IOFINA plc

Third Party Iodine Extraction from Brine
October 2009
Iofina is focused on establishing itself as a material gas and iodine producer through its three core businesses:

- Company owned production of natural gas and iodine (Atlantis c.290,000 net acres and Triton c.30,000 net acres)
- Processing of third party brine streams
- Speciality Chemical division with vertical integration in Iodine derivatives and other halogens
Corporate Structure

• Current ownership structure
  – Incorporated in 2005 and registered in England and Wales under the Companies Act 1985 with registered number 5393357
  – 102,906,114 shares issued, directors and management own 35%
  – 100% wholly owned subsidiary Iofina, Inc.
  – Iofina Natural Gas, Inc., Iofina Resource, LLC, Iofina Chemical, Inc., Iofina Chemical, LLC, H&S Kentucky Holdings, Inc., and H&S Chemical Co., Inc. are 100% wholly owned subsidiaries of Iofina, Inc.

• Current Financial Strength
  – c.290,000 net acres of iodine and natural gas leases in northern Montana’s Atlantis Prospect
  – c.30,000 net federal acres of iodine and natural gas leases in southeastern Montana at Triton Prospect
  – Strong portfolio of intellectual property
  – Strong Cash Position
  – Owner pipeline, drilling rig, wells, large production facilities and other equipment
  – No current or long term debt
Iodine pricing has increased over 20 per cent since September 2008

2009 pricing indications from the market are firm

Tight supply forecasted in short-to-medium term

Price increases reflect market conditions

Iodine derivatives chemicals have potential to enhance profit margins
Benefits of Iodine Extraction With Iofina
Iodine Extraction Method – WET®

- Iofina developed a new method of iodine extraction called Wellhead Extraction Technology® (WET®)
- Current technologies that extract iodine are reliant on incoming brine stream’s pH to be reduced to extremely acidic and corrosive conditions requiring large volumes of acid and base to be added at various stages in the process which are costly both in terms of capital cost and operating costs
- Iofina’s unique methodology allows the incoming brine stream to be pretreated near neutral pH levels for effective extraction simplifying the production process, reducing the production cost and reducing the process hazards at the extraction site.
Lofina’s
Wellhead Technology WET®

• Lower cost than other extraction methods
• Able to extract in the field using mobile PODs; unlike other methods, there is no need for a central chemical facility
• Converts an operating expense (water disposal) into revenue source
• Minimal to no capital investment
• WET units can be placed at or near water injection site

A Turnkey Solution
• technology set up
• maintenance and personnel
• revenue distribution
• insurance
IOFINA’S WET® POD
OPERATING SPECIFICATIONS

- Iodine collected safely in absorber units inside the POD
- Throughput 2,500 BPD to 6,500 BPD per POD
  - Can be hooked in series for scale up
  - Larger brine flows (>50,000 bpd) would utilize larger absorbers in a skid mounted design to minimize footprint on location
- Inlet and outlet pressures can be adjusted to meet specific requirements
- Maximum hydrocarbons in stream - less than 50 ppm
- Process uses diluted HCl and NaOCl (Bleach).
- Extraction and recharging of the absorbers would occur off site
- Brine stream is returned to operator with pH above 6 with only trace amounts of NaCl changes in chemistry.
- POD’s minimize operational and labor costs.
- POD’s are field tested with proven results
Volume Matrix for Iodine Extraction
Metric Tons per Year, 70% efficiency
Operations
Iofina’s Atlantis Prospect is located regionally between two of the most prolific shallow gas fields in North America:

- Medicine Hat has produced 5 Tcf of gas
- Tiger Ridge has produced 1.5 Tcf of gas
- Together have generated over $68bn in gas sales
- The adjacent fields produce from the same sediments found in Iofina’s Atlantis Prospect
- Atlantis has the potential to be the largest iodine resource in North America
• An area of widespread gas discoveries with large volumes of associated iodine rich brine
• Iofina’s WET® unlocked the value of iodine reserves in the water
• Dual revenue from natural gas and iodine
• CPR reports estimate recoverable gas and iodine of 98 Bcf and 37.2m kg on c.28,000 acres (as of 1 Feb 2008, Acquired c.30,000 net acres post IPO (May-July 2008), Acquisition of c.230,000 acres (May 2009)
• Iofina’s acreage position should enable it to become the leading iodine producer in the North America within 5 years
• Completed expansion of pipeline opening additional Atlantis Prospect acreage to field development
• Commercial production underway
  • Gas production: May 2009
  • Iodine production: July 2009
Conclusion

- Operating parameters of WET unit are adaptable to the characteristics of most brine streams
- WET® units are field tested and operational
- Little to no impact on existing operations
- Operational hazards very low compared other extraction methods and even traditional oilfield operations
- Revenue from the extraction of iodine can offset cost of water disposal thus extending the economic life of a field.
- Turnkey approach
- Iofina has established commercial extraction of Iodine at it’s Atlantis Field
- Iodine is in a favorable cycle based on price and demand
- Iofina specialty chemical business provides a ready market for produced iodine
- A proven management team in both iodine and oil & gas production
### Contacts

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Management Team

**Dr. David J. Schneider, President and CEO**
Dr. Schneider is a founder and former president of H&S Chemical, a manufacturer of speciality chemicals, of which the majority of the issued share capital was sold to Syrgis Companies in 2005. Dr. Schneider has extensive relationships with iodine buyers and sellers over the previous 20 years while President at H&S Chemical in the iodine derivates markets. Dr. Schneider earned a BS in Physics and Mathematics from Northern Kentucky University, an MS in Atomic and Molecular Physics from the University of Connecticut and a PhD in Chemical Physics from the University of Cincinnati. He has extensive experience in scale-up of chemical processes from laboratory to pilot to full scale production and is the inventor on several chemical patents over the past 10 years. Dr. Schneider is responsible for company direction, new projects, product development and EPA registrations.

