IVANHOE ENERGY INC
Form 10-K
March 16, 2009

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2008
OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____ to _____
Commission file number: 000-30586

IVANHOE ENERGY INC.
(Exact name of registrant as specified in its charter)

Yukon, Canada	**98-0372413**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
654-999 Canada Place **Vancouver, British Columbia, Canada**	**V6C 3E1**
(Address of principal executive offices)	(Zip Code)

(604) 688-8323
(Registrant s telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered pursuant to Section 12(g) of the Act:

Title of each class	Name of each exchange on which registered
Common Shares, no par value	Toronto Stock Exchange NASDAQ Capital Market

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. o Yes þ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. o Yes þ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. þ Yes o No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of large accelerated filer , accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer **o** Accelerated filer þ Non-accelerated filer **o** Non-accelerated filer **o**
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). o Yes þ No

As of June 30, 2008, the aggregate market value of the registrant s common stock held by non-affiliates of the registrant was $680,645,631 based on the average bid and asked price as reported on the National Association of Securities Dealers Automated Quotation System National Market System.

Indicate the number of shares outstanding of each of the issuer s classes of common stock, as of the latest practicable date.

Class	Outstanding at March 10, 2009
Common Shares, no par value	279,381,187 shares

DOCUMENTS INCORPORATED BY REFERENCE

None

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PART III

PART IV

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CURRENCY AND EXCHANGE RATES

Unless otherwise specified, all reference to **dollars** or to **$** are to U.S. dollars and all references to **Cdn.$** are to Canadian dollars. The closing, low, high and average noon buying rates in New York for cable transfers for the conversion of Canadian dollars into U.S. dollars for each of the five years ended December 31 as reported by the Federal Reserve Bank of New York were as follows:

	2008	2007	2006	2005	2004
Closing	$ 0.82	$ 1.01	$ 0.86	$ 0.86	$ 0.83
Low	$ 0.77	$ 0.84	$ 0.85	$ 0.79	$ 0.72
High	$ 1.01	$ 1.09	$ 0.91	$ 0.87	$ 0.85
Average Noon	$ 0.94	$ 0.94	$ 0.88	$ 0.83	$ 0.77

The average noon rate of exchange reported by the Bank of Canada (the Federal Reserve Bank of New York ceased posting noon exchange rates as of December 31, 2008) for conversion of U.S. dollars into Canadian dollars on March 10, 2009 was $0.78 ($1.00 = Cdn.$1.28).

ABBREVIATIONS

As generally used in the oil and gas business and in this Annual Report on Form 10-K, the following terms have the following meanings:

Boe	= barrel of oil equivalent
Bbl	= barrel
MBbl	= thousand barrels
MMBbl	= million barrels
Mboe	= thousands of barrels of oil equivalent
Bopd	= barrels of oil per day
Bbls/d	= barrels per day
Boe/d	= barrels of oil equivalent per day
Mboe/d	= thousands of barrels of oil equivalent per day
MBbls/d	= thousand barrels per day
MMBls/d	= million barrels per day
MMBtu	= million British thermal units
Mcf	= thousand cubic feet
MMcf	= million cubic feet
Mcf/d	= thousand cubic feet per day
MMcf/d	= million cubic feet per day

When we refer to oil in **equivalents**, we are doing so to compare quantities of oil with quantities of gas or express these different commodities in a common unit. In calculating Bbl equivalents (Boe), we use a generally recognized industry standard in which one Bbl is equal to six Mcf. Boes may be misleading, particularly if used in isolation. The conversion ratio is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

SELECT DEFINED TERMS

Ivanhoe Energy Inc. **Ivanhoe Energy** or **Ivanhoe** or **the Company**

The Company s proprietary, patented rapid thermal processing process (**RTP™ Process**) for heavy oil upgrading (**HTL™ Technology** or **HTL™**)

Syntroleum Corporation s (**Syntroleum**) proprietary technology (**GTL Technology** or **GTL**) to convert natural g into ultra clean transportation fuels and other synthetic petroleum products

United States Securities and Exchange Commission **SEC**

Canadian Securities Administrators **CSA**

The Securities Act of 1933 (the **Act**)

Enhanced oil recovery **EOR**

Steam Assisted Gravity Drainage	**SAGD**
Memorandum of Understanding	**MOU**
Toronto Stock Exchange	**TSX**

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this document are forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995, Section 21E of the United States Securities Exchange Act of 1934, as amended, and Section 27A of the United States Securities Act of 1933, as amended. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or other future events, to be materially different from any future results, performance or achievements or other events expressly or implicitly predicted by such forward-looking statements. Such risks, uncertainties and other factors include our short history of limited revenue, losses and negative cash flow from our current exploration and development activities in the U.S., China and Ecuador; our limited cash resources and consequent need for additional financing; our ability to raise additional financing. The availability of financing is dependent in part on the return of the credit and equity markets to normalized conditions. During the fourth quarter of 2008, as a result of the global economic crisis, the terms and availability of equity and debt capital have been materially restricted and financing may not be available when it is required or on acceptable terms. In addition to the above financing risks, uncertainties, risk and other factors also include uncertainties regarding the potential success of heavy-to-light oil upgrading and gas-to-liquids technologies; uncertainties regarding the potential success of our oil and gas exploration and development properties in the U.S. and China; oil price volatility; oil and gas industry operational hazards and environmental concerns; government regulation and requirements for permits and licenses, particularly in the foreign jurisdictions in which we carry on business; title matters; risks associated with carrying on business in foreign jurisdictions; conflicts of interests; competition for a limited number of what appear to be promising oil and gas exploration properties from larger more well financed oil and gas companies; and other statements contained herein regarding matters that are not historical facts. Forward-looking statements can often be identified by the use of forward-looking terminology such as may , expect , intend , estimate , anticipate , believe or continue or thereof or variations thereon or similar terminology. We believe that any forward-looking statements made are reasonable based on information available to us on the date such statements were made. However, no assurance can be given as to future results, levels of activity and achievements. Except as required by law, we undertake no obligation to update publicly or revise any forward-looking statements contained in this report. All subsequent forward-looking statements, whether written or oral, attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these cautionary statements.

