

### Altana Exploration Co. Ltd. - Caroline

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- Gas plant capacity test and debottlenecking study (13 MMSCFD refrigeration and lean oil optimization).

### Anderson Exploration Ltd. (now Devon Canada Corporation)

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#### Donnelly

- Rating of MyCom J-8 compressor and refrigeration facility.
- Plant rating.

#### Valhalla

- Design and project management of a 40 MMSCFD gas refrigeration facility including 4500 HP compression.

#### Woking

- Addition of 5 MMSCFD refrigeration and inlet compression (700 HP).

### Apache Canada Ltd. - Leafland Gas Plant

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- Study the potential for increasing the flowrate from the current 20 MMSCFD.
- Debottlenecking study of the cryogenic section of the plant.
- Resolved problems with brazed aluminum heat ex-changer.
- Rectifier column optimization study.
- Coldbox performance evaluation.

### APL Oil & Gas Ltd. - Niton

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- Design and project management of a refrigeration plant: 27 MMSCFD, 624 B/D LPG mix.

### ARC Resources Ltd – Sunrise, B.C.

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- Responsible for the FEED and EPCM for a 133 MMSCFD (2x 66.5 trains) greenfield sour gas processing facility comprised of:
  - Two 350 hp refrigeration trains (- 10<sup>0</sup>F)

### ATCO Gas Services Ltd. - Villeneuve

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- Troubleshooting of expander and cold box freezing problems which resulted in operating parameter adjustments and mechanical modifications to the mole sieve driers.

### ATCO Midstream - Golden Spike

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- Preliminary engineering and technical auditing of the detailed design for a 1127 e3m3/day (40 MMSCFD) sour gas plant involving 333 kW (450 HP) acid gas (50% H<sub>2</sub>S) injection, turbo expander and coldbox, ethane extraction, mole sieve, and mercaptan removal. Project management and engineering management, EPC contract development, and administration start-up services.
- Process design, permitting, and project management for a sacrificial sweetening system. Project included Solar turbine upgrades, replacement of trays with structured packing, and construction management.
- Study for third party gas processing, slug control, and processing options.

### Barrington Petroleum Ltd. - Jumpbush

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- Design of a gas plant expansion - addition of a compressor and a refrigeration skid.
- Troubleshooting of refrigeration system.

## BHP Petroleum (Canada) Inc.

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### Cecil Lake

- Design and project management of a sweet gas plant: 3.5 MMSCFD, 600 HP compression, refrigeration, 105 B/D LPG mix.
- 60 B/D / 0.5 MMSCFD sales gas / 1.5 MMSCFD gas cycling scheme comprised of field satellites test separator and header building, pig catcher and launcher, pop tank, battery and compressor station (group and test separator package c/w pig catcher, compressor, flare stack & K.O. drum, LPG bullet, refrigeration skid, U/G water drain tank, and 5 oil storage tanks).

### West Pembina

- Design and project management of a sweet gas plant: 600 MSCFD, 125 HP compression, refrigeration, and 15 B/D LPG mix.

## Blue Range Resource Corporation - Joffre

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- Design and project management of a 10 MMSCFD gas plant comprised of inlet separation, compression, refrigeration, liquids fractionation, and LPG storage.
- Plant expansion to 17 MMSCFD.

## Canada Northwest Energy Limited (now Sherritt International Corporation)

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### Boca de Jaruco, Cuba

- Conceptual design and project logistics for a 4 MMSCFD gas plant involving air blending scheme, 65 USGPM amine plant, 1200 HP compression, and a 150 HP refrigeration system.
- Completion, workovers, production, and operations management for a 17 well oil field (30<sup>o</sup> API) including liaison with Cuban regional officials. Responsibilities included co-ordination of office, field, and contract services.

### Gorzycza, Poland

- Conceptual design and project budgeting for a 24 MMSCFD gas plant (57.9% N<sub>2</sub>) involving 1200 B/D oil, 450 B/D LPG, and a 15 USGPM amine plant.

### Mikwan

- Design and project management of a sweet gas plant expansion: 6 MMSCFD, 180 BBL/D LPG mix, and 700 HP compression.

#### Oldman

- Design and project management of a new sweet gas plant: 18 MMSCFD, refrigeration, sweetening, 300 B/D LPG Mix, and 600 HP compression.

#### Róžańsko, Poland

- Conceptual design and project budgeting for a 120 MMSCFD gas plant (42% N<sub>2</sub>) involving 3800 B/D oil, 2065 B/D LPG, nitrogen removal, and 250 MW power generation.

