



Ontario Oil, Gas and Salt Resources Trust
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Ontario Oil, Gas and Salt Resources Trust

(Ontario Oil, Gas and Salt Resources Library)



2017 Business Plan

Prepared by:

Ontario Oil, Gas and Salt Resources Corporation

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Ontario Oil, Gas and Salt Resources Trust

MISSION AND OBJECTIVES

MISSION

The Ontario Oil, Gas and Salt Resources Trust is a non-profit organization established by the Ontario Oil, Gas and Salt Resources Act to provide information management relating to oil, natural gas and salt resources; funding of research, surveys; laboratory facilities; and operations relating to oil and natural gas exploration, production and storage in geological formations, and salt solution mining.

OBJECTIVES

The Ontario Oil, Gas and Salt Resources Trust's mandate includes maintaining and improving access to information relating to oil, natural gas and salt resources to developing programs to improve client access to information, develop new data products, and generating new revenue to sustain operations.

The Ontario Oil, Gas and Salt Resources Trust manages the Ontario Oil, Gas and Salt Resources Library, a resource centre for oil and gas exploration, salt solution mining, and subsurface storage and fluid disposal in Ontario.

The Ontario Oil, Gas and Salt Resources Library provides services to companies and individuals involved in oil and natural gas exploration, production and storage in geological formations, the disposal of oil field fluid in geological formations, and solution mining as well as the general public, universities, government ministries and agencies, companies providing geotechnical, geothermal and groundwater services, and other clients. The services provided are on a cost recovery basis.

The Ontario Oil, Gas and Salt Resources Library provides its clients in these resource industries with access to some of the important data they need with a view to enabling them to conduct their business in the most orderly, safe and efficient way possible. It also provides public access to this data at reasonable cost.

1.0 Introduction

The Ontario Oil, Gas and Salt Resources Trust (Trust) 2017 Business Plan was prepared to fulfill the mandate of the “Trust Agreement” between the Province of Ontario and the Ontario Oil, Gas & Salt Resources Corporation, an entity established by the Ontario Petroleum Institute Inc. (OPI).

2.0 Executive Summary

The 2017 Business Plan identifies both the long-term strategy and short-term action plans undertaken by the Trust in operating the Ontario Oil, Gas and Salt Resources Library (Library) as a resource centre for the Ontario oil and natural gas, hydrocarbon storage, and salt/solution mining industries.

The Library is a self-sustaining organization that generates the majority of its revenues from the Ontario oil and natural gas exploration and production industry

In 2017, the Library will continue to promote its expertise and services to achieve financial sustainability. The Library will continue to work closely with the MNRF supporting where it can the projects that provide both financial benefit as well as the progressive development of Ontario’s natural resources.

3.0 The Ontario Oil, Gas and Salt Resources Trust

The Ontario Ministry of Natural Resources formed the Ontario Oil, Gas and Salt Resources Trust and Forestry pursuant to amendments made to the Oil, Gas and Salt Resources Act in 1997. A Trust Agreement signed on February 16, 1998 with the “Original Trustee”, the Ontario Oil, Gas and Salt Resources Corporation, an entity established by the Ontario Petroleum Institute Inc. The OPI is the sole shareholder of the Ontario Oil Gas and Salt Resources Corporation. The Executive of the OPI are the directors and officers of the Corporation and the Managing Director of the Trust is the Executive Director of OPI.

The Trust Agreement transferred responsibility for the operation of the core and cuttings storage area, public well files, client service area and reference Library to the Trust including payment of all reasonable costs and expenses of the Library.

Requirements for a Trust Advisory Committee (TAC) exist within the Trust Agreement. The TAC is comprised of four representatives from the oil and natural gas exploration and production industry, and one representative from each of the natural gas storage, hydrocarbon cavern storage, and salt solution mining industry. The TAC meets regularly to advise on Trust policy, operations and budget.

3.1 The Structure of the Trust Agreement:

| | | |
|---|--|--|
| <p>Ontario Ministry of Natural Resources</p> | <p>Trustee (Ontario Oil, Gas & Salt Resources Corporation with Directors and officers comprised of the Ontario Petroleum Institute Inc.)</p> <p>Ontario Oil, Gas and Salt Resources Library</p> <p>↓</p> <p>Managing Director</p> <p>↓</p> <p>Manager</p> <p>↓</p> <p>Staff and Contractors</p> | <p>Trust Advisory Committee</p> |
|---|--|--|

3.2 Ontario Oil, Gas & Salt Resources Corporation

(Directors and officers comprised of the Ontario Petroleum Institute Inc.)

