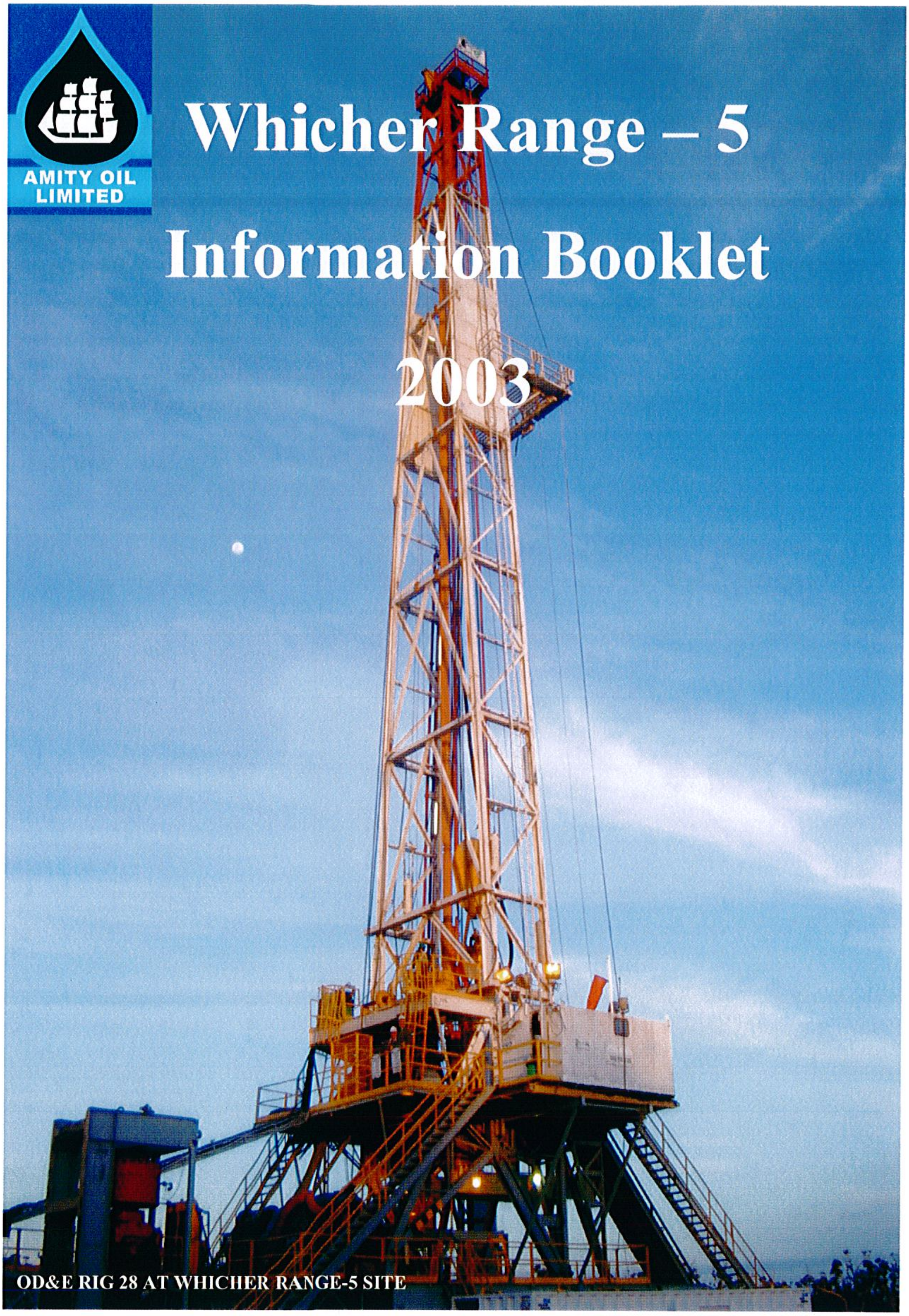
AMITY OIL LIMITED

Whicher Range – 5

Information Booklet

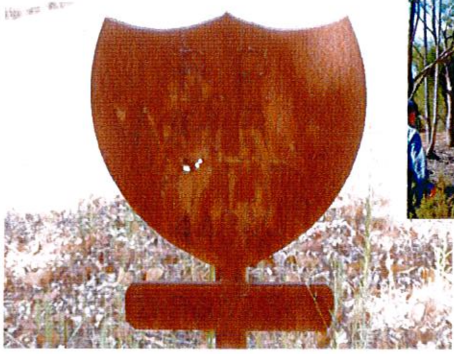
2003



OD&E RIG 28 AT WHICHER RANGE-5 SITE

History of Whicher Range Gas Field

The Whicher Range Gasfield is located 21 kilometres south of Busselton. The field was discovered in 1969 and by 1982 three wells had been drilled into the Permian Age Sue Group, where gas flows of up to 1.9 million cubic feet per day from individual drillstem tests, with an aggregate of 5 million cubic feet per day from all zones tested in one well were obtained, but were not commercial at that time



Whicher Range 2 and 3 Well Sites

Amity and its farmin partner, Pennzoil Exploration Australia, Inc. ("Pennzoil"), believed that the Whicher Range gas field could be made commercial by the application of modern reservoir stimulation technology. By June 1998, Pennzoil had drilled and stimulated Whicher Range-4 and re-entered and stimulated the Whicher Range-1 well. Despite wide intersections of reservoir and pre-stimulation flows of up to 2 million cubic feet per day, gas flows after several stimulations were a disappointing 1.2 to 1.4 million cubic feet per day from each well.

Amity resumed Permit operatorship in August 1998 and appointed a firm of international reservoir engineering consultants to determine why the Pennzoil stimulation did not work as expected. After studying the geological and engineering data and conducting extensive tests on Whicher Range drill core, the consultants concluded that the reservoir formations were damaged (reduced in permeability) by the hydraulic fracture fluids used in the stimulation procedure. The consultants indicated that this type of formation damage could be avoided in a new well by the use of more appropriate drilling and stimulation fluids. The consultants also indicated that formation damage could be remediated to some extent in the existing wells, by liquid carbon dioxide injection.

A programme of remedial stimulation designed by the consultants commenced in late July 1999 on the Whicher Range-4 well and was essentially completed by 1st October, 1999. Flow tests after the carbon dioxide injection, established a stabilised gas flow rate of 2.5 million cubic feet per day on a 3/8 inch choke. This post-remediation doubling of gas flow rate, while towards the lower end of expectations, is encouraging and clearly indicates that the remediation programme has reduced reservoir damage and increased gas flow. Analysis of the test results showed that considerable reservoir damage remains, supporting the consultants' conclusions that an undamaged reservoir would be capable of producing gas at substantially higher flow rates..

Earthworks of the Whicher Range-5 Location

Seismic and drilling to date on the Whicher Range field suggests it has an in-place gas resource of between 1 and 4 trillion cubic feet. If this gas can be produced commercially, it would be of major significance to Amity's shareholders and the south-west Australian gas market. The remedial stimulation programme has moved the project closer to commerciality and has given Amity the confidence to move to drilling the Whicher Range-5 well..