**Lance J. Baller, Finance Director**
Mr. Baller is the former managing partner of Shortline Equity Partners, Inc., a mid-market merger and acquisitions consulting and investment company in the United States. He has actively served on the investment committees, audit committees, committees on corporate governance, compensation and benefits committees, executive committees, finance committees, committees on public policy and social responsibility, and on the board of directors of companies in Asia and United States. Mr. Baller is also the former vice president of mergers and acquisitions, financing and corporate development at Integrated Biopharma, Inc and prior to this a vice president of the investment banking firm UBS AG and Morgan Stanley. He is the former chairman and current director of NetAds International, Inc. Mr. Baller is on the board of trustees of Giant 5 Mutual Funds and also serves as the chairman of the audit committee and as the audit committee financial expert under the Sarbanes-Oxley Act of the United States for Giant 5 Funds.

**Forest D. Dorn, CEO and President of Iofina Natural Gas, Inc.**
Mr. Dorn brings over thirty (30) years of broad oil and gas experience to Iofina. Prior to Mr. Dorn's appointment he was a Member/Manger of Avanti Exploration, LLC since 2004. Mr. Dorn began his career with Forest Oil Corporation (NYSE: FST US$1.77 bn cap) as a scout in Midland, Texas in 1977. He later became a landman in Midland, and in 1980 became Assistant Division Manager of the Company's MAFLA (Mississippi, Alabama and Florida) Division located in Jackson, Mississippi. In 1984 he was appointed Assistant Division Manager of the Company's Southern Division located in Lafayette, Louisiana. In 1990 he assumed the position in Denver of Division Manager - Onshore Division, and was appointed a Vice President of the Company in 1991, General Business Manager in December 1993, and Senior Vice President of the Gulf Coast Region in 1996, and Senior Vice President Corporate Services in 2000 until his departure in 2004. Mr. Dorn holds a Liberal Arts Degree from the University of Arizona in Tucson where he graduated in 1977.

**Jamison R. Davis, Chief Operating Officer of US Subsidiaries**
Mr. Davis has previously held finance positions at Intel Corp. and WebMD Corp. where he evaluated new internal and external business opportunities and worked on special projects for the CFO's office. In addition, Mr. Davis led the finance department at RespondTV, an interactive television infrastructure provider, and assisted the company in raising over $30 million (USD). Mr. Davis also worked with the senior management of eMotion, a digital asset management provider, to complete a successful restructuring and capital raise. Mr. Davis was awarded the Chartered Financial Analyst (CFA) designation in 2001. He graduated with Highest Honors from the Business Honors Program at The University of Texas at Austin with a BBA in Finance.
The Importance of Iodine

- Iodine compounds are used in CT scans, and X-rays, helping doctors to diagnose patients effectively.
- Iodine compounds are added to paints and protective coatings to prevent the growth of moulds and other pathogens.
- Iodine compounds are added to cosmetic products to prevent the growth and transfer of harmful bacteria.
- Iodine formulations protect dairy cows and humans from infections that can be transferred through milk.
- Iodine compounds are used to manufacture high-tech LCDs.
- Iodine derivatives are used to produce many essential pharmaceuticals, giving doctors powerful new drugs to fight disease.
- Iodine compounds are used as a more effective tool in controlling pathogens and weeds in food crops due to iodine’s lack of ozone layer depleting properties.
- Iodine is added to table salt, helping to ensure adequate daily intake of this vital nutrient.
- Insufficient iodine causes Iodine Deficiency Disorder – medically proven to cause health problems including cretinism and goitre.

Iodine is essential for life and industry.
• Multiple industries and products require iodine with 2008 production of 30,300mt*
• Iodine derivatives market worth $2.5-3bn pa offering substantial profit margins
• Growth being accelerated by new markets (LCD screens) and new consuming countries
• From 2000 to 2008 the CAGR of iodine has been 6.5%* (*source: SQM)
Iodine – A Valuable Resource

- The global iodine supply is dominated and controlled by two countries: Japan and Chile
  - **Chile** - 58% of global production – mined from caliche ore
    - SQM (NYSE listed; $13.2bn cap; 34% market share)
    - Cosayach (privately held and second largest in the world)
    - Atacama (TSX listed; $52m cap and high cost producer)
  - **Japan** - 21% of global production – 5 players producing from gas brine water
    - Ise Chemical Co, Ltd. (Sales $205m; profits $17.3m)
    - Kanto Natural Gas Development, Co, Ltd (Sales $125m; profits $13m)
    - Nippoh Chemicals Co (Sales $62m; profits $2.7m)
  - **US** - 5% of global production – all from gas brine in the Anadarko Basin in Oklahoma in which the producers were purchased by the Japanese
    - US is required to import over 80% of annual consumption