President, Dale Holland, First Vice President, Jim McIntosh, Second Vice President, Denis Marcus, Treasurer, Charlie Fairbank, Secretary, Frank Kuri

3.3 Trust Advisory Committee

The Trust Advisory Committee is a seven-person committee comprised of four representatives from the oil and natural gas exploration and production industry, and one representative from each of the natural gas storage industry, the hydrocarbon cavern storage industry, and the salt solution mining industry, appointed by the Ontario Oil, Gas & Salt Resources Corporation.

Oil and Natural Gas Exploration and Production:

Dale Norman, Elexco Ltd.
Scott Lewis, Clearbeach Resources
Mike Dorland, Consulting Geologist
Terry Carter, Consulting Geologist

Natural Gas Storage:

Shelie Cascadden, Union Gas

Hydrocarbon Cavern Storage:

Dean Edwardson, Sarnia-Lambton Environmental Association

Salt Solution Mining:

Stephan Whan, K+S Windsor Salt Ltd

Ontario Ministry of Natural Resources (non-voting observer)

Lee Fortner

The chair of the Trust Advisory Committee is Dale Norman,

3.4 Ontario Oil, Gas and Salt Resources Library Team

Hugh Moran, Managing Director
Jordan Clark, Manager
Liz Sutherland, Geographic Info Systems Technician

4.0 Industry Summary

Ontario's petroleum and salt solution mining industries include the following activities:

- (i) oil exploration and production;
- (ii) natural gas exploration and production;
- (iii) natural gas underground storage;
- (iv) salt solution mining; and
- (v) hydrocarbon underground storage associated with the petrochemical refining industry

These activities provide Ontario consumers with the following:

- (i) storage of natural gas imported to Ontario from sources in Saskatchewan, Alberta and British Columbia, Pennsylvania and Ohio by pipeline and held in reserve to supplement times of peak demand. This becomes very important with the switch from coal to natural gas generation of electricity;
- (ii) table salt and industrial salt – Ontario is a net exporter of salt produced from salt solution mining;
- (iii) underground storage caverns of product necessary for Ontario's petrochemical and refining industry;
- (iv) a small percentage of Ontario's demand for oil and related products; and
- (v) a small percentage of Ontario's demand for natural gas

An estimate of the oil and gas industry's contribution to the Ontario economy:

- (i) approximately 1,000 plus people directly employed in exploration, production, storage and salt solution mining in Ontario;
- (ii) industry assets = \$650 million;
- (iii) personal total taxable income = \$55 million;
- (iv) services and goods purchased by the industry = \$90 million;
- (v) lease payments and royalties paid to land owners and the crown = \$10.4 million; and
- (vi) municipal taxes = >\$4 million per year.

The value of production and storage in Ontario in 2016:

- (i) 1,163 wells produced 61,198 m³ (384,922 barrels) of oil = \$38.6 million
- (ii) 1,152 wells produced 157,112 m³ (5.6 billion ft³) of natural gas = \$31.7 million;
- (iii) 6,900 million m³ of natural gas storage capacity = \$2 billion in value;
- (iv) 3.5 million m³ of hydrocarbon storage capacity = ± \$2 billion in value; and
- (v) Solution Salt Value – no data available.

The annual value of oil and gas sector to the Ontario is about \$5 billion.

5.0 Ontario Oil, Gas and Salt Resources Library – A Resource Centre

5.1 Resources

The Ontario Oil, Gas and Salt Resources Library can trace its origin to the late 1800's, when the Geological Survey of Canada (GSC) solicited voluntary submissions of drill cuttings and core from oil and gas wells drilled in Ontario and other parts of the country. This informal collection evolved into the establishment of a core and drill cuttings sample processing, storage and study facility in Ottawa. In 1950, a similar facility in Calgary was established which housed all drill cuttings samples from Western Canada. In 1971, the Ontario cores and drill cuttings samples were collected and sent to the new Petroleum Resource Laboratory in London, Ontario that was owned and operated by the Ontario Ministry of Natural Resources

The Library houses resources and data available for study including:

- (i) drill cuttings samples from over 13,100 wells;
- (ii) cores from over 1,027 wells;
- (iii) file information on approximately 27,000 wells including geophysical logs, formations tops, well history and construction;
- (iv) oil/gas/water zones, initial completion results;
- (v) core analyses,
- (vi) oil/gas/water analyses; and
- (vii) an extensive collection of reference books, periodicals and reprints on the subsurface geology of oil, gas, salt and subsurface storage resources of Ontario.