AVAILABLE INFORMATION

Electronic copies of the Company s filings with the SEC and the CSA are available, free of charge, through its web site (www.ivanhoeenergy.com) or, upon request, by contacting its investor relations department at (604) 688-8323. Alternatively, the SEC and the CSA each maintains a website (www.sec.gov and www.sedar.com) that contains the Company s periodic reports and other public filings with the SEC and the CSA. The information on our website is not, and shall not be, deemed to be part of this Annual Report on Form 10-K.

ITEMS 1 AND 2 *BUSINESS AND PROPERTIES*

GENERAL

Ivanhoe Energy is an independent international heavy oil development and production company focused on pursuing long term growth in its reserve base and production using advanced technologies, including its HTL™ Technology. In mid-2008, the Company acquired two leases located in the heart of the Athabasca oil sands region in Alberta, Canada and recently signed a contract in Ecuador for the appraisal and development of a heavy oil lease in Ecuador. It is anticipated that these sites will provide for the first commercial applications of the Company s HTL Technology in major, integrated heavy oil projects (see Implementation Strategy below). In addition, the Company seeks to selectively expand its reserve base and production through conventional exploration and production of oil and gas.

Core operations are in Canada, the United States, China and Ecuador, with business development opportunities worldwide.

The Company has established a number of geographically focused entities. The parent company, Ivanhoe Energy Inc., will pursue HTL™ opportunities in the Athabasca oil sands of Western Canada and will hold and manage the core HTL™ Technology. A new subsidiary for Latin America recently signed a contract for the appraisal and development of a heavy oil lease in Ecuador. In addition, a subsidiary has been established to undertake activities in the Middle

East and North Africa. These companies complement Sunwing Energy Ltd., the Company s existing, wholly-owned company established for activities in China. Ivanhoe Energy Inc. owns 100% of each of these subsidiaries, although the percentages are expected to decline as they develop their respective businesses and raise capital independently.

We believe this structure will allow the development and financing of multiple HTL™ projects around the world, while minimizing dilution of the Company s existing shareholders. In addition, the alignment with principal energy-producing regions will help to facilitate financing from region-specific strategic investors, some of which already have been identified, and also will enhance flexibility in accessing global capital markets.

The Company s four reportable business segments are: Oil and Gas Integrated, Oil and Gas - Conventional, Business and Technology Development and Corporate. These segments are different than those reported in the Company s previous Form 10-Ks. Due to newly established geographically focused entities and the initiation of two new integrated projects, new segments are being reported to reflect how management now analyzes and manages the Company.

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Oil and Gas

Integrated

Projects in this segment have two primary components. The first component consists of conventional exploration and production activities together with enhanced oil recovery techniques such as steam assisted gravity drainage. The second component consists of the deployment of the HTL™ Technology which will be used to upgrade heavy oil at facilities located in the field to produce lighter, more valuable crude. The Company has two such projects currently reported in this segment - a heavy oil project in Alberta and a heavy oil property in Ecuador.

Conventional

The Company explores for, develops and produces crude oil and natural gas in China and in the U.S. In China, the Company s development and production activities are conducted at the Dagang oil field located in Hebei Province and its exploration activities are conducted on the Zitong block located in Sichuan Province. In the U.S., the Company s exploration, development and production activities are primarily conducted in California and Texas.

Business and Technology Development

The Company incurs various costs in the pursuit of HTL™ and GTL projects throughout the world. Such costs incurred prior to signing a MOU or similar agreement, are considered to be business and technology development and are expensed as incurred. Upon executing a MOU to determine the technical and commercial feasibility of a project, including studies for the marketability for the projects products, the Company assesses whether the feasibility and related costs incurred have potential future value, are probable of leading to a definitive agreement for the exploitation of proved reserves and should be capitalized.

Additionally, the Company incurs costs to develop, enhance and identify improvements in the application of the HTL™ and GTL technologies it owns or licenses. The cost of equipment and facilities acquired, or construction costs for such purposes, are capitalized as development costs and amortized over the expected economic life of the equipment or facilities, commencing with the start up of commercial operations for which the equipment or facilities are intended.

Corporate

The Company s corporate segment consists of costs associated with the board of directors, executive officers**,** corporate debt, financings and other corporate activities.

Our authorized capital consists of an unlimited number of common shares without par value and an unlimited number of preferred shares without par value.

We were incorporated pursuant to the laws of the Yukon Territory of Canada, on February 21, 1995 under the name 888 China Holdings Limited. On June 3, 1996, we changed our name to Black Sea Energy Ltd., and on June 24, 1999, we changed our name to Ivanhoe Energy Inc.

Our principal executive office is located at Suite 654 999 Canada Place, Vancouver, British Columbia, V6C 3E1, and our registered and records office is located at 300-204 Black Street, Whitehorse, Yukon, Y1A 2M9.

CORPORATE STRATEGY

Importance of the Heavy Oil Segment of the Oil and Gas Industry

The global oil and gas industry is being impacted by the declining availability of replacement low cost reserves. This has resulted in volatility in oil markets and marked shifts in the demand and supply landscape. Although there has been a great deal of volatility in the price of oil and significant recent price declines, we believe that long term demand and the natural decline of conventional oil production will see the development of higher cost and lower value resources, including heavy oil.

