



# ONSHORE GAS Facilities & Pipelines



# Gas Gathering & Processing



Equinox Engineering Ltd. is a world class provider of engineering services for the oil & gas marketplace, in Australia and worldwide.

We focus on design and installation of gas processing facilities and pipelines.

Founded in 1997, Equinox has executed over 5,000 projects around the world – with offices in Brisbane (Australia), Calgary (Canada) and Pune (India).

Equinox has been working with Australian clients since 2010. Our Brisbane office is focused on onshore gas processing projects for coal seam gas and unconventional gas.

## SURAT BASIN CSG – SCOTIA CF1 GAS PLANT EXPANSION

The Scotia project is the new benchmark for cost effectiveness regarding CSG Gas Processing Facilities. The project successfully utilised:

- Standard Designs
- Prefabrication & Modularisation
- Steel Driven Piles
- Global sourcing
- Best practices from Canada and Australia

By leveraging the Equinox Standard Design, the CF1 facility was expanded from 30 TJ to 90 TJ capacity.

Includes main compression, booster compression, TEG dehydration, sales gas metering, flare, water treatment, power, utilities.

# Gas Processing Expertise



## COAL SEAM GAS

Equinox provides a complete range of engineering services for Coal Seam Gas (CSG) facilities.

Equinox specialises in Coal Seam Gas developments including field facilities (wellsites, gathering lines), compression (field and nodal), Central Processing Facilities (gas treatment, water treatment, power generation) and transmission pipelines.

We have executed hundreds of unconventional gas projects including coal seam gas, shale gas and tight gas.



**POWER GENERATION**

Equinox has significant experience with power generation facilities. Equinox expertise includes natural gas fired, reciprocating engine generators (gensets); combined cycle Gas Turbine Generators (GTG); Cogeneration; Single or Dual fuel for the power plant feedstocks as well as Steam Turbines.



**COMPRESSION**

Equinox has successfully executed hundreds of compression projects. Our extensive gas compression experience includes centrifugal, reciprocating, rotary screw and vane type compressors for all sweet and sour gas applications, as well as gas turbine, natural gas engine, steam turbine and electric drivers.



**WELL SITE & FIELD FACILITIES**

Equinox has designed and completed thousands of well site tie-ins as well as gathering systems, trunk and group lines. We have industry leading expertise in unconventional, multi-well wellpad design as well as CSG single well designs.



**LIQUIDS RECOVERY**

Equinox has significant experience with liquids recovery from natural gas streams. We have executed numerous projects utilizing refrigeration, hydrocarbon dew point control and liquid recovery plants including propane refrigeration, mixed refrigerant plants, Joule Thompson (J-T) refrigeration, turbo-expanders, de-ethanizers, depropanizers and de-butanizer facilities.

# Selected Projects - Coal Seam Gas



**SURAT BASIN – SCOTIA CSG**

FEED, Detail Design and installation for brownfield plant expansion from 30 TJ to 90 TJ utilizing existing Standard Design package for gas processing plant design. Project includes inlet gas manifold, main compression, booster compression, TEG dehydration, fuel gas skid, sales gas metering, utilities, as well as water treatment.

Completely modular design for simplified execution and construction in the Surat basin. Utilisation of steel piles for structural foundations for piperack and equipment modules.



**SURAT BASIN – FAIRVIEW CSG**

Development of 'Standard Design' 60 TJ Central Processing Facility (including inlet header, slug catcher, compression, dehydration, coalescer and metering).

Design modularized for simplified execution and construction in Surat / Bowen basin regions, with pipe rack module dimensions designed for travel on Queensland roads without need for escort or pilot vehicles. Option for gas engine or electric drive compressors. Extensive civil engineering review of steel piles compared to concrete pads and piles for structural foundations for piperack and equipment modules.

# Selected Projects



**PLACID SOUR COMPRESSOR**

FEED, Detail Design and installation for 60 TJ sour processing facility with 16,000 bpd of liquids. Fast tracked (9 month) schedule including engineering through to commissioning and start-up. Equipment includes inlet module for multiphase gathering lines, inlet separation, compression, dehydration, emulsion pump package, instrument air, fuel gas, MCC building, power generation, LP and HP flare, office / control building.



**GLACIER SOUR GAS PLANT EXPANSION**

Equinox executed the FEED and Detail Design for the brownfield sour gas plant expansion to 250 TJ capacity. Newly installed facilities include refrigeration, condensate stabilization, compression, vapour recovery unit, power generation as well as an upgraded amine sweetening plant.



**KAKWA RIVER SOUR GAS COMPLEX**

FEED, Detail Design and installation of 250 TJ gas processing facility for sour, liquids rich gas.

Phase I (50 TJ) includes inlet separation, condensate stabilization, inlet compression, sales compression, refrigeration, de-ethanizer, vapour recovery unit, power generation, recycle system, storage for produced water, condensate and NGL.

Phase II (200 TJ) includes Detail Design and installation of an additional processing train. Major equipment includes inlet separation, inlet compression (14,200 hp), condensate stabilisation (5900 bbl), dehydration, turbo expander (17,799 bbl C2+), centrifugal sales compression (26,440 hp), amine sweetening and gas turbine power generation (12 MW).

# Selected Projects



## SIMONETTE GAS PLANT

FEED, Detail Design and installation for the brownfield sweet gas plant expansion to 75 TJ capacity. Newly installed facilities include slug catcher, liquids/liquids separator, inlet separation, condensate stabilization, inlet/sales compression, refrigeration, measurement, produced water injection, storage for produced water and condensate. Facilities provide incremental LPG production of 2,700 bpd and stabilized condensate production of 9,000 bpd.



## WEST DOE SOUR GAS PLANT

FEED and Detail Design for a sour gas plant with three process trains totaling 100 TJ with process gas conditions of 2.6% H<sub>2</sub>S and 3.0% CO<sub>2</sub> from the Montney.



## MUSREAU COMPRESSION HUB

FEED, Detail Design and installation of 50 TJ single train gas plant. Facility includes inlet separation, condensate stabilization, inlet compression, sales compression, refrigeration, de-ethanizer, vapour recovery unit, power generation, recycle system, storage for produced water, condensate and NGL.



## PIPESTONE LIQUIDS HUB

FEED, Detail Design and Installation of 30,000 bbl/d Liquids Terminal & Pumping Station, including 22,000 bpd of sour condensate and 8,000 bbl/d of produced water. Major equipment includes inlet separation, condensation stabilization, mercaptan removal, compression, pump packages, condensate storage (15,000 bbl), water storage (10,000 bbl), power, utilities.



## POUCE COUPE SOUR GAS PLANT

FEED, Detail Design and installation of 60 TJ dual train, sour gas plant. Processing trains (2 x 30 TJ) include inlet separation, inlet/sales compression, amine sweetening, refrigeration, liquid fractionation and stabilization, acid gas compression, vapour recovery, recycle system, storage for produced water, condensate and NGL.



Equinox delivers focused and experienced

## **Premium Teams**

customized with the best

## **Technical Expertise**

to align with

## **Client Culture**

to ensure repeatable and

## **Successful Projects**



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Australia | Canada | USA | India

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