## Alberta Hub - Peers

- Project management of the design and installation of 7 miles of 12 inch gathering system and wellsite facilities at Alberta HUB Gas Storage Facility.
- Additional tie-in of two wells with 16" gathering system.

## Altia Energy Ltd - Grande Prairie

- Design and installation supervision of 5 km of 3" insulated pipeline.

## Amerada Hess Canada Ltd.

**Bearberry**

- Design and installation management of seven pipelines.
- Design, procurement, and construction management of dehydration facility and pipeline for 5 MMSCFD.

**Boundary Lake, BC**

- Design and construction of a 50 MMSCFD sour gathering system.

**Cranberry**

- Design and project management of sweet gas wellsite facilities and pipeline, 5 MMSCFD.

**Goodlow**

- Pipeline design and installation management.

**Goodlow/Boundary Lake**

- Pipeline design and installation management.

**Olds**

- Pipeline design and installation management.

**Wilson Creek**

- Design and project management of a sour gas wellsite facility and pipeline, 2 MMSCFD.

## Anderson Exploration Ltd.

**Birley Creek, BC**

- Pipeline design and installation management.

**Eaglesham**

- Pipeline design and installation management.

**Paradise**

- Detailed engineering design for the addition of a 250 HP reciprocating booster compressor and tie-ins.
- Submitted applications to the Oil and Gas Commission for four pipeline projects in NE British Columbia.

**Pickell North, Nig Creek North, Pickell, Nig Creek, Wargen**

- Design and project management of sweet and sour gas well tie ins.
- Railway and river crossings.
- Regulatory approvals.

**Sextet**

- Project management for the installation of a line heater, dehydrator, and a 2.5 km, 6 MMSCFD pipeline associated with one well.

**Valhalla**

- 3,000 BOPD (42 API, high paraffin content) oil battery c/w treating, water source, treatment and re-injection, gas boot, gas blanket flare system, field test satellites (2) and pigging system, custody transfer metering, provision for future VRU. The solution gas plant (c/w dehydration) was designed for 6 MMSCFD. Provided permitting, engineering, and project management of oil and gas production facilities including mechanical design, equipment specification, purchasing, expediting, critical path scheduling, reporting, cost control, instrumentation, and controls system design. The scope of the installation also included an inlet skid, a separator package, storage tanks, a recycle building, a process heater, and a PLC control system.

**Wargen**

- Design and project management of a pipeline installation.

## Blue Range Resource Corporation

**Hillsdown 2-29**

- Design and project management of a pipeline installation.

**Hillsdown 8-36**

- Pipeline design and installation management.

**Pickwell**

- Design and project management of 5 MMSCFD two well gas gathering system and compressor re-commissioning.

**Silver**

- Pipeline design and installation management.

**Tommy Lakes, B.C.**

- Wellsites and pipelines; permitting, design, drafting, procurement, and construction management.

## Canadian Natural Resources Ltd. - Fort St. John

- Hydrate calculations and methanol injection rates to prevent plugging in wellbore strings and pipelines.

## Capilano Holdings Inc. (AZGERNEFT) - Azerbaijan

- Preliminary process design and cost estimate for a $2 million system of flowlining, field satellites, FWKO, desanding, treating, produced water reinjection, and fuel gas scrubbing.

## Conoco Phillips Canada Resources Ltd

**Dewdney**

- Design and specification for a NGL pipeline injection system.

**Edson**

- Design and project management for the installation of a new group/test separator associated with an existing compressor/dehydration station at Minehead.
- Design, AEUB permit, and project management for the construction of a new wellsite at Peco.

- Design, AEUB permit, and project management for the construction of two new wellsites and pipeline at Grand Cache.

**Hanna**

- Hanna Shallow Gas Program including 25 wellsite tie-ins and 52 km of pipeline.

## Crestar Energy Inc

**Bantry**

- Overall permitting, design, project management, customer liaison, commissioning, and start-up for 2000 B/D oil (20º API) batteries comprised of separators, FWKO, and water disposal systems.

**Cessford**

- Cessford Shallow Gas A Program: 65 wellsites and 50 km pipeline.
- Cessford Shallow Gas B Program: 57 well sites and 46 km pipeline
- Cessford Shallow Gas C Program: 42 well sites and 25 km pipeline.
- Cessford Shallow Gas D Program: 62 well sites and 46 km pipeline.
- Cessford Shallow Gas Program: 41 well sites and 50 km pipeline.
- Cessford Deep Gas Wells: 7 wellsites.

**Jenner**

- Jenner Shallow Gas Program A: 21 wellsite tie-ins with 19 km pipeline.
- Jenner Shallow Gas Program B: 44 well site tie-ins with 40 km pipeline.

**Westerose**

- Project management and engineering for a 15 well gathering system and 3,000 B/D central sour oil battery.