#### Varadero, Cuba

- Waste Heat Recovery System Study: fuel gas used to feed turbine driven electric generator which fed major tourist needs at Veradero beach. The soft water from the battery would be pumped to recover heat from the turbine exhaust and the produced steam would be used at the battery for process needs.
- 10 MMSCFD Gas Plant Study: 300 gpm amine sweetening, refrigeration, compression, and 35 T/D sulphur plant.
- Completion, workovers, production, and operations management for an 11 well field (10<sup>o</sup> API) including liaison with Cuban regional officials. Responsibilities included co-ordination of office, field, and contract services.
- Responsible for the detailed engineering for a 10,000 B/D facilities upgrade comprising a gathering system, test/metering/pump stations, and major treating facility c/w ship loading facilities. Also, a comprehensive feasibility study was done that examined the economic scenarios for phased expansions to 40,000 B/D.
- Operations review and troubleshooting on and amine and IFPEX facility.

#### Canadian Natural Resources Ltd. - Greencourt

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- 35 MMSCFD optimization study of liquid recovery improvement options.

#### Chancellor Energy Resources Ltd. - Stewart Lake

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- 13 MMSCFD debottlenecking and expansion to optimize liquid recoveries.

## Conoco Phillips Canada Resources Ltd

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### Hanna

- Design and project management for the installation of a JT choke plant.

### Peco

- Project engineering for 35 MMSCFD shallow cut facility addition.

## Devon Canada Corp (formerly Anderson)

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### Normandville

- Permitting, engineering, drafting, and project management of a sour gas plant: 20 MMSCFD, 3000 HP compression (inlet & sales), 200 HP refrigeration, 20 USGPM amine sweetening, and 50 HP acid gas re-injection compression.
- 2002 Expansion: Stabilizer, LPG bullet, and pump skid.
- Acid gas composition: 10% H<sub>2</sub>S and 90% CO<sub>2</sub>. Acid gas compressor: 50 HP @ 2000 psig discharge. Acid gas pipeline: 1.5 km with wellhead pressure of 1750 psig. Acid gas rate: 135 kg/hr.
- 2004 Expansion: Installation of condensate flash tank.

### North Cecil

- Permitting, engineering, drafting, and project management of a sour gas plant: 45 MMSCFD, 6000 HP compression, 450 HP refrigeration, 65 USGPM amine sweetening, recycle compression, and acid gas incineration.

### Pica

- Permitting, design, and project management of a sweet gas plant: 16 MMSCFD, 740 HP compression, 150 HP refrigeration, and condensate product.

### Puskwaskau

- Design and project management of a sour gas plant: 20 MMSCFD, 1,478 HP compression, 200 HP refrigeration, 20 USGPM amine sweetening, 125 HP (57% H<sub>2</sub>S, 43% CO<sub>2</sub>) acid gas re-injection compression, 50 HP water disposal pump, and 40 HP recycle compression.
- Permitting and public consultation.
- Plant modifications including incinerator installation and replacement of heat exchangers.

#### Rycroft

- Design and project management of a 24 MMSCFD sour gas plant including 125 USGPM amine sweetening, 350 HP refrigeration, C<sub>5+</sub> production, 3000 HP primary gas compression, 250 HP acid gas injection, and 1200 kW power generation.
- Acid gas composition: 70% H<sub>2</sub>S, 29% CO<sub>2</sub>. Acid gas compression: 250 HP at 1220 psia discharge. Acid gas pipeline: 500m with 1218 psia wellhead pressure.

#### South Eaglesham

- Design and project management of a 20 MMSCFD sweet gas plant including gas gathering, inlet separation, compression, refrigeration, liquids fractionation, and NGL and LPG storage producing 400 BBL/D LPG mix, 465 BBL/D oil.

#### West Culp

- Design and project management of a 20 MMSCFD sour gas plant including 125 USGPM amine sweetening, 350 HP refrigeration, LPG production, oil battery modifications, solution gas compression, 3000 HP primary gas compression, 250 HP acid gas injection, and power generation.
- AENV permit application.
- AEUB permit application and audit manual.
- Acid gas rate: 2190 lb/hr. Acid gas composition: 53% H<sub>2</sub>S, 45% CO<sub>2</sub>. Acid gas compression: 250 HP at 1220 psig. Wellhead pressure 800 psi.