Heavy oil developments can be segregated into two types: conventional heavy oil that flows to the surface without steam enhancement and non-conventional heavy oil and bitumen. While the Company focuses on the non-conventional heavy oil, both play an important role in Ivanhoe Energy s corporate strategy.

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Production of conventional heavy oil has been steadily increasing worldwide, led by Canada and Latin America but with significant contributions from most other oil basins, including the Middle East and the Far East, as producers struggle to replace declines in light oil reserves. Even without the impact of the large non-conventional heavy oil projects in Canada and Venezuela, world heavy oil production has been increasingly more common. Refineries, on the other hand, have not been able to keep up with the need for deep conversion capacity, and heavy versus light oil price differentials have widened significantly.

With regard to non-conventional heavy oil and bitumen, the dramatic increase in interest and activity has been fueled by higher prices, in addition to various key advances in technology, including improved remote sensing, horizontal drilling, and new thermal techniques. This has enabled producers to more effectively access the extensive, heavy oil resources around the world.

These newer technologies, together with higher oil prices seen in the first part of this past year, have generated increased interest in heavy oil resources, although for profitable exploitation, key challenges remain, with varied weightings, project by project: 1) the requirement for steam and electricity to help extract heavy oil, 2) the need for diluent to move the oil once it is at the surface, 3) the wide heavy versus light oil price differentials that the producer is faced with when the product gets to market, and 4) conventional upgrading technologies limited to very large scale, high capital cost facilities. These challenges can lead to distressed assets, where economics are poor, or to stranded assets, where the resource cannot be economically produced and lies fallow.

Ivanhoe s Value Proposition

The Company s application of the HTL™ Technology seeks to address the four key heavy oil development challenges outlined above, and can do so at a relatively small minimum economic scale.

Ivanhoe Energy s HTL upgrading is a partial upgrading process that is designed to operate in facilities as small as 10,000 to 30,000 barrels per day produced. This is substantially smaller than the minimum economic scale for conventional stand-alone upgraders such as delayed cokers, which typically operate at scales of over 100,000 barrels per day produced. The Company s HTL Technology is based on carbon rejection, a tried and tested concept in heavy oil processing. The key advantage of HTL is that it is a very fast process, as processing times are typically under a few seconds. This results in smaller, less costly facilities and eliminates the need for hydrogen addition, an expensive, large minimum scale step typically required in conventional upgrading. The Company s HTL Technology has the added advantage of converting the byproducts from the upgrading process into onsite energy, rather than generating large volumes of low value coke.

The HTL process offers significant advantages as a field-located upgrading alternative, integrated with the upstream heavy oil production operation. HTL provides four key benefits to the producer:

1. Virtual elimination of external energy requirements for steam generation and/or power for upstream operations.

2. Elimination of the need for diluent or blend oils for transport.

3. Capture of the majority of the heavy versus light oil value differential.
4. Relatively small minimum economic scale of operations suited for field upgrading and for smaller field developments.

The business opportunities available to the Company correspond to the challenges each potential heavy oil project faces. In Canada, Ecuador, California, Iraq and Oman, all four of the HTL™ advantages identified above come into play. In others, including certain identified opportunities in Colombia and Libya, the heavy oil naturally flows to the surface, but transport is the key problem.

The economics of a project are effectively dictated by the advantages that HTL™ can bring to a particular opportunity. The more stranded the resource and the fewer monetization alternatives that the resource owner has, the greater the opportunity the Company will have to establish the Ivanhoe Energy value proposition.

Implementation Strategy

We are an oil and gas company with a unique technology which addresses several major problems confronting the oil and gas industry today and we believe that we have a competitive advantage because of our patented technology. In

addition, because we have experienced thermal recovery teams in Bakersfield and Calgary, we are in a position to add value and leverage our technology advantage by working with partners on stranded heavy oil resources around the world.

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The Company s continuing strategy is as follows:

1. ***Build a portfolio of major HTL™ projects.*** Continue to deploy the personnel and the financial resources in support of our goal to capture additional opportunities for development projects utilizing the Company s HTL™ Technology.
2. ***Advance the technology.*** Additional development work will continue to advance the technology through the first commercial application and beyond.
3. ***Enhance the Company s financial position in anticipation of major projects.*** Implementation of large projects requires significant capital outlays. The Company is working on various financing plans and establishing the relationships required for the development activities of the future.
4. ***Build internal capabilities.*** During 2008, significant progress has been made in building execution teams in preparation for the Company s first HTL™ projects. The upstream teams consist of a number of experienced heavy oil petroleum engineers and geologists complemented by a core team of geotechnical experts. In addition, the Company s Houston-based HTL™ technology team has been strengthened with the addition of a number of engineers that have an extensive background in chemical and petroleum refining, project engineering and the development and management of intellectual property. The Company expects to continue filling key positions in its execution mode.
5. ***Build the relationships needed for the future.*** Commercialization of the Company s technologies demands close alignment with partners, suppliers, host governments and financiers.

INTEGRATED OIL AND GAS PROPERTIES

Tamarack Project

In July 2008, the Company announced the completion of the acquisition of Talisman Energy Canada s (**Talisman**) 100% working interests in two leases (Leases 10 and 6) located in the heart of the Athabasca oil sands region in the Province of Alberta, Canada. Lease 10 is a 6,880-acre contiguous block located approximately ten miles (16 km) northeast of Fort McMurray. Lease 6 is a small, un-delineated, 680-acre block, one mile (1.6 km) south of Lease 10. Once the acquisition was complete the development of Lease 10 became known as the **Tamarack Project** or **Tamarack** .