Korean Majors Farmin:

In April 2003 Amity and US-based GeoPetro Resources Company entered into a farmin agreement with Korea National Oil Corporation (KNOC) and Seoul City Gas Company Ltd (SCG) that will see the two Korean companies commit up to $6.7 million for exploration of the Whicher Range Gasfield. The deal will earn KNOC and SCG a 20% and 15% interest respectively in Exploration Permit EP 408 by conducting and co-funding exploration activities, and drilling one new well at the Whicher Range field.

KNOC is Korea's State-owned oil and gas exploration and production company, with extensive international interests, including production in the Middle East, South America, Europe, Africa and Asia. SCG, a publicly listed company, is the second largest gas distributor in Korea and currently supplies over one million customers across Korea. The Whicher Range deal represents both companies' first venture into Australia..

The farmin agreement became active on 29 July when the State Development minister approved the renewal of the EP 408 permit.

Seoul City Gas **Korean National Oil Company**

Current Activities:

In July 2003 Amity announced that it had signed a letter of intent with Australian drilling contractor, Oil Drilling and Exploration Pty Ltd, ("OD&E") to import their Rig 28 from Indonesia, to drill the Whicher Range-5 well. Drilling commenced, or spudded om October 11th 2003.

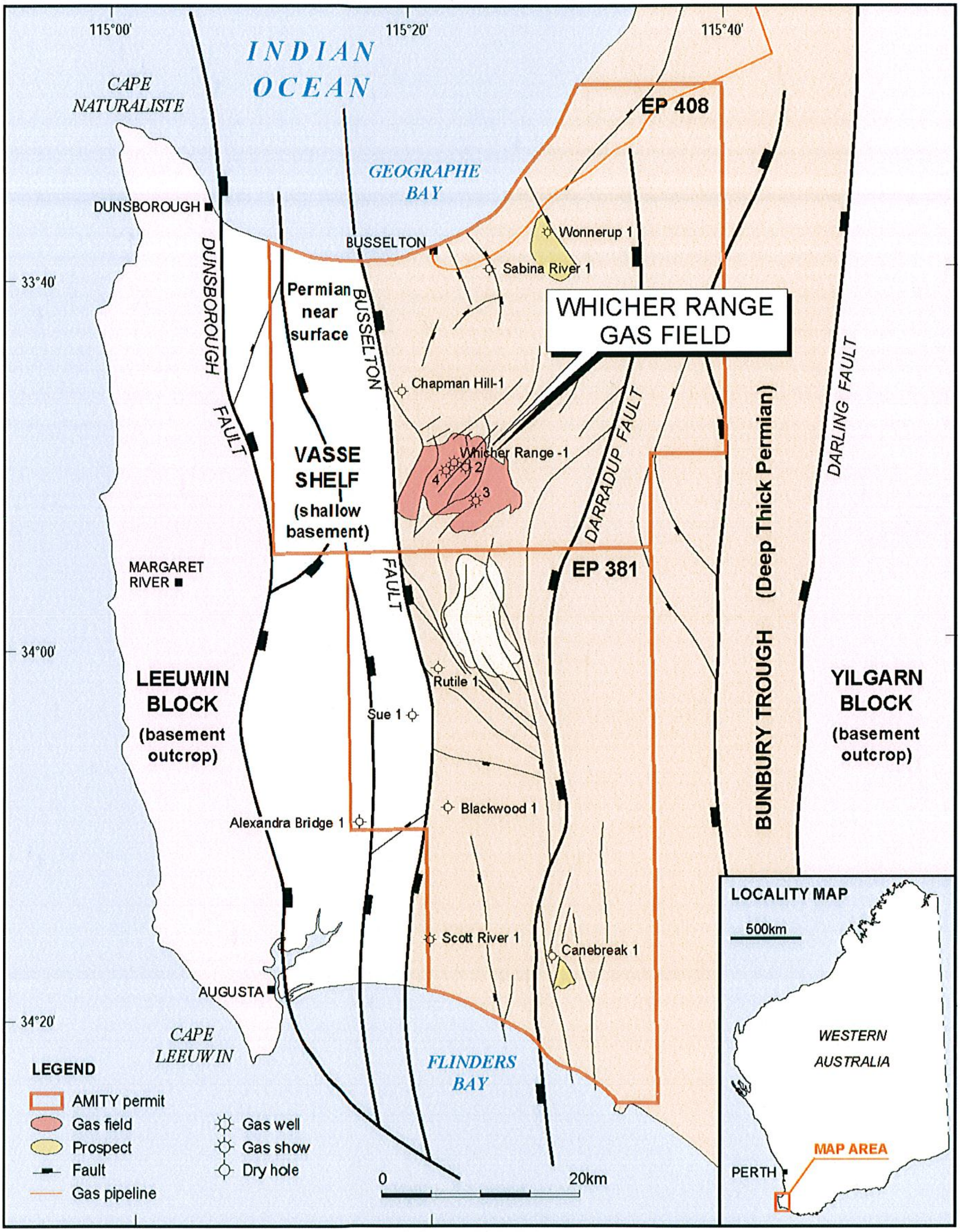
Rig 28 is equipped with Top-Drive and 10,000 psi Blowout-Preventers and with 1,500 HP of power available, is ideal for drilling the 4,300 metre deep Whicher Range-5 well. The well is programmed to be drilled in 50 days.

Whicher Range-5 well will use significantly different drilling and completion techniques compared to those employed on any of the previous wells in the field.

The rationale underlying the new techniques is to minimise formation damage during drilling and stimulation to maximise gas flows. The reservoir is proposed to be drilled underbalanced with air. Air-mist drilling has been used successfully for over 50 years worldwide and in Australia.

If a commercial gas flow is obtained (greater than 5 million cubic feet per day), the well will be completed for production.

Should the well require stimulation to flow commercially, a full-scale oil-based monobore "frac" programme is proposed. This is an innovative technique involving the use of carbon dioxide and gelled oil as a fracture fluid. This system is based on recently developed procedures with proven success in the USA, where some 80,000 similar "tight-gas" wells produce around 17% of domestic production.