## Devon Canada Corp (formerly Anderson)

**Birley Creek, BC**

- A sour central oil battery with solution gas recovery and gathering/discharge pipeline system. Provided permitting, engineering including mechanical design, equipment specification, procurement, expediting, instrumentation, and controls design.

**Chinchaga**

- Design and project management of installation of 40 km of tie-in pipeline to 18 wells.

**East Eagle**

- A sour 6 MMSCFD, 1050 HP compression facility comprised of group separator, compressor, dehydrator, flare system, pipelines, and modifications to existing oil battery to recover solution gas. Provided permitting, engineering, and project management including mechanical design, equipment specification, procurement, expediting, instrumentation, and controls system design.
- Repair and abandonment permits for pipelines.
- Design and project management for the installation of two test seperators into existing plant header system.

**Edam, Saskatchewan**

- Permitting and relocation of compressor station from Alberta to Saskatchewan.
- Design and project management of a facility including 500 HP compression, inlet separation, dehydration, produced water, gas gathering system, and sales line with an alternate fuel gas system for the nearby sand disposal facility.

**Falher**

- Design and project management for the installation of 30 km of gas gathering system.

**Leland/Horse**

- Engineering and project management for the construction of four 5 MMSCFD sweet natural gas wellsites and the installation of 15km of 6" sour pipeline.
- AENV and AEUB approvals.

**North Nig Creek, BC**

- Permitting, process design, and project management for the installation of a second compression train at an existing 40 MMSCFD compressor station.
- Modifications included the addition of inlet separator, compression (2215 HP), dehydration with dual sales line flowcontrol, a sales pipeline, and power generation.

**Portreeve**

- Design and project management for the installation of a 42 well gathering system.

**West Stoddart**

- Design and project management for installation of two test separators.

**Zaremba, BC**

- Permitting, process design, and project management for the installation of an oil battery with solution gas compression and gathering system.

## Dublin International Petroleum – Syria

- Scoping study of the Tishrine Oil Gathering System.

## Enco Gas Ltd. - Helmet, BC

- Design and project management of gathering and dehydration facilities.

## Enco Gas Ltd.

**North Helmet, BC**

- Co-ordinated the detailed engineering and procurement of facilities equipment for two gas gathering systems, including four wellsites, and pipelines in NE British Columbia.

**Sierra West**

- Design and project management of a 25 MMSCFD sour gas dehydration facility including aerial cooler and power generation.
- Design and installation management of a 6” diameter, 5 km sour pipeline.

**Windflower, BC**

- Design and project management of a gathering system for 6.5 MMSCFD plant.

## Enermark Inc

**Bashaw**

- Design procurement and field supervision for the installation of 15 single well coal bed methane wellsites and associated metering and pipelines.

**Giltedge**

- Design and field supervision of the installation of 8 oil and casing gas production wellsites with 6 km of gathering system.
- Design and field supervision of the installation of 915 b/d water injection facility.

**Medicine River**

- Co-ordination of AEUB License Amendments for 10 pipeline facility.

**Wainwright**

- Design, procurement, and field supervision for the installation of 14 pipelines.

## Enerplus Resources Corp - Bantry

- Design and project management of a 46 well shallow gas program including 25 km of pipelines.

## EnerPlus Resources Fund - Alberta

- Review, updating, and submission of 343 AEUB applications and projects within Alberta

## Enerplus Resources Inc

**Hanna**

- Design and project management of 56 well gathering system with over 25 miles of pipelines. Project was completed under budget and ahead of schedule.
- Detailed engineering, materials specifications, AEUB permits, material procurement, and construction management for the installation of a new compressor package at existing Valhalla facilities.

**Princess**

- Design and project management of a booster compression addition to conserve flare gas. 600 HP, 3-stage compression from 20 psig to 700 psig.
- Design and project management of 5.5 km of 6" emulsion pipeline.

## Grad & Walker Resources Ltd.

**Bonnyville**

- Design and project management of a 1200 HP compression/dehydration facility including 10 km 4” / 6” gathering system.

**Fort Kent**

- Design and pipeline installation management.

**Martineau East**

- Design and pipeline installation management.

**Mitsue**

- Design and installation management of two pipelines.

## Gulf Canada Resources Limited

**Atlee Buffalo**

- Atlee Buffalo Shallow Gas Program - 12 well tie-ins and 11 km pipeline. Dual zone completion tie-in at 4 MMscfd. Deep well tie-in at 1.5 MMSCFD.

**Cessford**

- Cessford Shallow Gas Program - 64 well site tie-ins and 56 km of pipeline.

**Jenner**

- Jenner Shallow Gas program with 100 well site tie-ins.
- Rebuilt and modified Jenner 15-23 51" separator.
- Project manager for the installation of 7840 HP Ariel JGH4 compressor and 5 MMSCFD dehydrator.