The Tamarack Project will provide the site for the application of Ivanhoe Energy s proprietary, HTL heavy oil upgrading technology in a major, integrated heavy oil project. Tamarack has a relatively high level of delineation (four wells per section). We believe that a high-quality reservoir is present and is an excellent candidate for thermal recovery utilizing the SAGD process. The high quality of the asset is expected to provide for favorable projected operating costs, including attractive steam-oil ratios (**SOR**) using SAGD development techniques.

The Company s HTL™ plants at Tamarack are projected ultimately to be capable of operating at production rates of at least 30,000 barrels per day for approximately 25 years. The Company intends to integrate established SAGD thermal recovery techniques with its patented HTL upgrading process, producing and marketing a light, synthetic sour crude.

The Company has commenced planning its Project Tamarack development program in preparation for the submission of permits for an integrated HTL™ project. In general, thermal oil sands projects, including SAGD projects, require a period of initial development, including delineation, permitting and field development, which is followed by relatively stable operations for many years. The integrated HTL™ and SAGD project is expected to produce 20,000 BOPD of bitumen as a first stage and sell a sour synthetic bottomless product, most likely into the US mid-west market.

Ecuador Project

In October 2008, Ivanhoe Energy Ecuador Inc., an indirect wholly owned subsidiary, signed a contract with Ecuador state oil companies Petroecuador and Petroproduccion to explore and develop Ecuador s Pungarayacu heavy oil field which is part of Block 20. Block 20 is an area of approximately 426 square miles, approximately 125 miles southeast of Quito, Ecuador s capital.

Under this contract Ivanhoe Energy Ecuador will use the Company s unique and patented HTL™ Technology, as well as provide advanced oil-field technology, expertise and capital to develop, produce and upgrade heavy crude oil from the Pungarayacu field. In addition, Ivanhoe Energy Ecuador has the right to conduct exploration for light oil in the contract area and to use any light oil that it discovers to blend with the heavy oil for delivery to Petroproduccion.

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The contract has an initial term of 30 years and has three phases. The first two phases include the evaluation of the field s production capability and the crude-oil characteristics, as well as construction of the first HTL™ plant. The third phase involves full field development and will include drilling additional exploration and development wells. Additional HTL™ capacity will be added as necessary for expected production.

The Company will be in the approval phase during the first part of 2009 which includes obtaining environmental licenses. If the Company succeeds in getting the necessary approvals it will enter into the appraisal phase which would include obtaining permits to drill, undertaking seismic activity and drilling selected locations. Our analysis of old drilling core data from the Pungarayacu field suggests that there may be oil in the field that is lighter than the bitumen oil seeps that occur at the surface. During the drilling campaign undertaken approximately 25 years ago, geologists on site reported that the oil in the drilling cores fluoresced a bright color which would be inconsistent with bitumen. This coloration in other oil fields around the world is usually a sign of lighter oil. We will not be able to confirm this until we have results from our drilling program planned for later this year.

To recover its investments, costs and expenses, and to provide for a profit, Ivanhoe Energy Ecuador will receive from Petroproduccion a payment of US$37.00 per barrel of oil produced and delivered to Petroproduccion. The payment will be indexed (adjusted) quarterly for inflation, starting from the contract date, using the weighted average of a basket of three U.S. Government-published producer price indices relating to steel products, refinery products and upstream oil and gas equipment.

CONVENTIONAL OIL AND GAS PROPERTIES

Our principal oil and gas properties are located in California s San Joaquin Basin and Sacramento Basin, the Permian Basin in Texas and the Hebei and Sichuan Provinces in China. Set forth below is a description of these properties.

The following table sets forth the estimated quantities of proved reserves and production attributable to our properties:

Property	Location	2008 Production (in MBoe)	Percentage of Total 2008 Production	12/31/2008 Proved Reserves (in MBoe)	Percentage of Total Estimated Proved Reserves
South Midway	Kern County, California	189	27%	675	38%
West Texas	Midland County, Texas	13	2%	94	5%
Other	California	2	0%		0%
Total U.S.		204	29%	769	43%
Dagang	Hebei Province, China	472	68%	960	53%
Other	China	18	3%	72	4%
Total China		490	71%	1,032	57%
Total		694	100%	1,801	100%

Note: See the Supplementary Disclosures About Oil and Gas Production Activities (Unaudited) , which follow the notes to our consolidated financial statements set forth in Item 8 in this Annual Report on Form 10-K, for certain details regarding the Company s oil and gas proved reserves, the estimation process and production by country. Estimates for our U.S. and China operations were prepared by independent petroleum consultants Netherland, Sewell & Associates Inc. and GLJ Petroleum Consultants Ltd., respectively. We have not filed with nor included in reports to any other U.S. federal authority or agency, any estimates of total proved crude oil or natural gas reserves since the beginning of the last fiscal year.

Special Note to Canadian Investors

Ivanhoe is a SEC registrant and files annual reports on Form 10-K. Accordingly, our reserves estimates and securities regulatory disclosures are prepared based on SEC disclosure requirements. In 2003, certain Canadian securities regulatory authorities adopted *National Instrument 51-101 - Standards of Disclosure for Oil and Gas Activities* (**NI 51-101**) which prescribes certain standards that Canadian companies are required to follow in the preparation and disclosure of reserves and related information. We applied for, and received, exemptions from certain NI 51-101 disclosure requirements based on our adherence to SEC disclosure requirements, which differ in certain respects from the prescribed disclosure standards of NI 51-101.