LOCATION MAP

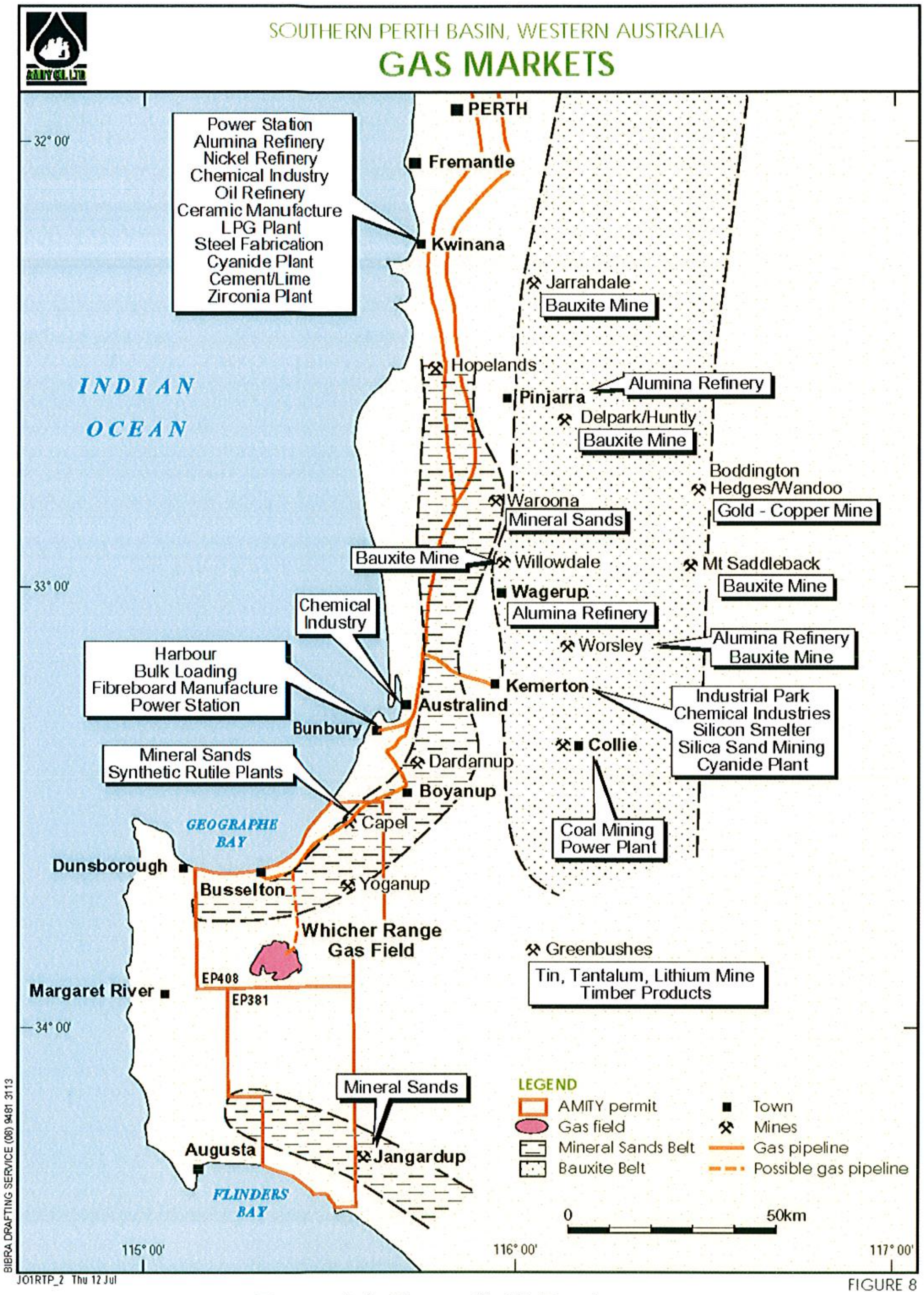


FIGURE 8

Potential Greenfield Projects

Aluminum Smelter	**250 TJ/D**
Base Load Power	**250 TJ/D**
GTL – Methanol	**180 TJ/D**
FT DIESEL	**500TJ/D**
AMMONIA	**75 TJ/D**

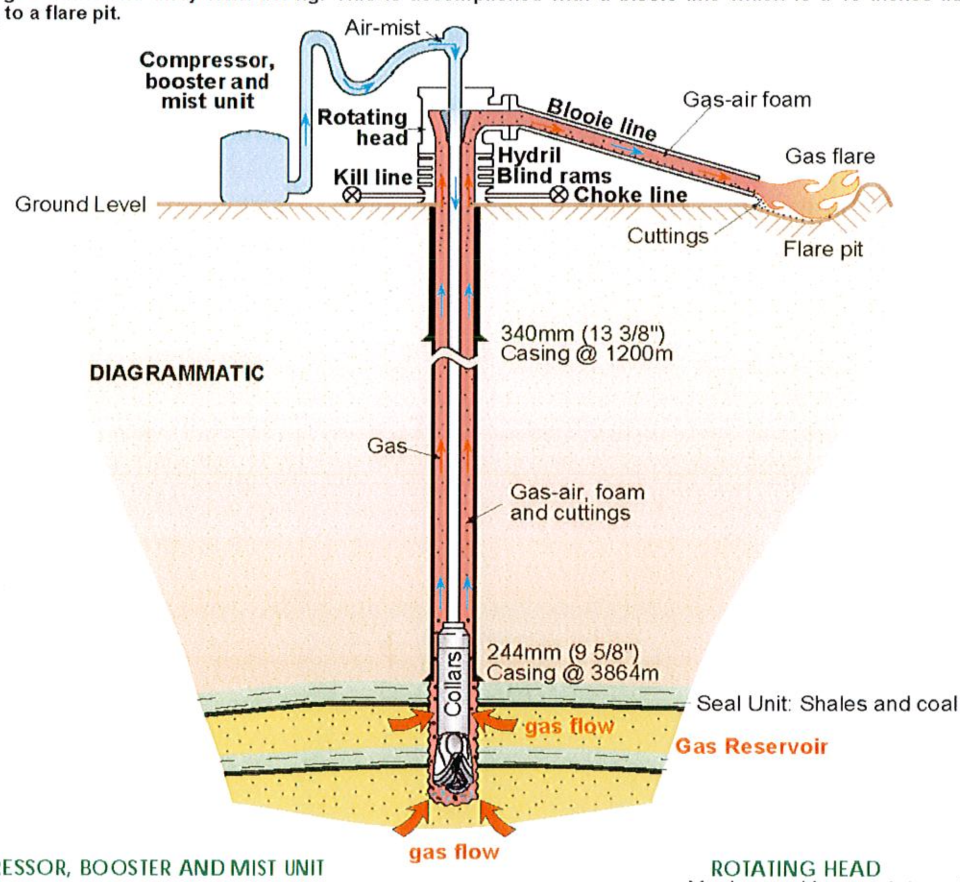
WHICHER RANGE-5 WELL

UNDERBALANCED AIR-MIST DRILLING

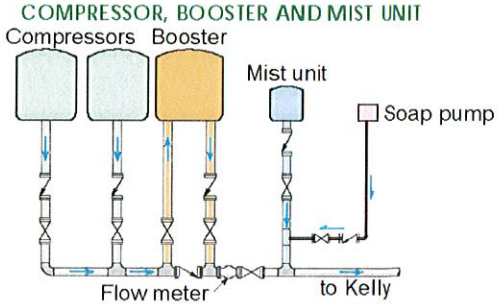
Air-mist drilling at Whicher is believed to be the most appropriate drilling method for the Sue Group reservoir section for the following reasons:

- *reservoir gas flow capacity determined while drilling (continuous gas testing),*
- *minimum reservoir damage to water sensitive reservoir zones,*
- *ability to complete the well for production while flowing gas, thus avoiding reservoir damage from cementing operations and kill fluids,*
- *increased penetration rate,*
- *longer bit life.*

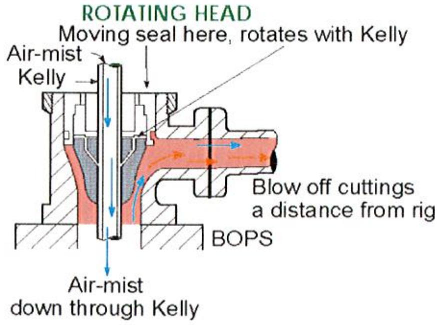
In air-mist drilling a rotating head is necessary to seal around the drill-string and allow drill cuttings to be directed out the flanged outlet and away from the rig. This is accomplished with a blooie line which is a 10 inches I.D. flowline leading to a flare pit.