Digitization of hard-copy petroleum well records project remained as a first priority in the spring of 2016. This project completed approximately 500,000 scans of well plugging and other technical reports now available on-line. Library members can now begin their study of Ontario's petroleum resources regardless of their current geographic location, as all documents are now accessible to any member with an Internet connection.

The Ontario Petroleum Data System data entry project is complete with a total count of approximately 26,500 wells on record. The ongoing "Data Integrity" phase has further enhanced data accuracy and remains as an ongoing effort. New efforts to improve and maintain data quality are undertaken each year by the Library and between the Library and industry partners. In 2016, approximately 80,000 geological picks graded by the MNRF and the Geologic Survey of Canada (GSC).as part of a quality assurance program. Work on the geology portion of the database is likely to continue with GSC from 2017 through 2018.

A pools and pipelines update in 2016, summed up the total cumulative production numbers for all pools producing natural gas and crude oil in Ontario. A geographical component of this project produced a new layer of updated pool boundaries and published in the Oil and Gas Pools and Pipelines Map of Southern Ontario. For 2017, it will mark a new round of advertisers for the map and new advertising opportunities will be available to emphasize the digital reality of mapping. Ads will now be display on the heavily trafficked on-line version known as *PxTools* and on the Library website.

5.2 Services

The Library attracts industry participants wanting to view data files relating to wells drilled in Ontario (i.e., well cards, production information, plugging information, etc.), core and drill cutting samples for wells drilled in Ontario, maps of well locations, and open file reports on the industry. Clients can review materials in the Library, and if relevant, take copies of the data files for studying outside of the Library.

An *ArcGIS* workstation is available for client use and is equipped with the MNRFP proprietary *PetroGIS* software for performing spatial queries on the digital petroleum well database and with *Surfer 9* digital gridding and contouring software for subsurface geological mapping. The Library also provides a drill cutting sample service and a core cutting service. A full time technician with expert training in GIS software is available to fill all client requests.

The Library also operates a dynamic website (www.ogsrlibrary.com) that contains all relevant data from the Ontario government electronic database, from hard copy records held in the Library, and from special electronic databases created by the Library. Member access includes individual well history complete with geology, analysis, geophysical logs, production, plugging and stimulation. The data is available to view in electronic format and all of the original documents are accessible as scans.

The Library website posts all basic digital petroleum well data for all of the counties in Ontario for complimentary downloading (well location and historical data). A set of enhanced and value-added subsurface data for all counties is available for purchase. The website receives regular updates of verified county data and digital data products. The Library staff utilizes this digital data for plotting specialized maps that combine different data types including well locations, bedrock geology, bedrock topography, oil and gas pools, and digital elevation models for Ontario as well as incorporating results from data queries and filters.

All drill cores and rock chip samples from the Ontario petroleum industry submitted to the Library are processed, catalogued, and stored on-site. Over 12,000 wells with drill samples and 1100 drill cores are in the Library warehouse. This unique catalogue of raw scientific material is available for viewing and analysis by clients, industry members, consultants, governments, academics, or members of the public. A laboratory is available at the facility for client use and stocked with basic chemicals and equipment for this purpose. Remote users of the Library can request high-resolution core photography and Library staff can take samples at their request. In most cases, cores at the Library may be samples and those samples removed from the Library of analysis. In the case of material removal, a small amount of material must always be retained and the results of the analysis must be added to the Library archives for publication after an agreed upon period.

The Production Module for the Library's well database now incorporates all 80,000-production forms scanned. The forms posted on the website are available for viewing at no charge by the public. This module also contains digitized monthly production data for all wells completed between 1992 and 2015. Annual production reports by well are available from 1967 to 1991. Prior to 1967 production is recorded on a geographic basis dating back to 1897. The Library has over 8 million rows of digital production data available for query and download by individual and corporate members.

5.3 Ongoing Initiatives

5.3.1 Digitization of Hard-copy Petroleum Well Records

In conjunction with MNR, all of the public well file documents stored at the Library are scanned and available on-line to members. The Library continues to maintain this catalogue but scanning all new records received and all modified records. On-line documents maintained are a mirror image of their hard copy counterparts enabling access to anyone with an Internet connection.