In 2008, as a result of the enactment of amendments to NI 51-101, we were required to re-apply for, and received, exemptions from certain of the amended NI 51-101 requirements. These exemptions permit us to substitute disclosures based on SEC requirements for much of the annual disclosure required by NI 51-101 and to prepare our reserves estimates and related disclosures in accordance with SEC requirements, generally accepted industry practices in the U.S. as promulgated by the Society of Petroleum Engineers, and the standards of the Canadian Oil and Gas Evaluation Handbook (the **COGE Handbook**) modified to reflect SEC requirements.

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The reserves quantities disclosed in this Annual Report on Form 10-K represent net proved reserves calculated on a constant price basis using the standards contained in SEC Regulation S-X and Statement of Financial Accounting Standards No. 69, Disclosures About Oil and Gas Producing Activities . Such information differs from the corresponding information prepared in accordance with Canadian disclosure standards under NI 51-101. The primary differences between the current SEC requirements and the NI 51-101 requirements are as follows:

- SEC registrants apply SEC reserves definitions and prepare their reserves estimates in accordance with SEC requirements and generally accepted industry practices in the U.S. whereas NI 51-101 requires adherence to the definitions and standards promulgated by the COGE Handbook;
- the SEC mandates disclosure of proved reserves calculated using year-end constant prices and costs only; whereas NI 51-101 requires disclosure of reserves and related future net revenues using forecasted prices, with additional constant pricing disclosure being optional;
- the SEC mandates disclosure of proved and proved developed reserves by country only whereas NI 51-101 requires disclosure of more reserve categories and product types;
- the SEC does not require separate disclosure of proved undeveloped reserves or related future development costs whereas NI 51-101 requires disclosure of more information regarding proved undeveloped reserves, related development plans and future development costs; and
- the SEC leaves the engagement of independent qualified reserves evaluators to the discretion of a company s board of directors whereas NI 51-101 requires issuers to engage such evaluators and to file their reports.

The foregoing is a general and non-exhaustive description of the principal differences between SEC disclosure requirements and NI 51-101 requirements. Please note that the differences between SEC requirements and NI 51-101 may be material.

United States

Production and Development

South Midway

We currently have 66 producing wells in South Midway of which we are the operator with a working interest of 100% and a 93% net revenue interest. In 2008, we drilled eight new wells on the South Midway properties compared to 2007 when we drilled none. Six of these new wells were in a new pool discovery. As well as being successful wells, these new wells have proved up additional locations. These new wells have initial production rates after steam stimulations of 15-50 Boe/d.

West Texas

In 2000, we farmed-in to the Spraberry property, which is a producing property located on 2,500 gross acres in the Spraberry Trend of the Permian Basin in West Texas. We retain working interests ranging from 31% to 48% in 23 wells, which are currently producing approximately 28 net Boe/d compared to 40 net Boe/d at December 31, 2007. The future decline of the oil and gas production rates are expected to be moderate and should lead to consistent performance and long life reserves.

Other

In mid-2004, we farmed-in to the McCloud River prospect near the Cymric field in the San Joaquin Basin. After the initial well resulted in a dry hole, a second prospect, North Salt Creek was identified. Due to the prior completion of three producers with attractive pay columns which resulted in oil production with repeated cyclic steam stimulations, three more oil wells were drilled and completed in 2008. Two of the wells are located in the Miocene Antelope Section and the third in a Pliocene sand. One of the wells is expected to produce gas and the other two are oil wells currently awaiting steam stimulation.

In addition to the new producers at Salt Creek, a new water disposal well and facilities have been constructed.

The Company has a 24% working interest in this 1,120 gross-acre prospect.

Exploration

The Company is focusing its exploration efforts on the lower risk opportunities noted below.

Knights Landing

In 2004, we farmed-in to the Knights Landing project, which is a 15,700 gross-acre block located in the Sacramento Gas Basin in northern California. We drilled nine new exploratory wells which resulted in three successful

completions and six dry holes. Subsequent to this drilling program we increased our working interests in the project and 11 existing producing natural gas wells. By the end of 2005, production from the Knights Landing wells had been fully depleted in all but one well, which was producing at minimal levels. This well was full depleted by the end of 2006.

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In late 2005, we acquired a 3-D seismic data program over 25 square miles covering our Knights Landing acreage block. We completed our seismic acquisition program in December 2005 and completed processing and interpretation of the seismic data in 2006. The primary objective of this development and exploration program is the Starkey Sand formation, which is an established producing reservoir in the region that lies between depths of 2,000 to 3,500 feet. Negotiations for farm-outs and other financing opportunities in order to drill this play have been unsuccessful to date. The Company plans to continue to explore its options with regard to the Knights Landing property to seek either a farm out or possible drilling program.

Aera Exploration Agreement

The exploration agreement with Aera Energy LLC (**Aera**), a company owned by affiliates of ExxonMobil and Shell, originally covering an area of more than 250,000 acres in the San Joaquin Basin, gave us access to all of Aera s exploration, seismic and technical data in the region for the purpose of identifying drillable exploration prospects. We identified 13 prospects within 11 areas of mutual interest (**AMI**) covering approximately 46,800 gross acres owned by Aera and an additional 24,200 acres of leased mineral rights. Of the 13 prospects submitted, Aera has elected to take a working interest in 10 prospects, resulting in our retention of working interests ranging from 12.5% to 50%. We have a 100% working interest in three prospects in which Aera elected not to participate South Midway, Citrus and North Yowlumne. We will continue to hold exploration rights to the lands within each previously designated and accepted prospect until an exploration well is drilled on that prospect. There is no time deadline for drilling to occur if Aera elects to participate in the drilling of a prospect. If Aera elects not to participate we have an additional two years to drill the prospect on our own or with other parties. This two-year period will be extended as long as we continue to drill or have established production. The majority of these San Joaquin prospects are fee property with no rental payments to maintain the Company s leases. The timing of drilling on these prospects is dependent on other working interest owners.

