effective techniques for data analysis.

SPECIFIC EXPERIENCE

FRACTICAL SOLUTIONS INC.

Consultant – 1989-Present

- Performed extensive analysis of well and reservoir performance data from the Dover (UTF) SAGD project.
- Designed and assisted in the implementation and monitored a successful gas injection project to control water influx in a heavy oil reservoir.
- Developed a log analysis program, *Log Cruncher*, for the evaluation of heavy oil properties. Applied this model to map the possibilities for SAGD in the McMurray region. Also used to identify key parameters for successful reservoir management of conventional heavy oil primary production.
- Developed a numerical simulator, *FSWORM*, for the modeling of wormhole growth in conventional heavy oil primary production reservoirs. Applied this model to several reservoirs.
- Provided substantial assistance on the operation of single well SAGD and conventional SAGD projects operated by ELAN Energy/Ranger Oil. Including: evaluation of thermal wellbore hydraulics and reservoir management. Directed reservoir modeling to history match field performance and develop new reservoir processes.

- Consulting services for the evaluation of a prospective SAGD project for ISH Energy, including reservoir characterization, production forecasts and preliminary economics.
- Consulting services for the design of the horizontal wells for SAGD at the Nexen/OPTI Canada Inc. Long Lake project.
- Consulting services for the design of steam circulation start-up for SAGD wells at Rio Alto's Kirby pilot.
- Provided thermal wellbore design services for the Thermal Solvent consortium directed by Suncor.
- Consulting services for the analysis of wormhole type cold flow production for the Vapex Phase III consortium on Plover Lake.
- Consulting services for the evaluation of the performance of the Edam heavy oil reservoir for ISH Energy Ltd.
- Consulting services for the design of the horizontal wells for SAGD at the Petro-Canada McKay River and Meadow Creek projects.
- Consulting services for the design of the horizontal wells for SAGD at the Suncor Brunt Lake project.
- Consulting services for the design of the horizontal wells for SAGD at the Shell Peace River project.
- Consulting services for the design of the horizontal wells for SAGD at the Gulf Surmont project.
- Well design for AOSTRA UTF SAGD surface access horizontal well program. Work included detailed thermal/hydraulic calculations, preparation of a well operating strategy, and assistance in the specification of criteria for: wellbore tubulars/casing, bottomhole instrumentation, surface well control scheme and wellheads.
- Developed the *QFLOW* thermal/hydraulic wellbore simulator.
- Evaluation of an existing waterflood at a major heavy oil pool using geostatistical mapping techniques.