#### Duke Midstream (now Spectra Energy, formerly Canrock) - Fourth Creek

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- Project management of the design, procurement and construction of a sour gas plant, 69 MMSCFD, 10 t/d sulphur inlet, two 30 & 45 GPM mixed amine processes, 200 HP (-10° F) and 500 HP (-45° F) refrigeration units, 1800 HP Paddy compression scheme, 3000 HP plant sales compression, 150 HP acid gas (30% H<sub>2</sub>S) re-injection compression. Acid gas pipeline: 3830 m.
- Equipment and piping layout for a refrigeration skid addition.
- Design and project management of a 2145 HP installation.
- Design and project management of a pipeline installation.
- MOC approvals.

#### Gardiner Oil and Gas - Caroline

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- Design and project management of a 5 MMSCFD gas plant: - 40° F refrigeration, 220 B/D LPG mix.

#### Gascome Oils Ltd. - Turin

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- Design and project management of a 25 MMSCFD gas plant, 430 gpm DEA amine plant, 200 B/D LPG mix.

#### Granisko Inc. - Rainbow Lake

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- Complete design checking of the amine, refrigeration, heat medium, and stabilizer skids (including the checking of all vessel, steel details, and spools).

#### Hudson's Bay Oil and Gas Company Limited - West Edson

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- Design and project management of a 15 MMSCFD gas plant with 150 HP refrigeration.

#### Industrie Meccaniche Scardellato s.p.a. - Petrex, Italy

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- Design review and equipment sizing for 350 MMSCFD amine plant (two trains - 100 GPH of DEA each); sizing of mole sieve unit including 200 cyclone separator units.
- Amine plant (60 GPM MDEA) and 15 MMSCFD refrigeration plant design.

#### Inuvialuit Energy Inc. - Rainbow Lake

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- Rated the existing plant and determined the modifications necessary to process 15 MMSCFD additional gas.
- Prepared and evaluated equipment specifications and bid packages.
- Prepared the bid documentation for the construction of 48 km of 8"Ø sour gas pipeline and 16 km of 6" Ø sweet gas pipeline.
- 40 MMSCFD sour gas plant: Supervised complete turnaround activities including the rebuild of the sulphur plant and the installation of a new inlet separation package and deethanizer package.

## Jarrood Oils Ltd. - Antelope Lake Gas Plant

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- Debottlenecking study of 4 MMCFD gas plant.
- Resolved problems with plant operation including problems with hydrates, glycol injection, and refrigeration system.

## Kinder Morgan CO<sub>2</sub> Company – Texas, USA

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- Kinder Morgan CO<sub>2</sub> Company is the leading U.S. transporter and marketer of carbon dioxide for Enhanced Oil Recovery (EOR). A key asset, the SACROC Unit located in West Texas, is one of the largest oilfields and one of the oldest operating CO<sub>2</sub> capture and injection projects in the U.S.
- The SACROC Unit processes over 620 MMSCFD of gas for CO<sub>2</sub> capture and injection while recovering over 30,000 bpd of oil and 15,000 bpd of NGL liquids. Kinder Morgan desired to maximize production and thus requested Gas Liquids Engineering Ltd. to carryout the following two projects:

### Capacity Increase Project

- Identified an additional 90 MMSCFD capacity with minor equipment modifications.
- The primary scope involved process review, simulation, major equipment rating, and cost estimation for modifications for inlet separation, dehydration, filtration, chilling/separation, booster compression, gas and liquid amine treating, NGL recovery, and condensate stabilization.

### Expansion Project

- Generated the FEED for a 240 MMSCFD expansion train for CO<sub>2</sub> capture, injection, and liquids recovery.
- The primary scope involved design basis memorandum generation, engineering process design, capital cost estimation, and data sheet package development involving inlet separation, dehydration, filtration, refrigeration, liquids separation, heating, and water-cooling.
- The secondary scope involved to varying degrees process review, cost estimation, and data sheet package generation for modifications of all affected downstream processes such as molecular sieves, amine systems, NGL recovery, condensate stabilization, and Puraspec. Process design review of MEA liquid/liquid contactor replacement internals, technical consultation for amine systems change-out.
- Process design review of MEA liquid/liquid contactor replacement internals, technical consultation for amine systems change-out.



- Provided economic consultation for the 240 MMSCFD membrane design including financial perspectives and strategic advice.

#### Maynard Exploration Co. - Drumheller

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- Design and project management of a 20 MMSCFD refrigeration/dehydration process unit.