5.3.2 Digital Archiving of Geophysical Log

A major undertaking in 2012 was the digital log archiving that produced over 20,000 geophysical log scans from paper records and became the ultimate backup and an on-line resource. Maintenance of this catalogue continues with newly received logs added weekly. Enhancements for 2017 include more conversion of scanned raster logs into true digital vector form. The first step in this process will be to create smarter raster's in 2017 and record more details about each log using an on-line portal. This will immediately create better search and raster products.

5.3.3 Seismic Surveys and Shot Lines

Following industry feedback, the Library will approach in 2017 the majority of companies who own seismic surveys in Ontario to propose a one-point data exchange with anyone interested in exploration. The objective of this venture will aim at encouraging investment in the Ontario oil and gas industry. All seismic shot lines were verified using historical records and a digital compilation produced.

A seismic survey database was developed and completed in 2012. However, more work is required to locate owners of seismic data (proprietary) to expose geological sub-structures in Ontario for the benefit of future exploration

5.3.5 Log Digitizing

TGI research provided budget for hardware/software to scan and digitize hard-copy geophysical well logs, and some funding for personnel to acquire select project logs. Staff have been trained on digital acquisition, and can digitize logs upon client request.

A fee for this work is charged. There is a continuous review of current digital data pricing. There are on-going requests to ensure that digital log submissions are part of the next Operating Standards update. To date, there have been 20,000 geophysical well logs scanned and catalogued as TIFF files and 4,700 well logs digitized as LAS files.

5.3.6 Digital Data Publishing

The Library will continue to work, in partnership with the MNR to build, maintain and market a digital database of geological and engineering information on wells drilled in Ontario. The Library will be the data vendor for information on Ontario oil, gas, and salt and storage resources, based on the Data Resale Agreement with MNR.

5.3.7 Petroleum Production Digitizing

The MNRF provided funding to create a full digital backup of all annual reports, including production documents, and create a searchable database of petroleum production. In all, 80,000 records were scanned and about 500,000 months' worth of production were entered into the database by Library staff using a custom build on-line digitizing portal. The operator can now query and aggregate the information on production, formation, location and on other criteria on a per well basis instantaneously. After verifying the submitted reports, the scanned records and the database are updated.

5.3.8 Annual Pools and Pipelines Map

Following the submission of annual reports, the Library does a review of pool production and boundaries. Small changes made to the pools shape layer as required and the results, along with the recent year's production statistics published on a hard copy map. The *Pools and Pipelines* map also features ads by sponsors, which are up for renewal in 2017. Sponsors of the 2017 – 2018 maps will also receive on-line advertising on the Library website and inside the Library's *PxTools* overlay for *Google Earth* that is heavily trafficked by industry.

5.3.9 High Resolution Core Photography

Newly purchased equipment has enabled the Library to take high-resolution core photos thanks to a generous sponsorship by Charlie Fairbank. Core photography is now a service available to all Library clients on a per core box basis. This allows clients to get more work done off-site, preview cores before traveling to the lab for viewing, and create images and diagrams for reports and presentations. The Library is photographing new cores and key cores and all photographs will be available for viewing on-line in 2017.

5.3.10 Quality Assurance of Geology Database

Geologic data from the petroleum well geology database has become a critical input to models created by various government agencies. The Library has been working with the Geological Survey of Canada, Ontario Geological Survey, and Ontario Ministry of Natural Resources and Forestry to ensure the highest quality of data is available for modelling. Previous modelling efforts have highlighted errors in the geological data. Geologists working at the Library correct the data and distribute it to current and future modelers.

Current Activity:

- MNRF has an operational database of all licensed wells in Ontario within the Ontario Petroleum Data System (OPDS). All new wells and well information, with the exception of production information, entered into OPDS. The OGSRL, in conjunction with MNRF, has populated the database with old well information and files.
- Sale of value-added subsurface data from OPDS by the Library in 2003 will continue through 2017. Data consists of geological formation tops, logging records, and oil/gas/water interval records.