China

Production and Development

Our producing property in China is a 30-year production-sharing contract with China National Petroleum Corporation (**CNPC**), covering an area of 10,255 gross acres divided into three blocks in the Kongnan oilfield in Dagang, Hebei Province, China (the **Dagang field**). Under the contract, as operator, we fund 100% of the development costs to earn 82% of the net revenue from oil production until cost recovery, at which time our entitlement reverts to 49%. Our entire interest in the Dagang field will revert to CNPC at the end of the 20-year production phase of the contract or if we abandon the field earlier.

In January 2004, we negotiated farm-out and joint operating agreements with Richfirst Holdings Limited (**Richfirst**) a subsidiary of China International Trust and Investment Corporation (**CITIC**) whereby Richfirst paid $20.0 million to acquire a 40% working interest in the field after Chinese regulatory approvals, which were obtained in June 2004. The farm-out agreement provided Richfirst with the right to convert its working interest in the Dagang field into common shares in the Company at any time prior to eighteen months after closing the farm-out agreement. Richfirst elected to convert its 40% working interest in the Dagang field and in February 2006 we re-acquired Richfirst s 40% working interest.

During 2001, we completed the pilot phase and in 2002 submitted the final draft of our Overall Development Plan (**ODP**) to the Chinese regulatory authorities for approval. Final government approval was obtained in April 2003, after which the development phase commenced in late 2003. We suspended drilling in late 2005 to allow for detailed evaluation of well productivity and production decline performance. By the end of 2006, we had drilled a total of 39 development wells, as compared to the estimated 115 wells set out in the approved ODP, and in the fourth quarter of 2006, we reached agreement with CNPC to reduce the overall scope of the ODP to approximately 44 wells through a modified ODP. This program included a further five development wells to be drilled in 2007. This program has been finalized and all five wells have been completed and placed on production. Further to the previous relinquishment of three of the six blocks that were part of the ODP, an additional 2,759 acres of undeveloped land was relinquished in one of the remaining blocks in 2008. Commercial production commenced on January 1, 2009 as agreed by the parties following conversion of two wells to water injection for pressure maintenance. At such time the Company, pursuant to the terms of the agreement, will be able to recover from CNPC its share of operating costs, currently 18% then 51%

after cost recovery.

No new development wells were drilled in 2008 as compared to 5 in 2007. In 2008, we did, however, fracture stimulate 12 wells and perforate additional sands in 8 other wells. Only a third of the net pay in each of the new five wells was completed and fracture stimulated in 2007. The year-end 2008 gross production rate was 1,700 Bopd (277 Bopd resulting from the five 2007 wells) compared to 1,900 Bopd at the end of 2007 and 1,877 Bopd at the end of 2006. We currently sell our crude oil at a three-month rolling average price of Cinta crude which historically averages approximately $3.00 per barrel less than West Texas Intermediate (**WTI**) price.

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Exploration

In November 2002, we received final Chinese regulatory approval for a 30-year production-sharing contract (the **Zitong Contract**), with CNPC for the Zitong block, which covers an area of approximately 900,000 acres in the Sichuan basin. Under the Zitong Contract, we agreed to conduct an exploration program on the Zitong block consisting of two phases, each three years in length. The first three-year period was ultimately extended to December 31, 2007. The parties will jointly participate in the development and production of any commercially viable deposits, with production rights limited to a maximum of the lesser of 30 years following the date of the Zitong Contract or 20 years of continuous production. In 2006, we farmed-out 10% of our working interest in the Zitong block to Mitsubishi Gas Chemical Company Inc. of Japan (**Mitsubishi**) for $4.0 million. The Company is currently discussing additional farm-out interest opportunities with Mitsubishi and other international oil companies.

The Company now has completed the first phase under the Zitong Contract (**Phase 1**). This included reprocessing approximately 1,649 miles of existing 2D seismic data and acquiring approximately 705 miles of new 2D seismic data, and interpreting this data. This was followed by drilling two wells, totaling an aggregate of 22,293 feet. Both wells encountered expected reservoirs and gas was tested on the second well, but neither well demonstrated commercially viable flow rates and both have been suspended. The Company may elect to reenter these wells to stimulate or drill directionally in the future.

In December 2007, the Company and Mitsubishi (the **Zitong Partners**) made a decision to enter into the next three-year exploration phase (**Phase 2**). By electing to participate in Phase 2 the Zitong Partners must relinquish 30%, plus or minus 5%, of the Zitong block acreage and complete a minimum work program involving the acquisition of approximately 200 miles of new seismic lines and approximately 23,700 feet of drilling (including the Phase 1 shortfall), with total gross remaining estimated minimum expenditures for this program of $27.4 million. The Phase 2 seismic line acquisition commitment was fulfilled in the Phase 1 exploration program. The Zitong Partners plan to acquire additional seismic data in Phase 2. The partners have requested that CNPC allow the offset of this additional seismic line acquisition against the drilling commitment, reducing the required Phase 2 drilling footage requirement, but no agreement has been reached at this time. The Zitong Partners have relinquished 15% of the Block acreage and will relinquish an additional 10% to complete the Phase I relinquishment requirement. The Zitong Partners contracted Sichuan Geophysical Company to conduct a complete review of the seismic data acquired to date on the block to select the first Phase II drilling location. Drilling is to commence in late 2009 with expected completed drilling, completion and evaluation of the prospect finalized in late 2010. The Zitong Partners must complete the minimum work program or will be obligated to pay to CNPC the cash equivalent of the deficiency in the work program for that exploration phase. Following the completion of Phase 2, the Zitong Partners must relinquish all of the remaining property except any areas identified for development and production. In the event of a discovery, the Zitong Partners believe it would be possible to negotiate to enter a Phase III and reduce the amount of land relinquishment to allow further exploration activities.