#### Mazeppa Processing Partnership - Mazeppa

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- Design and project management for the addition of 45 MMSCFD processing capacity including expansion to inlet separation, fractionation, refrigeration, and product storage.
- Extensive control systems modification to implement an integrated DCS system.

#### Murphy Oil Corp. – Tupper West, N.E.B.C.

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- Engineering, procurement, and construction management (EPCM) currently underway for a 180 MMSCF/d sour natural gas processing plant near Dawson Creek, British Columbia. Design features of the plant include:
  - Dewpoint control utilizing mechanical refrigeration (300 USTR and 700 HP refrigeration compressors) and glycol injection (17.5 USGPM of 80/20 ethylene glycol)

#### North Canadian Oils Limited - Knopcik

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- Expansion of 32 MMSCFD refrigerated J-T plant, addition of depropanizer, debutanizer systems, mole sieve unit for removal of methanol from propane product, product storage, chromatography, and control systems.

#### Northridge Exploration Ltd.

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##### **Ansell**

- Design and project management of a gas plant: 16 MMSCFD, 2000 HP compression, refrigeration (-25° F), 500 B/D LPG mix, 500 B/D condensate.

##### **McLeod River**

- Design and project management of an 18 MMSCFD gas plant: 700 HP refrigeration, 2,300 HP compression, 250 B/D condensate, 700 B/D LPG mix.

- Supervision of a plant relocation; permitting for a compressor packages with a low noise level design and for pipeline relocation.
- Procurement, construction inspection, commissioning, and start-up responsibilities.

#### Northstar Energy Corporation - Turin

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- Design and project management of a plant expansion from 30 to 55 MMSCFD: screw compressor, condenser, low temperature separator, and gas/gas exchanger.

#### Numac Energy Inc (now Devon Canada Corporation, formerly Anderson) - Ferrier

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- Simulation, rating and evaluation of a 20 MMSCFD sweet gas plant.
- Design and costing for a 20 MMSCFD fractionation train involving 1200 B/D NGL recovery.
- Design and costing for a 20 MMSCFD refrigeration system.
- A number of process simulations were developed to examine the merit of various process improvements yielding higher revenue streams through increased liquids recoveries.
- Project engineering for the optimization, debottlenecking, and reconfiguration for a gas plant totaling 5,000 HP.

#### Pacific Cassiar Limited

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##### **Blood**

- Maintenance servicing of refrigeration system.

##### **Bow Island**

- Design and project management of a 5 MMSCFD, 350 HP choke plant.

##### **Welling**

- Design and project management of a 5 MMSCFD compression and choke plant facility.

#### Pan Canadian Petroleum Ltd. - Dimsdale

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- Design and project management of a 30 MMSCFD, 1200 HP compression sweet gas facility including dehydration and hydrocarbon dew point control.
- Three field dehydrators - design and installation management.

## Paragon Petroleum Corporation

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### **Kitto Lake, Ontario**

- Simulation and debottlenecking of existing facility relocated from Ontario with subsequent modifications and application in Alberta; detailed design, permitting, procurement, construction inspection, commissioning, and start-up of a 15 MMSCFD facility. The plant consisted of 1100 HP compression, inlet condensate stabilization, 100 T refrigeration, and 265 B/D NGL recovery.

### **Rochester, Ontario**

- Design and project management of a grassroots 3000 B/D oil and 2 MMSCFD sweet gas plant (refrigeration, 300 HP compression).

### **Wildwood**

- Grassroots design and project management of a 17 MMSCFD amine facility involving 1160 HP compression, refrigeration, wellsite facilities, and gathering system.

## PDVSA/PPC - Caracas, Venezuela

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- Evaluation and recommendations to improve the accuracy and reliability of 120 gas metering stations in Maturin District.

## PDVSA/Tivenca – Maracaibo, Venezuela

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- Conceptual design of multiple processing options for 1200 MMSCFD gas stream including CO<sub>2</sub> removal, ethane recovery, turbo-expander facility, mercury removal, and a nitrogen rejection facility.

## Pembina Resources Limited

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### **Diamond Valley**

- 400 B/D debutanizer performance upgrade and 20 MMSCFD turbo-expander performance review.
- Sulphur plant facility review and appraisal.

### **Viking/Kinsella**

- Study of liquids recovery improvement scenarios.

### Petrolia Oil and Gas Ltd. - Antelope

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- Design and project management of a 10 MMSCFD, 750 HP gas compression, and choke plant including H<sub>2</sub>S treating and gathering system.