- A data sharing agreement signed between the MNRF Information Access Section and the Ontario Oil, Gas and Salt Resources Trust. The agreement allows corporate members of the Library to use MNRF Digital Base Maps.
- Improvements to the lab space include more supplies available to clients and more services, including high-resolution core photography.
- The Library is updating geographic co-ordinates for a number of wells populating the well location metadata record for well location accuracy, and performing quality assurance checks and corrections for oil, gas, and water interval records in the MNRF petroleum well database.
- Well production history is one of the most sought after items by Library users. The Library has produced a digital dataset of well production history and has posted the data on its website for use by members. This project funded in part by the MNRF.
- In conjunction with GSC, another major review of geology data will run in 2017 and continue to 2018. The final product will be high resolution, high accurate, maps of Ontario's key subsurface layers.

6.0 Marketing

In 2017, Trust will market the Library as a resource centre and provider of member and client services. The emphasis will be on business development and promotion.

These activities will support generating Library sources of non-fixed revenue from five strategic areas:

- **Data sales**
- **Membership**
- **Publications**
- **Projects**
- **Data & Mapping Services**

6.1 Business Development

The Library's business development activity will target additional project work, sales of information and data, new memberships, publications, and direct support of client activity through data enhancement services.

The geographical markets are Ontario, Alberta, and the mid-western and northeastern USA. In Ontario, users are usually the operator of oil, gas, solution mining, natural gas storage, oil field fluid disposal or petroleum storage wells in the province of Ontario, or a consultant providing services to these operators. Outside of Ontario, potential clients are resource exploration companies considering new locations for investment or activity.

The Library will continue to look for opportunities to sell data and information (see Appendix 1), primary assets that the Library has to offer current and potential clients. Various sectors of the economy – energy, telecommunications, construction – responding to market conditions and regulations, specifically environmental compliance, may require resources offered by the Library.

Potential project work opportunities will essentially come from the Ontario Ministry of Natural Resources and Forestry, Ontario Geological Survey, Geological Survey of Canada, and member companies and individuals.

The primary market for membership is the oil and gas sector, hydrocarbon storage and salt solution mining companies that fall under the jurisdiction of the MNRF. Academics and researchers form an important secondary membership market. Of 140 companies that are assessed well license fees, approximately 30 are Library members. In 2017 the Library will target companies that operate wells licensed under the Oil, Gas and Salt Resources Act but do not have a Library membership, as well as companies and individuals from across the industry.

The other membership potential is with any sector that does subsurface work in Ontario. This includes government ministries and agencies, companies providing geotechnical, geothermal and groundwater services, academic researchers, and the public.

6.2 Promotion

The Library's promotional activity is focusing on exhibiting at conferences to obtain exposure to key sectors that represent revenue opportunities for membership, projects and data sales.

The Library, in conjunction with the OPI, will develop an exhibit presentation that will feature, to the highest possible level, the benefits that demonstrate the value of each organization.

The list of potential conferences in 2017 will include:

- North American Prospect Expo, Houston, Texas, February 2017
- Michigan Petroleum Conference, Traverse City, Michigan, April 2017
- Ontario Petroleum Institute Conference and Trade Show, May 2017
- AAPG Annual Convention & Exhibition, April 2017

These conferences as well as others offer potential opportunities for the Library to collaborate with other organizations, the OPI and MNRF, for example, to maximize its exposure.

7.0 Budget

7.1 Revenue

The Trust has fixed and non-fixed revenue from well license fees, memberships, data sales and projects.

The fixed revenue – the largest source – comes from well license fees collected annually through Ontario Regulation 245/97 that obligates producers to pay a yearly production based fee assessed by the MNRF. Revenue in 2017 estimated to increase by approximately 7%.

The non-fixed revenue from memberships and data sales will remain similar to 2016. Special projects estimated to increase in 2017.

The 2015 Library fee schedule attached as Appendix 1,

Project revenue for 2016 was more than \$77,000, an amount greater than the budgeted amount of \$66,000 and all of which derived from projects for the MNRF, GSC, and OGS. The Library is projecting an increase in special project revenue to \$97,000 in 2017. Strong partnerships with MNRF, GSC, and OGS expected to continue in 2017.

7.2 Expenses

The Library's expenses will rise in 2017 due to staffing requirements involved with special projects and increased promotional activity that began in the spring of 2014. It is a result of the combined marketing efforts by the OPI and the Library and additional project work.

Additional projects taken on by the Library bring with them extra staffing requirements. These costs offset by funds received upon completion of the projects. The library also proposes to increase the total number of full-time employees available to enhance and make data available.

The Library expects to post a modest surplus in 2017.

8.0 A Sustainable Future

The Ontario Oil, Gas and Salt Resources Trust have successfully supported the oil and natural gas industry, hydrocarbon storage, and the salt/solution mining industries in and outside of Ontario.