BUSINESS AND TECHNOLOGY DEVELOPMENT

Heavy to Light Oil Upgrading

RTP™ License and Patents

In April 2005, we acquired all the issued and outstanding common shares of Ensyn Group, Inc. (**Ensyn**) whereby we acquired an exclusive, irrevocable license to Ensyn s RTP™ Process for all applications other than biomass. In January 2007, the Company received a Notice of Allowance from the U.S. Patent Office for the first of a family of additional petroleum upgrading patent applications. Since Ivanhoe acquired the patented heavy oil upgrading technology it has been working to expand patent coverage to protect innovations to the HTL™ Technology as they are developed. This allowance is the first patent protection that has been granted directly to Ivanhoe Energy, and significantly broadens the Company s portfolio of HTL™ intellectual property for petroleum upgrading and opens up additional HTL™ patenting opportunities for Ivanhoe Energy. In addition, Ivanhoe Energy currently has several additional HTL™ patents in various stages of prosecution.

Feedstock Test Facility

The Company initiated the construction of the Feedstock Test Facility (**FTF**) during 2007. The FTF is a small 10-15 Bbls/d, highly flexible state-of-the-art HTL™ facility which will permit screening of global crude oil for current and

potential partners in smaller volumes and at lower costs than required at the Commercial Demonstration Facility (**CDF**) (see described below). As we continue to advance our technology, this unit will form an integral part of the ongoing post-commercialization optimization of our products and processes. The FTF will provide additional data and will support the detailed engineering process once the first commercial target location and crude has been established. The FTF will also serve an integral part in supporting all of the Company s commercial operations.

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This facility, costing approximately $8.8 million, is expected to be commissioned during the first quarter of 2009. The FTF is located in San Antonio, Texas.

Commercial Demonstration Facility

In 2004, Ensyn constructed a CDF to confirm earlier pilot test results on a larger scale and to test certain processing options. This facility, acquired by the Company as part of the Ensyn merger, was built in the Belridge field, a large heavy oil field owned by Aera. In March 2005, initial performance testing of the CDF was completed successfully and the results of the test were verified by two large independent consulting firms. The CDF demonstrated an overall processing capacity of approximately 1,000 Bbls/d based on whole oil from the Belridge California heavy oil fields and a hot reaction section capacity of approximately 300 Bbls/d.

During 2007, technical developments were led by two important test runs at the CDF: a High Quality configuration was demonstrated on Belridge whole oil vacuum tower bottoms (**VTBs**) and a key test was successfully completed processing Athabasca bitumen pursuant to a longstanding technology development agreement with ConocoPhillips Canada Resources Corp. These two key tests were the capstones of the CDF test program and we have now fulfilled the primary technical objectives of the CDF. The goals of the test program were: (1) to confirm in a substantially large facility the key results generated in the early Ensyn pilot plant runs of heavy oil and bitumen which formed the basis of the HTL™ intellectual property, and (2) to provide sufficient data for the design and construction of commercial HTL™ plants.

The Athabasca bitumen CDF test provided important technical information related to the design of full-scale HTL™ facilities. This test coupled with other test run data, correlated the performance of the CDF with earlier runs on the smaller scale pilot facility and validated the assumptions in Ivanhoe Energy s economic models.

The Company plans to have the CDF available through the end of 2009 for potential investor crude evaluations as well as investor due diligence exercises.

Business Development

We are pursuing HTL™ business development opportunities around the world, primarily Western Canada, Latin America and the Middle East/North Africa region. Integrated HTL™/SAGD financial models for Athabasca have been updated and refined, incorporating newly revised capital costs from AMEC, and revised price assumptions and currency exchange rate changes. These updated models show that HTL™ integration represents robust value-add for thermal bitumen projects in Western Canada.

We also made significant progress in developing an execution plan with AMEC, our Tier One engineering contractor, for the design and construction of full-scale commercial HTL™ facilities. The Company is proceeding with preliminary, non site-specific engineering related to the first fully commercial HTL™ facility, supported by the recent successful CDF runs.

In October 2004, we signed a MOU with the Ministry of Oil of Iraq to study and evaluate the shallow Qaiyarah oil field in Iraq. The field s reservoirs contain a large proven accumulation of 17.1 degree API heavy oil at a depth of about 1,000 feet. We have completed the reservoir assessment and have evaluated various recovery methods. Facility design work as well as an economic evaluation are both complete. Based on this evaluation we submitted a technical proposal to the Iraq Ministry of Oil who have accepted and approved the study and its conclusions.

In the first half of 2007, the Company and INPEX Corporation (**INPEX**), Japan s largest oil and gas exploration and production company, signed an agreement to jointly pursue the opportunity to develop the above noted heavy oil field in Iraq. During the second quarter of 2007, INPEX paid $9.0 million to the Company as a contribution towards the Company s historical costs related to the project and certain costs related to the development of its HTL™ upgrading technology.

The agreement provides INPEX with a significant minority interest in the venture, with Ivanhoe Energy retaining a majority interest. Both parties will participate in the pursuit of the opportunity but Ivanhoe will lead the discussions with the Iraqi Ministry of Oil. Should the Company and INPEX proceed with the development and deploy Ivanhoe Energy s HTL™ Technology, certain technology fees would be payable to the Company by INPEX.