### Petrorep (Canada) Ltd. - Provost

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- Design and project management of a 25 MMSCFD gas plant: 2,400 HP compression, refrigeration, desiccant dehydration, and 105 B/D LPG mix.
- Design for the non-destructive desiccant screen modification thereby permitting continued operation of the existing unit.

### Poco Petroleum Ltd.

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#### **McLeod River**

- Gas plant expansion to 16 MMSCFD, -25 deg F refrigeration, 540 B/D LPG mix, and 180 B/D condensate.

#### **Wolf South**

- 30 MMSCFD gas plant design and engineering of refrigeration (-35° F), 1900 BBL/D LPG product, and inlet compression.

### Polish Oil and Gas Company

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#### **Chobienice, Poland**

- Design basis memorandum and project specifications for Chobienice Gas Plant

#### **Dębno, Poland**

- Design basis memorandum and project specifications for a 45,000 SCM/hr sour gas plant including fractionation and sulphur plants. Economic evaluation of 200 cum/d fractionation train options.
- Project management of a US \$70 million gas plant development involving 21 wells and the production of 45 MMSCFD gas, 6000 BPD oil, 120 t/d sulphur, 600 BPD LPG, and 200 BPD condensate.

- Fabrication and construction inspection.
- Pipeline system design and evaluation.
- HAZOP evaluation. Start-up and operations support.
- Training – plant management and Dębno Plant Operations personnel.

#### Potash Corporation Saskatchewan - Sussex, New Brunswick

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- Design and project management of the first onshore gas production facility in New Brunswick, Canada.
- Engineering, project management, procurement, construction management, operation training, and commissioning of a 4.3 MMSCFD sweet gas plant.
- Customized hydrate course prior to project implementation.
- On going operation support.

#### Prime West Energy - Sundre

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- Rated the ability of an existing refrigeration plant (two Mycom P250S compressors) to process 28 MMSCFD of natural gas.

#### Resman Holdings Ltd. - Eckville

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- Design and project management of a 3 MMSCFD gas plant including inlet separation, compression, refrigeration, liquids fractionation, and LPG storage.

#### Richmount Petroleum Ltd - Sawn Lake

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- Conceptual and detailed engineering, procurement, and construction management for a 2.7 MMSCFD choke plant.
- Satellite communications of production data to client laptop.

## Rio Alto Exploration Ltd.

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### Galloway

- Responsible for the process design, specification, and the procurement of mechanical equipment for a 75 MMSCFD gas plant expansion including inlet facilities, inlet and sales compression, refrigeration unit, condensate stabilizer and recycle compressor, hot oil heating package, flare stack, NGL bullet, and condensate storage tanks.

### Smoky

- Responsible for the process design, specification, and the procurement of mechanical equipment for a 40 MMSCFD gas plant expansion including inlet facilities, inlet and sales compression, a future refrigeration unit, dehydration unit, condensate stabilizer and recycle compressor, glycol heating package, flare stack, NGL bullet, and condensate storage tanks.

## Rozsa Petroleum Ltd. - Keho

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- Design and project management of an 8 MMSCFD sweetening, refrigeration, and LPG recovery facility.
- ERCB hearing preparation and owner representative on hearing panel.

## S. E. G. I. - Al Khobar, Saudi Arabia

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- Process and mechanical design for an ethylene glycol injection unit for a 320 MMSCFD refrigeration system.

## Samson Canada Ltd. - Innisfail

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- Optimization of a 1,200 BOPD, 8,800 BWPD, 2.5 MMSCFD oil battery (14% H<sub>2</sub>S, high paraffin content, saturated brine). The shell/tube exchangers were removed and the inlet separator was modified. The result of the work was improved water retention time, reduced fuel consumption, reduced facility maintenance requirements, and improved recycle treating flexibility.
- Conceptual simulation of proposed pipeline looping and compression expansion.
- EUB regulatory application and technical support for a 10 MMSCFD sour gas plant. Compression, amine sweetening, refrigeration, liquids recovery, and acid gas injection.
- Filter/separator design.

### Samson Canada Ltd. - Medicine Lodge

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- Detailed design through procurement, construction management to start-up of a relocated, retrofitted refrigeration package, dehydration system, inlet separation facilities of an existing 100 t/d sulphur plant, and gas facility.
- Installation of 500 HP two stage booster compressor.