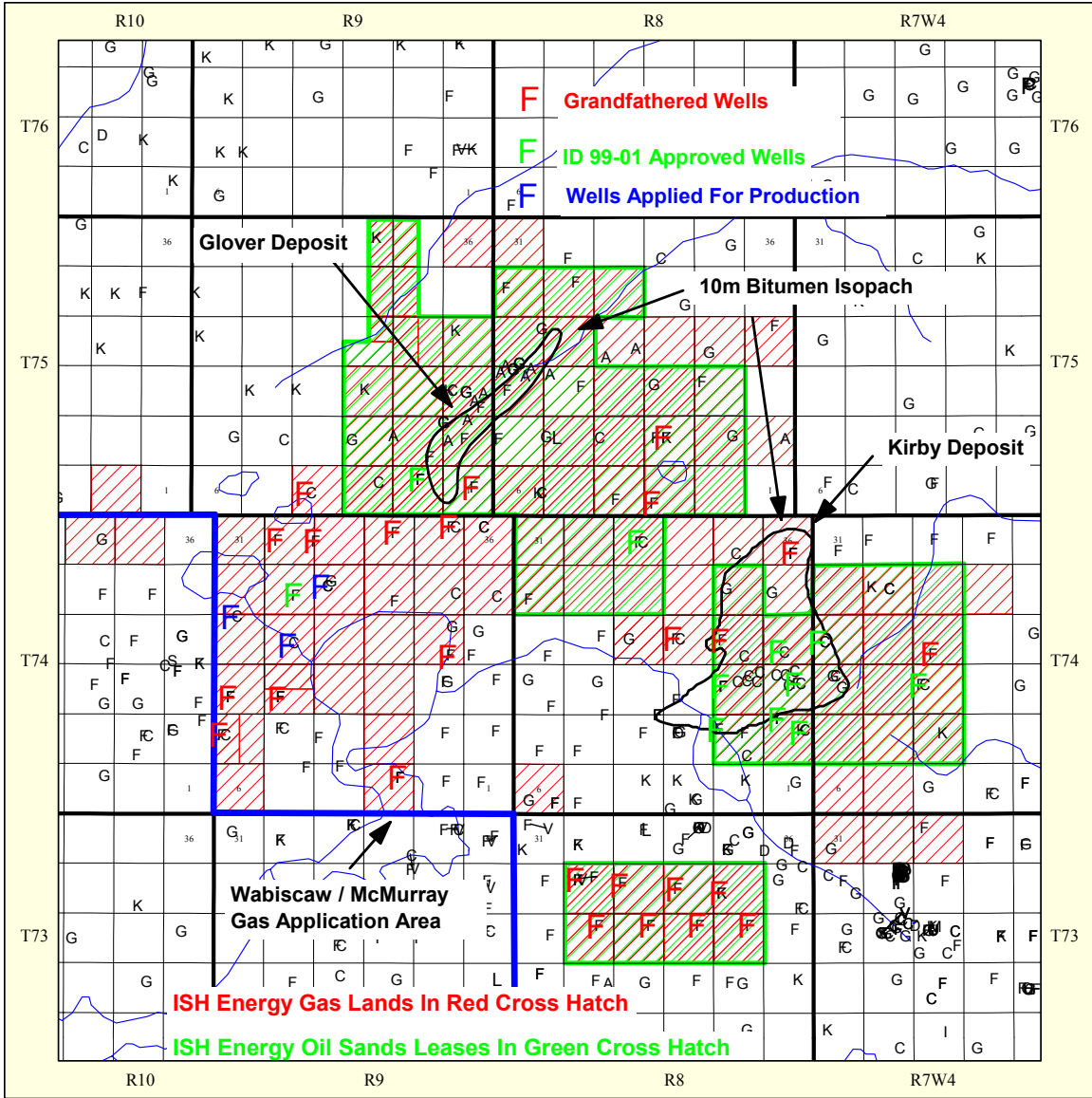
AOSTRA
Senior Facilities Engineer – 1982-1989

Monitored evaluated and directed AOSTRA's involvement with surface facilities and well completions on heavy oil and in situ pilot projects. Directed a staff of 1-3 junior engineers on major assignments. Also provided technical consulting on specific problems to joint interest partners. Investigations included: sand control technology, well pumping systems, tubular connections, thermal wellbore hydraulics, downhole instrumentation, corrosion/scaling problems, surface facility design and utilization, and environmental audits.


GULF CANADA RESOURCES LTD.

Project Engineer – 1979-1982

Worked extensively on the Pelican Lake heavy oil fireflood project, including: complete project engineering for a 7.0 MMSCFD, 2000 psi air injection facility and engineering design of a 28 well expansion.



WELL LEGEND	
Bottom Hole Locations:	
A Location	C Suspended
D Service or Drain	E Oil
F Gas	G Dry & Abandoned
I Suspended Oil	K Suspended Gas
L Abandoned Gas	M Abandoned Service
O Suspended Heavy Oil	P Abandoned Heavy Oil
S Injection	

PROPRIETARY DATA LEGEND	
Regions:	
	ISH DLS LANDS

ISH Energy Ltd.

KIRBY

Oil and Gas Lands

Map Software by
ISH Energy

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Author: R. Jean
Date: June 25, 2003
File: Kirby Hwy OILMAP
Scale: 1 : 175000