COMPRESSOR, BOOSTER AND MIST UNIT



ROTATING HEAD



BLOOIE LINE

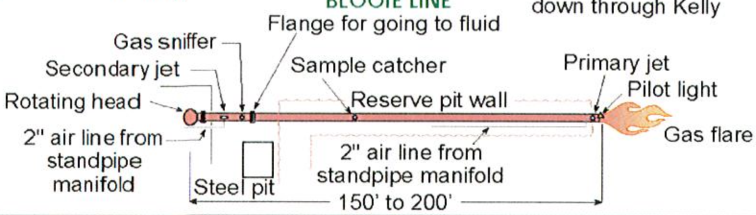


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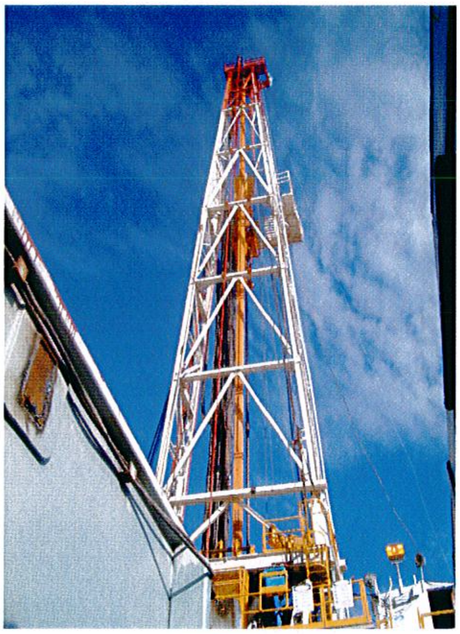
FIGURE 7

Background into Drilling

Introduction

Drilling for salt water was performed over 2000 years ago, however the rotary drilling technique used today was not in common use worldwide until the early 1900's. Rotary drilling boomed after the Spindletop discovery well was drilled using the technique during 1901 in Texas. The well flowed uncontrolled to the surface at 100,000 bbls per day for several days before being brought under control.



Drilling Aims

1) Accurately evaluate the hydrocarbon potential of the geological formations intersected.

2) Preserve the formation's fabric to allow an accurate assessment of the hydrocarbon potential and productivity.

3) Successfully complete the drilling of the well allowing a safe abandonment or installation of production equipment.

4) Adhere to safe drilling practices.

5) Achieve maximum penetration rate (cost saving).

Functions of a Drilling Rig

1) Hoisting - The lifting of the drilling rods (or drillstem) in and out of the hole.

2) Rotating - Rotating the drill stem to allow the cutting action of the drill bit at the base of the rods to penetrate the subsurface.

3) Circulating - Circulation of a drilling fluid from the surface down the drill stem and around the outside of the drill pipe removes cuttings from near the base of the hole to the surface. This prevents the drill pipe and bit becoming clogged or jammed in the hole. Circulation also cools and lubricates the drilling bit.

4) Controlling - The drilling fluid system also provides a column of fluid within the borehole that counterbalances the pressures encountered in the subsurface. This function helps prevent high-pressure fields in the subsurface rising to the surface in an uncontrolled manner (blowouts). A further precaution to prevent blowouts are blow out preventors (BOPs) these pieces of equipment act as a valve closing around the drill pipe and sealing the drilled hole from the surface. The BOPs are usually located immediately below the rig's superstructure.

BOP (Blow Out Preventors) below the floor

Casing a Well

Enables the well to be more easily controlled and in the case of producing wells linked to production equipment. This operation is the lining of the hole with threaded hollow steel pipe, which can be screwed together to form continuous length of pipe called casing. Casing is performed on all wells near the surface as it allows the BOPs to be attached and prevents the drilling fluid which is circulated in the hole under pressure from being lost into the unconsolidated sediments near the surface.

Successive lengths of casing or strings are set progressively deeper as the hole is drilled. These reduce in external/internal diameter to allow the string to pass through the preceding string. The casing is then cemented around its external surface to the walls of the hole (which is of a slightly larger diameter) by pumping cement down the casing and out the bottom and thus to the surface in the annulus or void surrounding the casing.

How are wells evaluated for hydrocarbons?

1) Mud logging - The monitoring of the drilling fluid (mud) and rock chips(cuttings) circulated back to the surface from the bottom of the drill hole. The fluid is sampled for the presence of gas and the cuttings examined for residual hydrocarbons present in their pores. Additional parameters such as drill rate, circulation pump rate, drilling bit details etc. are also recorded.

2) Electric Logs - This operation is usually performed when drilling has stopped and involves lowering instruments down the hole on a steel cable. The instruments record the subsurface properties and transmit electric signals to the surface via wires in the steel cable,

Down hole instruments record the following responses:

a) Radioactivity

b) Electrical

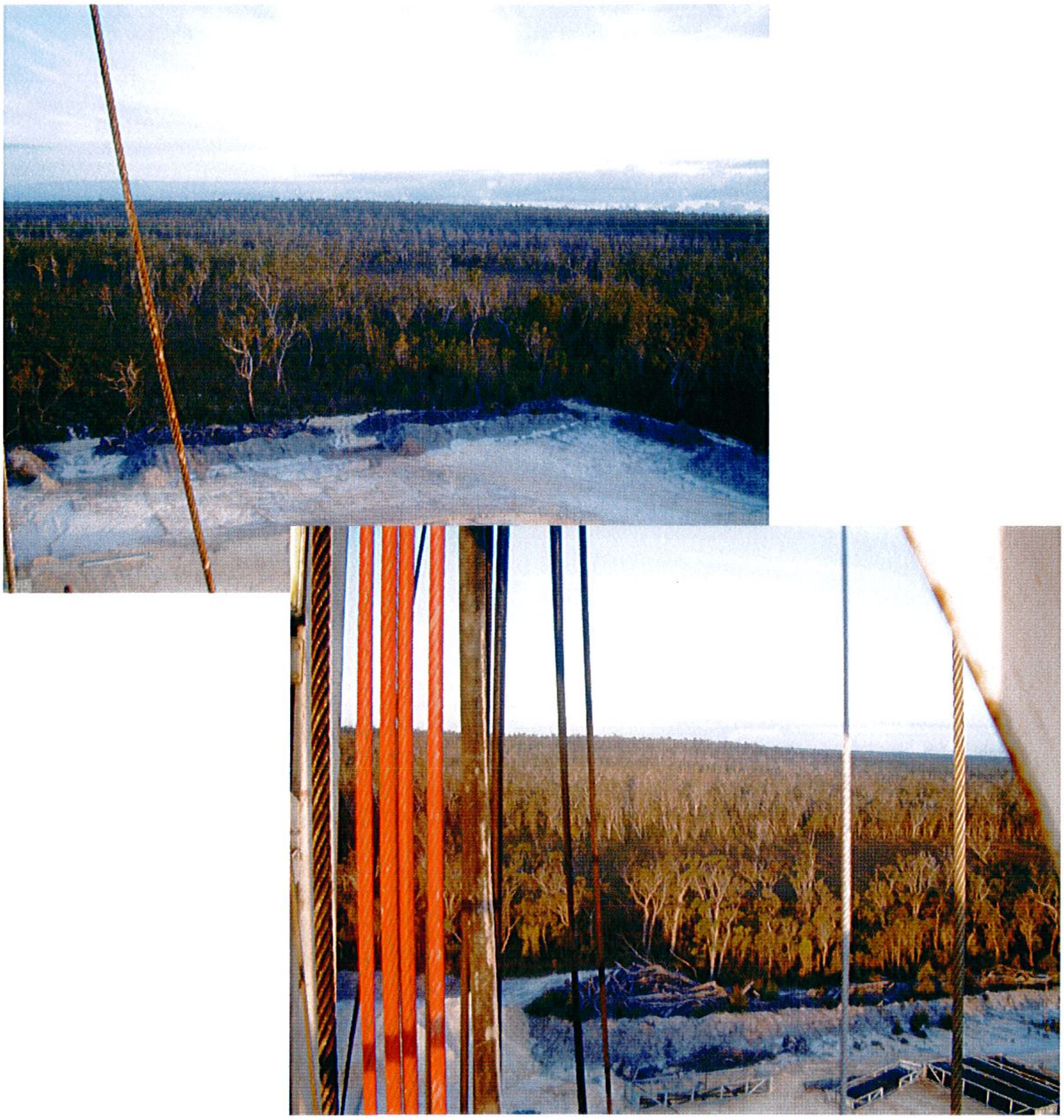
c) Acoustic

d) Fluid /rock samples (Repeat formation tester/side wall cores)

Electric logs combined with each other and other evaluating procedures help determine the saturation of oil versus water in the reservoir which ultimately enables the volume of hydrocarbon present to be calculated.

Coring - A solid cylinder (core) of rock is obtained in key zones of the well by using a special bit which cuts and captures the core of a predetermined length usually only a few metres long. The core is retrieved at the surface and provides valuable information about the rocks cored, usually a reservoir rock, i.e. porosity, permeability, structuring, bedding etc.

4) Drillstem testing (DSTs) - DSTs are essentially a valve mechanism, with pressure gauges attached, which can be lowered to a prescribed depth in the well bore via the drill pipe to test the fluid flow of the well. The DST tool has the ability to isolate a discrete test zone usually a 10-20m interval by sealing above and below the zone with sealing apparatus called packers. Valves in the tool are then opened exposing the formation to surface pressures and hopefully allowing a fluid flow to the surface. Pressure gauges, within the tool or more particularly the plot of pressure versus time during the test allows the derivation of key reservoir and hydrocarbon properties which in conjunction with electric log results determine the productivity of the hydrocarbon find.

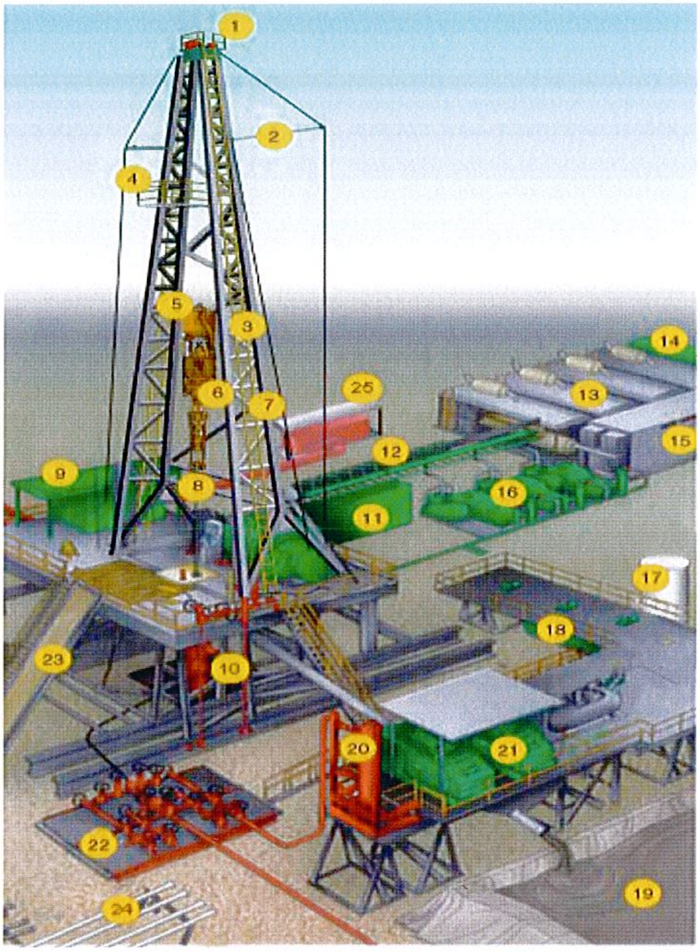


View of Forest from the Monkeyboard

of Rig 28 at Whicher Range

Equipment used on a Drilling Rig

- Crown Block
- Catline Boom and Hoist Line
- Drilling Line
- Monkeyboard
- Traveling Block
- Top Drive
- Mast
- Drill Pipe
- Doghouse
- Blowout Preventer
- Water Tank
- Electric Cable Tray
- Engine Generator Sets
- Fuel Tank
- Electrical Control House
- Mud Pumps
- Mud Mixing Tanks
- Mud Tanks (Pits)
- Sump
- Mud-Gas Separator
- Shale Shakers
- Choke Manifold
- Pipe Ramp
- Pipe Racks
- Accumulator



Additional rig components not illustrated

- Catwalk
- Cellar
- Degasser
- Desander
- Desilter
- Drawworks
- Drill Bit
- Drill Collars
- Driller's Console
- Mousehole
- Ram BOP
- Substructure

1. Crown Block

An assembly of sheaves or pullies mounted on beams at the top of the derrick. The drilling line is run over the sheaves down to the hoisting drum

2. Catline Boom and Hoist Line

A structural framework erected near the top of the derrick for lifting material.

3. Drilling Line

A wire rope hoisting line, reeved on sheaves of the crown block and traveling block (in effect a block and tackle). Its primary purpose is to hoist or lower drill pipe or casing from or into a well. Also, a wire rope used to support the drilling tools

4. Monkeyboard

The derrickman's working platform. Double board, tribble board, fourable board; a monkey board located at a height in the derrick or mast equal to two, three, or four lengths of pipe respectively.

5. Traveling Block

An arrangement of pulleys or sheaves through which drilling cable is reeved, which moves up or down in the derrick or mast.

6. Top Drive

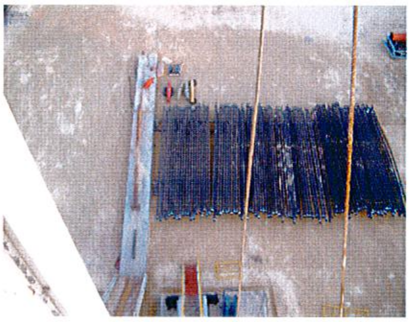
The top drive rotates the drill string end bit without the use of a kelly and rotary table. The top drive is operated from a control console on the rig floor.

7. Mast

A portable derrick capable of being erected as a unit, as distinguished from a standard derrick, which cannot be raised to a working position as a unit.

9. Doghouse

A small enclosure on the rig floor used as an office for the driller or as a storehouse for small equipment. Also, any small building used as an office or for storage.