The Trust has built-up a contingency reserve of approximately \$440,000 to ensure it has operational stability. For the Library to have a sustainable future it will require continued attention on balancing its revenue and expenses.

9.0 Priorities 2017

(1) Geological/Geoscience Study - develop an initiative in partnership with the OPI and the Ontario Geological Survey (OGS) to update geological studies and an airborne magnetic survey to support an increase in oil and natural gas exploration in Southwestern Ontario.

(2) Marketing – promote the Library as a resource centre for the oil and natural gas, groundwater, hydrocarbon and salt/solution mining industries in a continued effort to increase membership, project contracts, and client services.

(3) Data services and products - provide the most up-to-date data available and develop a broad selection of products based on an expanding database of subsurface sources to offer members and clients.

(4) Client access to information - provides members and clients with ease of access – onsite and on-line – to the store of information housed in the Library.

(5) Geophysical/Geochemical Program – foster partnerships to develop geophysical and geochemical surveys in Southwestern Ontario that will be made available to the oil and natural gas industry with the goal of stimulating drilling activity in Southwestern Ontario.



Appendix I

2017 Fees - Ontario Oil, Gas and Salt Resources Library

Membership Fees:

| | |
|-------------------------------|--------------|
| Annual fee – corporate | \$1,925/year |
| Annual fee – individual | \$660/year |
| Unlimited Geophysical Viewing | \$500 |

User Fees:

| | Member | Non-Member |
|--|---------------|--------------------------------|
| Use of Core & Cuttings Room | No fee | \$20/hour Plus setup charge |
| Use of File & OGSRL Research Room | No fee | \$10/hour |
| Copying | | |
| Standard copying charge (self-serve photocopy, custom staff e-mail, and pdf) | 25¢/copy | 50¢/copy |
| Geophysical log copying on paper bond | \$4.75/m | \$6.50/m |
| Plotting | \$25 | \$25 |
| Research and Data Retrieval | | |
| General Research/Retrieval by OGSRL Staff : (1-hour minimum) | \$30/hour | \$45//hour (\$40) |
| Digital Data Research/Retrieval by OGSRL Staff: (1-hour minimum) | \$55/hour | \$80/hour (\$75) |
| Digital Products and Services | | |
| Ontario Digital Base Maps (GIS) <i>GIS (shape file) coverage of Southern Ontario.</i> | No fee | Not Available |

Digital Surface Data (DBF) FREE at www.ogsrlibrary.com
Well location and historical information for over 26,000 well records.

| | | |
|-------------------------------|---------|-------------------|
| Digital Subsurface Data (DBF) | \$4,000 | \$69255 (\$6,500) |
| Data Maintenance Updates | \$300 | \$300 |

Digital tables with oil, natural gas, water, casing, logging and geological formation intervals.

Geophysical Logs
\$10.00/image (TIFF)
\$15.00/smart raster (depth calibrated TIFF)
\$20.00/LAS curve

Core Photos: \$10/box

Maps

Pool & Pipelines of Southwestern Ontario \$75/map
Oil and gas pools, underground storage and major pipelines map at 1:400,000
(The pools and pipeline map will be updated and available for purchase on a yearly basis)

Well Location Maps:

| | |
|-------------|------|
| E-size plot | \$50 |
| D-size plot | \$25 |

Over 26,000 well locations plus roads, rivers and other culture.

Spacing Orders

Free PDF at www.ogsrlibrary.com
E-size plot - \$50.00

Sample Processing Fees - New Wells

| | |
|------------------------------|--|
| Cuttings Bagged and Unwashed | 90¢/meter for vertical and deviated section of wells |
| Cuttings Bagged and Unwashed | 45¢/meter for horizontal section of wells |

| | |
|-----------------------------|--|
| Cuttings Washed and Vialled | 60¢/meter for vertical and deviated section of wells |
| Cuttings Washed and Vialled | 30¢/meter for horizontal section of wells |

Core Processing Fee

| | |
|-----------------------------|------------|
| Delivered, unslabbed | \$30/meter |
| Delivered, slabbed to specs | \$10/meter |

Miscellaneous

Exclusive use of Core & Cuttings Room - \$300.00/day
Shipping & Handling - \$10 plus postage
Shipping & Handling applies to all products not picked up at the OGSRL

* All fees are subject to all applicable taxes.



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