**Red Earth**

- 11,000 $m^3$/d water flood simulation and study of surface equipment and pipeline systems.

**Swan Hills**

- 13,000 $m^3$ /d water flood simulation study of existing equipment and pipeline systems.
- Conversion of two Batteries into Satellites and installation of a new inlet header system, pumps, and associated equipment upgrades for Swan Hills Unit #1.
- Conducted a mechanical reliability study for the 65 km of produced water pipelines, 50 km gas gathering, and oil flowlines (ranging from 4”Ø to 12”Ø). The system flows were 7500 B/D oil, 50 MMSCFD gas, and 180,000 B/D water.
- Conducted system improvement studies for the above gas gathering and produced water injection pipelines.
- Carried out the economic evaluations for various production gain scenarios involving reliability improvement for the gathering and produced water injection systems.
- Investigated the reliability effect, environmental risk reduction, and the production improvement associated with the rerouting of the production from seven oil wells. The system flows were 4 MMSCFD gas, 650 B/D oil, and 24000 B/D water.
- Designed flare system modifications at the miscible flood plant in order to avoid the utilization of the flare pit. The modifications included a flash drum system to separate the phases - gas to flare, liquids reinjected in the NGL line.
- Prepared equipment specifications for the stated modifications at the miscible flood plant and conducted the bid evaluations and procurement.

## Husky Oil Operations Ltd.

**Hamburg**

- Design, procurement, and field supervision for the installation of approximatley 20 km of insulated pipelines.

**High Level**

- Design, procurement, and field supervision for the installation of approximately 50 km of pipelines.

## IPE Bolivia SRL - Santa Cruz, Bolivia

- Multiphase pipeline simulation.
- Pipeline simulations to increase gas production from 2 MMSCFD to 16 MMSCFD including five compressor stations and pipeline looping.

## J.M. Huber Canada Ltd. - Sierra

- Pipeline design and installation management.

## K2 Energy - Cutbank, Montana

- Design, engineering, and project management for the tie-in of 7 low pressure gas wells and gathering system including booster compressor (325 HP), dehydration, sales compressor (250 HP), and sales pipeline.
- Permitting including Montana Flood Plain & Floodway Management, Glacier County Planning, Glacier County Sanitation, Glacier County Roads, FAA, Dept. of Environmental Quality, Montana Land Use License, Montana Department of Transportation, ASACoE, Federal Rivers & Harbours, and Federal Clean Water.

## Luscar Oil & Gas Ltd.

**Donalda**

- Design and project management of sweet gas wellsite facilities, 4 MMSCFD, and 3” diameter, 4 km pipeline.

**Limited**

- Design and project management of a pipeline installation.

**Minola**

- Design and project management of a pipeline installation.

**Oak**

- Design and project management of a pipeline installation.

## M.L. Cass - Acadia Valley

- Design and project management of a pipeline installation.

## Murphy Oil – Tupper West, NE BC

- EPCM scope currently underway for a 180 MMSCF/d sour natural gas processing plant. Design features of associated pipelines: 25 km long 18” diameter sweet sales gas pipeline and a 5 km long 3” diameter sour sales gas pipeline.

## Nova Chemicals - Sarnia, Ontario

- Calculations for the prevention of hydrate formation in a liquids ethane pipeline.

## Numac Energy Inc.

**Calling Lake**

- Design and project management of four 1 MMSCFD wellsite tie-ins and 4 km of 3” and 4” pipeline installation.

**Clarke Lake**

- DBM, budget, detailed engineering, material specs, bid documentation, BC government permits, material procurement and construction, contract award, as well as project management through to completion, for an 8.5 km 4” pipeline, wellsite installations, and tie-in to existing dehy plant (b-89-K, 94-J-10).

**Forsyth, Manatokan, Leo and Maple Glen**

- Responsible for various gas well tie-ins and gathering system pipelines.

**Fort Nelson, BC**

- Prepared the DBM and the project control cost budget for an 8.5 km, 4”Ø pipeline.
- Responsible for the detailed engineering, material specifications and bid documentation, material procurement and construction contract award as well as project management through to completion.

**Joffre**

- Project manager for the preliminary engineering of a crude oil/butane blending facility. Responsible for developing the project definition and AFE preparation.
- Designed and managed installation of $CO_2$ and water injection pipelines for pattern 10 and 11 into five injection wells.
- Designed and managed installation of emulsion pipelines for patterns 10 and 11 through 3 production wells.

**Otter**

- Pipeline design and installation management.

**Tommy Lakes**

- DBM, budget, detailed engineering, material specs, bid documentation, BC government permits, material procurement and construction contract award, as well as project management through to completion, for wellsite installations (4 new wells) and gathering pipeline (4.5 km 6” and 3.5 km 4”).