8. Drill Pipe

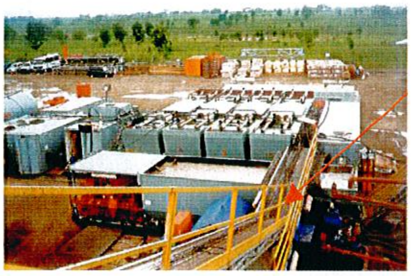
The heavy seamless tubing used to rotate the bit and circulate the drilling fluid. Joints of pipe 30 feet long and are coupled together with tool joints.

10. Annular Preventer

A large valve, usually installed above the ram preventers, that forms a seal in the annular space between the pipe and well bore or, if no pipe is present , on the well bore itself.

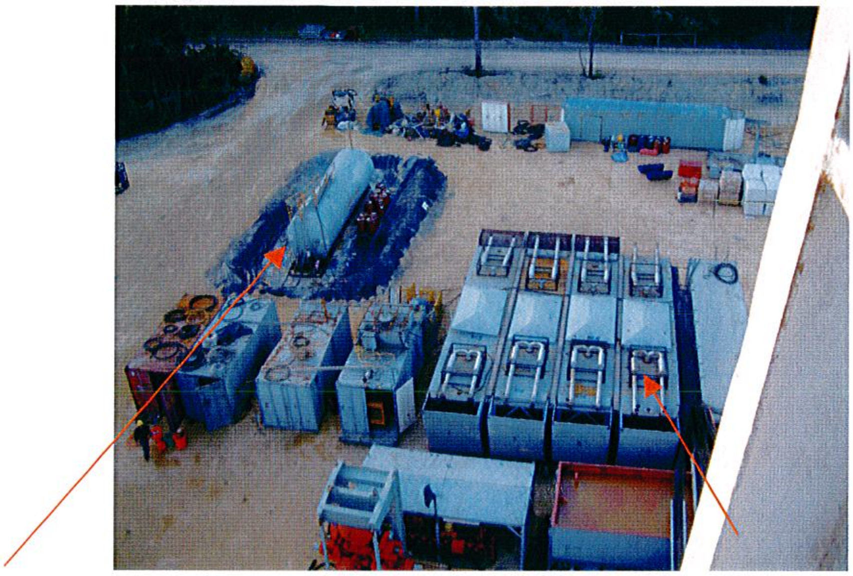
11. Water Tank

Is used to store water that is used for mud mixing, cementing, and rig cleaning.



12. Electric Cable Tray

Supports the heavy electrical cables that feed the power from the control panel to the rig motors



14. Fuel Tank

Fuel storage tanks for the power generating system

13. Engine Generator Sets

A diesel engine, along with a mechanical transmission and generator for producing power for the drilling rig.

15. Electrical Control House

On diesel electric rigs, powerful diesel engines drive large electric generators. The generators produce electricity that flows through cables to electric switches and control equipment enclosed in a control cabinet or panel. Electricity is fed to electric motors via the panel.

16. Mud Pumps

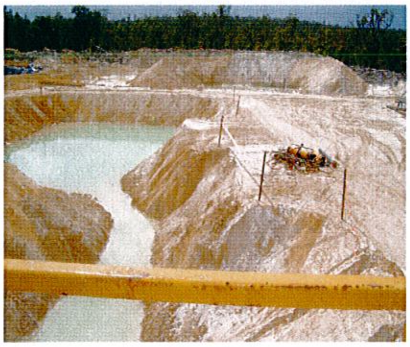
A large reciprocating pump used to circulate the mud (drilling fluid) on a drilling rig.

17. Mud Mixing Tanks

Tanks for storage of drilling fluid.

18. Mud Tanks (Pits)

A series of open tanks, usually made of steel plates, through which the drilling mud is cycled to allow sand and sediments to settle out. Additives are mixed with the mud in the pit, and the fluid is temporarily stored there before being pumped back into the well. Mud pit compartments are also called shale shakers, settling pits, and suction pits, depending on their function.



19. Sump

A pit where cuttings from the shakers, as well as unwanted drilling fluid is dumped

20. Mud-Gas Separator

A device that removes gas from the mud coming out of a well when a kick is being circulated out

21. Shale Shakers

A series of trays with sieves or screens that vibrate to remove cuttings from circulating fluid in rotary drilling operations. The size of the openings in the sieve is selected to match the size of the solids in the drilling fluid and the anticipated size of cuttings. Also called a shaker.

22. Choke Manifold

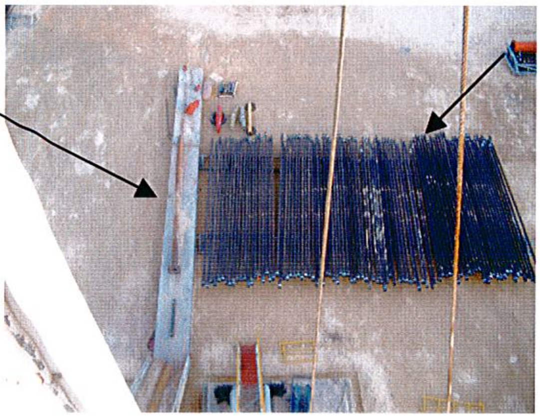
The arrangement of piping and special valves, called chokes, through which drilling mud is circulated when the blowout preventers are closed to control the pressures encountered during a kick.

23. Pipe Ramp

An angled ramp for dragging drill pipe up to the drilling platform or bringing pipe down off the drill platform, also called the ‘V’ door.

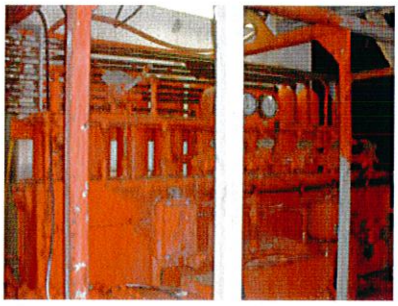
26. Cat Walk

The ramp at the side of the drilling rig where pipe is laid to be lifted to the derrick floor by the catline or by an air hoist



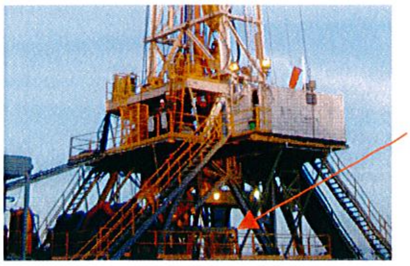
24. Pipe Racks

A horizontal support for tubular goods



25. Accumulator

The storage device for nitrogen pressurized hydraulic fluid, which is used in operating the blowout preventers



27. Cellar

A pit in the ground to provide additional height between the rig floor and the well head to accommodate the installation of blowout preventers, mouseholes, and so forth. It also collects drainage water and other fluids for disposal.

28. Degasser

The equipment used to remove unwanted gas from a liquid, especially from drilling fluid.

29. Desander

A centrifugal device for removing sand from drilling fluid to prevent abrasion of the pumps. It may be operated mechanically or by a fast-moving stream of fluid inside a special cone-shaped vessel, in which case it is sometimes called a hydrocyclone.

30. Desilter

A centrifugal device, similar to a desander, used to remove very fine particles, or silt, from drilling fluid. This keeps the amount of solids in the fluid to the lowest possible level.