### Sherritt International Corporation - Cuba

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- Revamping a multi-skid gas plant / power generation unit including: compression, sweetening, refrigeration, steam system, and turbine driven electrical power generation.

### Sherritt International Corporation - Varadero, Cuba

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- Phase 1 (US 20 million) - Responsible for the re-engineering, 25% of the procurement, 50% of project management, 100% of construction troubleshooting, commissioning, and start-up for a 35 MW gas-fired power generation facility involving a 110 kV substation, a GEMS6001 turbine, and two 25 km transmission lines. A 15.5 MMSCFD gas plant - 25% mechanical design, 50% of the procurement, commissioning, and start-up by GLE. The design provided recovery of 192 bbl/d of LPG and 133 bbl/d of condensate as well as 40 t/d sulphur.
- Phase II (US 30 million) - Responsible for 75% of the engineering, 75% of the procurement, 75% of the project management, 100% of the commissioning, and start-up for a 70 MW gas-fired power generation facility involving two GEMS6001 turbines and a 25 km transmission line. A 27.5 MMSCFD plant - 25% of mechanical design, 50% of procurement, commissioning, and start-up by GLE - supplied the gas feed. The design provided recovery of 413 bbl/d of LPG and 286 bbl/d of condensate as well as 70 t/d sulphur.
- Phase III (US 100 million) - Responsible for the detailed engineering of the interfaces between three supplemental fired 400+ MMBTU/hr waste heat recovery boilers and the three GE-MS6001 gas-fired turbine generators. Also primary responsibility for engineering of the reverse osmosis (176 US gpm) water treatment system and its interface with the steam generation system, detailed engineering of the interfaces between the steam turbine generator/condenser/cooling water, and detailed engineering of the sea water intake and water desalination make-up. Field procurement of the equipment.

### Sherritt Power Corporation - Boca de Jaruco, Cuba

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- Phase IV - Responsible for the engineering, procurement, project management, commissioning, and start-up for a US \$15 million, 35 MW gas-fired power generation facility involving a 110 kV substation, a GEMS6001 turbine and a 5 km transmission line. A 15 MMSCFD gas plant designed by GLE supplied the gas feed. The design provided for recovery of 166 bbl/d of LPG (C<sub>3</sub> & C<sub>4</sub>) and 115 bbl/d of condensate as well as 15 t/d sulphur.
- Integrated within the Cuba projects were the interconnection of the substations into the UNE National grid and the upgrading of the communications link to microwave. This modification became the backbone of a whole new system in Cuba and involved the MMI remote control interface in Havana, towers, and the transmission system.

### Solex Energy Inc. - Princess

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- Design and project management for a 4 MMSCFD choke plant with 8 km pipeline.

### Suncor Inc. - Fort McMurray

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- Preliminary design of modifications to an existing 2 MMSCFD vapour recovery unit to switch Freon AZ 50 refrigeration to propane refrigeration.

### Suncor Inc. - Phoenix

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- Design and project management of a 3.6 MMSCFD auto-refrigeration plant, 230 B/D LPG mix.

### Texaco Canada - Alberta HUB

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- Design and project management of an underground gas storage plant capacity increase from 250 MMSCFD to 500 MMSCFD.
- Installation of 9 km of 16" pipeline and tie-in of two storage wells.
- Addition of inlet separation and 3335 HP compression.
- Executed heat and material balance for 400 MMSCFD hydrocarbon dewpoint control unit. P&ID development. Equipment Specification. Supervised assembly of components onto one skid.



Tom Brown Resources - Carrot Creek

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- Design, detailed engineering, and project management for the expansion of an existing gas facility from 22 MMSCFD to 41 MMSCFD. Expansion units included 450 HP refrigeration unit, 1900 HP compression, and additional condensate stabilizer.

Total Austral S. A. - Aguada Pichana, Argentina

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- Design/fabrication co-ordination, commissioning, and performance testing for a 280 MMSCFD dew point control plant with refrigeration and 9 MW power generation.

Total Austral S. A. - Ara, Canadon Alfa, Brazil

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- Layout of a multi-skid plant extension including the inlet FWKO, exchanger, low temp, economizer, compressor (700 HP, screw type) refrigeration accumulator, glycol dehydration, fuel gas, condensate flash drum, condensate pump, ESD, and quadruple level pipe rack skids.

U. O. P. Equitec Services Ltd. - Burnaby, B.C.

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- Design of a double decker gas chilling skid including 700 HP screw compressors.