**Tommy Lakes**

- DBM, budget, detailed engineering, material specs, bid documentation, material procurement and construction contract award, as well as project management through to completion, for wellsite installations (7 new wells), and gathering pipeline (14 km 4”).
- DBM, budget, detailed engineering, material specs, bid documentation, material procurement, and construction contract award, as well as project management through to completion, for wellsite installations (6 new wells) and gathering pipeline (8 km 4”, 6 km 6").

## Penn West Petroleum Ltd.

**Esther**

- Gathering system design and installation management for the connection of 17 oil wells.
- Project management of the installation of inlet separation, compression (500 HP), and dehydration for solution gas.
- Project management of the twinning of existing water injection facility.

**Firebird**

- Install water disposal / condensate re-injection pump package, gas driven.
- Design and project management of 7 km of 6” pipeline and three wellsite meter facilities.
- Design and installation management of a grassroots gas plant. The scope included a five well tie-in, wellsite facilities, 18 km of pipeline (4 " and 6"), inlet separation, 750 HP compression, dehydration, and water disposal.
- Installed incremental 500 HP inlet compression.
- Satellite plant communications.

**Hoosier, Saskatchewan**

- Conceptual engineering, costing, detailed design, procurement, construction management, commissioning, and start-up services for a grassroots 1,000 B/D heavy oil battery complete with a 6,000 B/D water disposal system.
- 15 well tie-in.
- 35 km of gathering system.

## Petrolia Oil and Gas Ltd. - Cactus Lake

- Pipeline design and installation management.

## Placer Dome Inc. - Milligan

- Pipeline design and installation management.

## Poco Petroleums Ltd. - Sierra

- Pipeline design and installation management.

## Remington Energy Ltd. - Pouce Coupe, BC

- National Energy Board pipeline permit (14 km).

## Rigel Oil and Gas Ltd. - Peggo

- Pipeline design and installation management.

## Royal Trust Energy Resource Corp. - Ferrier

- Pipeline design and installation management.

## Rozsa Petroleum Ltd. - Carmangay

- Engineering and procurement for five (5) test separators and one (1) group separator.
- Engineering and procurement for oil battery, gathering system and compression.

## Samedan Oil of Canada Inc. - Drayton Valley

- Sour gas 3” pipeline / wellsite facility including line heater.

## Saxon Petroleum Inc.

**Bearflats**

- Pipeline design and installation management.

**Garrington**

- Pipeline design and installation management.

**Swallwell**

- Pipeline design and installation management.

## Slade Energy - Rainbow Lake

- Design and project management of 12 miles of 4, 6, 8, 10 inch gathering system and wellsite facilities.

## Solex Energy Inc. - Princess

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

## Summit Resources Limited

**Drake**

- Pipeline design and installation management (35 km).

**Woodrush, BC**

- Pipeline design and installation management.

## Suncor Inc. - Lagarde, BC

- Pipeline design and installation management.

## Transwest Gas Systems Ltd.

**Beaver Crossing**

- Pipeline design and installation management.

**Bonnyville South**

- Evaluated the operation of an existing gathering system through pipeline pressure drop surveys and modeling work.
- Recommended the relocation of two (2) compressors and the recylindering of two (2) other units.

**Cherry Grove**

- Pipeline design and installation management.

**Ethel Lake**

- 5 MMSCFD, 5 well tie-in with dehydration facilities.

**Kehiwin**

- Design and project management of a sweet gas compression (1478 HP) and dehydration facility including a mix of 4” and 6” diameter pipe in a 10 km gathering system.

**Marie Lake**

- Pipeline design and installation management.

**Provost**

- Design, permitting, procurement, and project management (including mechanical design, instrumentation and controls, equipment specifications, purchasing, expediting, scheduling, cost control, reporting) for a 3000 BPD (23 API), 27,000 BWPD oil battery. The facilities included a gathering system, oil treating, water treating and disposal, as well as solution gas compression. The equipment included an inlet heat exchanger, a free water knock-out, a treater, 6 storage tanks, a water injection package with biocides, descaling, corrosion inhibitors and demulsification, a recycle package and a solution gas compressor for 2 MMSCFD, MCC/air compressor/office skid.

**Winnefred North**

- Design and installation management of a 1478 HP screw compressor.
- Addition of two (2) 1478 HP compressors to the existing plant, upgraded the dehydration facilities, and installed 35 km of gathering system complete with two (2) satellites.
- Piping design of gathering system expansion.
- Designed multi-well satellite skid.

**Winnefred South**

- Addition of a booster screw compressor (1478 HP).
- A 40 km gathering system involving a mixture of 3”, 4”, and 6” pipeline c/w two (2) satellites.