In September 2007, the Ministry of Oil requested that we submit a commercial proposal for a 30,000 Bopd Pilot Project to test the reservoir response to thermal recovery methods, optimize the development plan and build/operate the first HTL™ unit for the field. Commercial proposals for a 10,000 Bopd Quick Start Project and a 30,000 Bopd

Pilot Project were both submitted to the Ministry in the latter part of 2008. A meeting took place with the Iraqi Ministry of Oil during November 2008. Negotiations are currently underway on the 10,000 BPD proposal.

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During the fourth quarter of 2007 we signed a MOU with Libya to perform an evaluation of the Haram Field and submit a proposal if warranted. A commercial proposal was submitted in September 2008 to the Libya National Oil Corporation (**LNOC**). We expect to be meeting with the LNOC in early 2009 to discuss this proposal.

Gas-to-Liquids Technology

Syntroleum License

We own a non-exclusive master license entitling us to use Syntroleum s proprietary GTL Technology to convert natural gas into ultra clean transportation fuels and other synthetic petroleum products in an unlimited number of projects with no limit on production volume. Syntroleum s proprietary GTL process is designed to catalytically convert natural gas into synthetic liquid hydrocarbons. This patented process uses compressed air, steam and natural gas as initial components to the catalyst process. As a result, this process (the **Syntroleum Process™**) substantially reduces the capital and operating costs and the minimum economic size of a GTL plant as compared to the other oxygen-based GTL technologies. Competitor GTL processes use either steam reforming or a combination of steam reforming and partial oxidation with pure oxygen. A steam reformer and an air separation plant necessary for oxidation are expensive and considered hazardous and increase operating costs.

The attraction of the GTL Technology lies in the commercialization of stranded natural gas. Such gas exists in discovered and known reservoirs, but is considered to be stranded based on the relative size of the fields and their remoteness from comparable sized markets. We have performed detailed project feasibility studies for the construction, operation and cost of plants from 47,000 to 185,000 Bbls/d. Additionally, we have conducted marketing and transportation feasibility studies for both European and Asia Pacific regions in which we identified potential markets and estimated premiums for GTL diesel and GTL naphtha.

GTL Project

At the present time, the only GTL project we are pursuing is in Egypt. In 2005, we signed a memorandum of understanding with Egyptian Natural Gas Holding Company (**EGAS**), the state organization responsible for managing Egypt s natural gas resources, to prepare a feasibility study to construct and operate a GTL plant in Egypt that would convert natural gas to ultra-clean liquid fuels. We completed an engineering design of a GTL plant to incorporate the latest advances in Syntroleum GTL technology and have completed market and pricing analysis for GTL products to reflect changes since the original evaluation was completed several years ago. Plant capacity options of 47,000 and 94,000 Bbls/d were evaluated and in May 2006, we presented the feasibility study report to EGAS along with three commercial proposals. Based on EGAS review, and response to the proposals, we submitted a revised proposal in October 2006. In November 2006, the Company signed a Participation Agreement with H.K. Renewable Energy Ltd. (**HKRE**). In August 2007, we signed a Term Sheet with EGAS (a 24% project participant) and HKRE (a 15% project participant) which set out the commercial terms for a 47,000 Bbls/d project to be run on a tolling basis. EGAS agreed to commit, at no cost to the project, up to 4.2 trillion cubic feet of natural gas, or approximately 600 MMcf/d for the anticipated 20-year operating life of the project, subject to satisfactory conclusion of pre-front end engineering and design to confirm commercial viability and financing ability, the negotiation and signature of a definitive agreement and approval by the Company s Board of Directors and the appropriate authorities in Egypt.

Because the Company has been working on this project in Egypt for an extended period of time and has not been able to obtain a definitive agreement or appropriate project financing, the Company has impaired the carrying value of the costs associated with GTL. This impairment does not affect the Company s intention to continue to pursue this project.

CERTAIN FACTORS AFFECTING THE BUSINESS

Competition

The oil and gas industry is highly competitive. Our position in the oil and gas industry, which includes the search for and development of new sources of supply, is particularly competitive. Our competitors include major, intermediate and junior oil and natural gas companies and other individual producers and operators, many of which have substantially greater financial and human resources and more developed and extensive infrastructure than we do. Our larger competitors, by reason of their size and relative financial strength, can more easily access capital markets than we can and may enjoy a competitive advantage in the recruitment of qualified personnel. They may be able to absorb the burden of any changes in laws and regulations in the jurisdictions in which we do business more easily than we can, adversely affecting our competitive position. Our competitors may be able to pay more for producing oil and

natural gas properties and may be able to define, evaluate, bid for, and purchase a greater number of properties and prospects than we can. Further, these companies may enjoy technological advantages and may be able to implement new technologies more rapidly than we can. Our ability to acquire additional properties in the future will depend upon our ability to conduct efficient operations, to evaluate and select suitable properties, implement advanced technologies, and to consummate transactions in a highly competitive environment. The oil and gas industry also competes with other industries in supplying energy, fuel and other needs of consumers.

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Environmental Regulations

Our conventional oil and gas and HTL™ operations are subject to various levels of government laws and regulations relating to the protection of the environment in the countries in which we operate. We believe that our operations comply in all material respects with applicable environmental laws.

In the U.S., environmental laws and regulations, implemented principally by the Environmental Protection Agency, Department of Transportation and the Department of the Interior and comparable state agencies, govern the management of hazardous waste, the discharge of pollutants into the air and into surface and underground waters and the construction of new discharge sources, the manufacture, sale and disposal of chemical substances, and surface and underground mining. These laws and regulations generally provide for civil and criminal penalties and fines, as well as injunctive and remedial relief.

China and Ecuador continue to develop and implement more stringent environmental protection regulations and standards for different industries. Projects are currently monitored by governments based on the approved standards specified in the environmental impact statement prepared for individual projects.