31. Drawworks

The hoisting mechanism on a drilling rig. It is essentially a large winch that spools off or takes in the drilling line and thus raises or lowers the drill stem and bit.

32. Drill Bit

The cutting or boring element used in drilling oil and gas wells. Most bits used in rotary drilling are roller-cone bits. The bit consists of the cutting elements and the circulating element. The circulating element permits the passage of drilling fluid and uses the hydraulic force of the fluid stream to improve drilling rates.

33. Drill Collars

A heavy, thick-walled tube, usually steel, used between the drill pipe and the bit in the drill stem. It is used to put weight on the bit so that the bit can drill.

34. Driller's Console

The control panel, located on the platform, where the driller controls drilling operations.

35. Mouse Hole

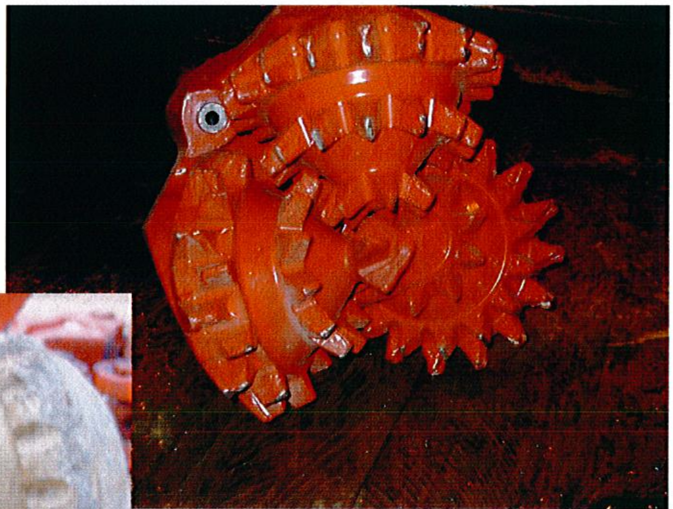
Shallow bores under the rig floor, usually lined with pipe, in which joints of drill pipe are temporarily suspended for later connection to the drill string.

36. Ram BOP

A blowout preventer that uses rams to seal off pressure on a hole that is with or without pipe. It is also called a ram preventer. Ram-type preventers have interchangeable ram blocks to accommodate different O.D. drill pipe, casing, or tubing

37. Substructure

The foundation on which the derrick or mast and usually the drawworks sit; contains space for storage and well control equipment.



A 17 ½" Mill Toothbit before and after shot

Independent Geologist's Report

August 11, 2001

The Board of Directors
Whicher Range Gasfields Limited
Level 22
Allendale Square
77 George's Terrace
Perth WA 6000

Dear Sirs:

Independent Geologist's Report

This report has been prepared for inclusion in a prospectus to be issued by Whicher Range Gasfields Limited (WRG) dated on or about [ ] 2001 (Prospectus) for the issue of 50,000,000 ordinary shares each with one free option for every two shares issued. The Prospectus will raise $10,000,000 for WRG. This report complies with the code and guidelines for technical assessment and /or valuation of mineral and petroleum assets and mineral and petroleum securities for independent expert reports (Valmin Code). Unless otherwise indicated, capitalized terms used in this report are defined in the glossary to this report.

Barree & Associates LLC was commissioned by Whicher Range Gasfields Limited as the Independent Expert to evaluate the exploration and exploitation potential of interests to be acquired by WRG in exploration permits EP 408 and EP 381. The specific objective of this report is to address the following points:

- the geology of the area covered by the permits under consideration;
- the exploration and/or production history associated with the region;
- the work commitment and previous exploration and production activity in the permits under consideration;
- the appropriateness of the proposed exploration and development program.

I have reviewed the past exploration and production history of the permits and the work program proposed by the operator for each of the permits and am satisfied that:

- the exploration and production history of the area suggests the existence of a commercial hydrocarbon resource;
- the work commitment proposed by the permits operator is clearly defined and the expected expenditures are reasonable in regard to achieving the stated goals;
- the planned drilling, completion, and production plan is appropriate for the development of the resource targeted.

1. SUMMARY

Whicher Range Gasfields Limited has negotiated agreements with Amity Oil Limited (Amity) and GeoPetro Resources Company (GeoPetro) whereby it is entitled to acquire and earn a 31.54% interest in Permit EP 408 and a 30.0% interest in permit EP 381. Both permits are located onshore in the Perth Basin, Western Australia (WA). To acquire and earn its interests in the Exploration Permits, Whicher Range Gasfields Limited is required to:

- make such payments that effectively equal the first $6,600,000 and thereafter 31.54% of the expenditure required to drill Whicher Range-5 on Permit EP 408; and
- contribute the first $500,000 of the costs of general exploration activities on Permit EP 381 on behalf of Amity and GeoPetro and thereafter 30% of such costs.

Amity is the operator of each of the permits. Amity is a publicly listed Australian exploration and petroleum company which explores and develops international and domestic upstream oil and gas projects as its prime business. Outside Australia, Amity's main activities are focused in Turkey with some minor producing interests in the USA.

2. INTRODUCTION

Perth Basin and Whicher Range overview

The Perth Basin (Basin) is host to several producing gas fields and some minor oil fields. The large Dongara gas field has produced about 600 bcf since coming on stream in the early 1970's. The Dongara gas is underlain by an oil leg of more than 100mmb that may not be produced due to loss of pressure in the reservoir. Several other satellite fields have been discovered in and south of the Dongara area. More recently the Woodada and Beharra Springs fields have been brought into production, these fields are of the order of 100 bcf reserves. Small oil and gas pools have also been found in several offshore wells.

The Perth Basin is fairly heavily faulted and has poor seismic data quality in many places. The modest success rate is partly linked with poor well location emanating from poor seismic data and its mapping. Only in the last two years has three-dimensional seismic survey data (3D-seismic) been acquired around Beharra Springs. The sandy nature of the Basin is the other limiting factor that adversely affects source rock and seal potential.

The gross gas column of more than 650m at the Whicher Range gas field (Whicher Range) has been established by four wells, and is at a depth of 3650mss to at least 4300mss. There is no risk or uncertainty associated with the existence of a large volume of high quality gas in place at Whicher Range. Low flow rates on previous wells have always been further reduced by water-based fracs and acidization operations. The recent success of Amity's pilot carbon dioxide frac has opened up an opportunity to obtain commercial flow rates from the wells and trigger a development.

The high quality gas and proximity of Whicher Range to southern WA markets and infrastructure means modest facilities costs are required to develop this field, see Figure 1 for the field location. If the exploration and exploitation test proposed for Whicher Range-5 is successful, it could result in a full-field development project.

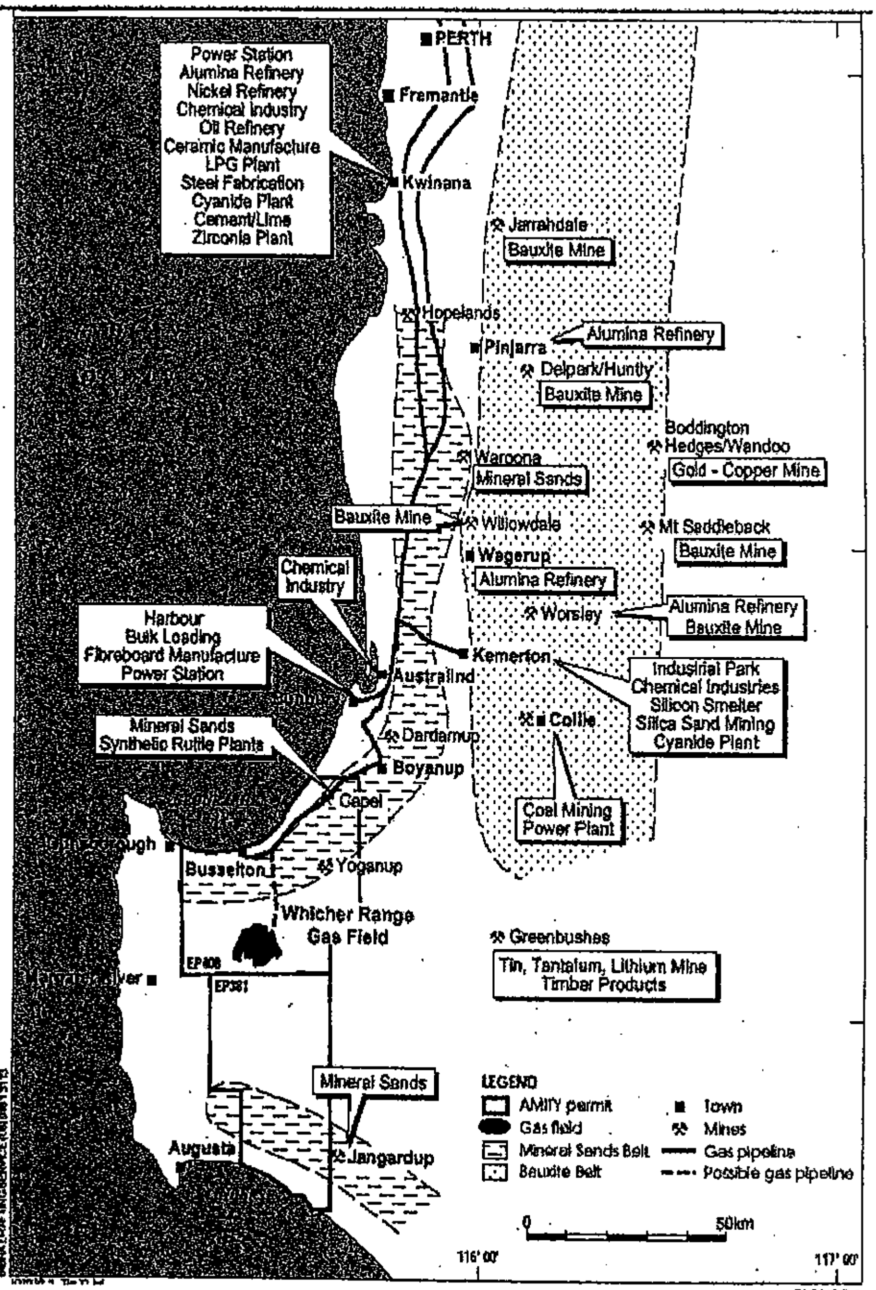


Figure 1: Whicher Range Gas Field Location

3. REGIONAL GEOLOGY AND STRUCTURE

3.1 Structural history and setting

EP 408 is situated over the central Bunbury Trough and Vasse Shelf of the southern portion of the Perth Basin of Western Australia (see Figure 2).

The Bunbury Trough:

- Is a deep graben 50km wide by 200km long containing up to 11kms of Permian to Holocene sedimentary rocks.
- Is unusual for the Perth Basin in being confined on two sides by the Leeuwin Block to the west and the Yilgarn Craton to the east. This has contributed to the trough's faulting style and tectonic stress regime. The major bounding faults are the Darling to the east and the Dunsborough to the west.
- Extends down-dip northwards into the Vlaming Sub-Basin offshore.
- Thins and shallows rapidly southwards offshore from Augusta approaching the modern day continental margin.
- Is separated from the Dandaragan Trough to the north by the Harvey Ridge that extends from the Darling Fault in a north-westerly direction.
- Is shown in a good 3D perspective diagram in Figure 3 from Lasky (1993) and has its stratigraphic column illustrated by Figure 4.

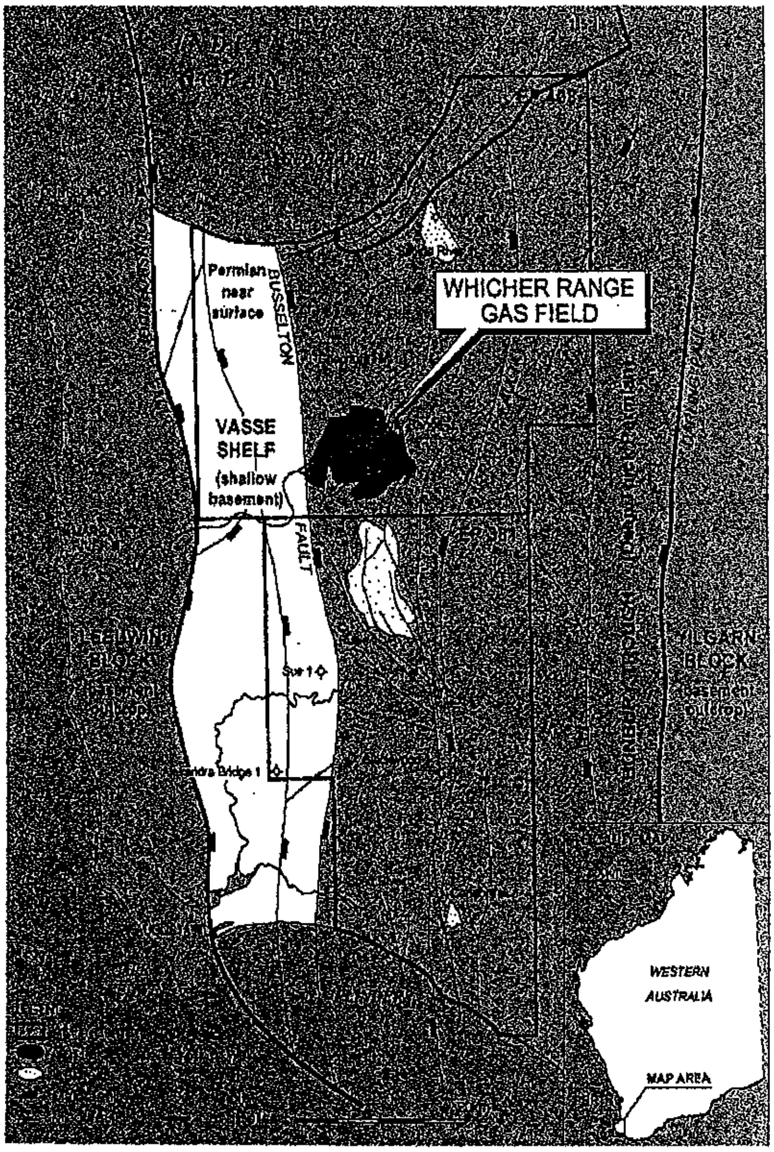


Figure 2: Structural setting of Whicher Range

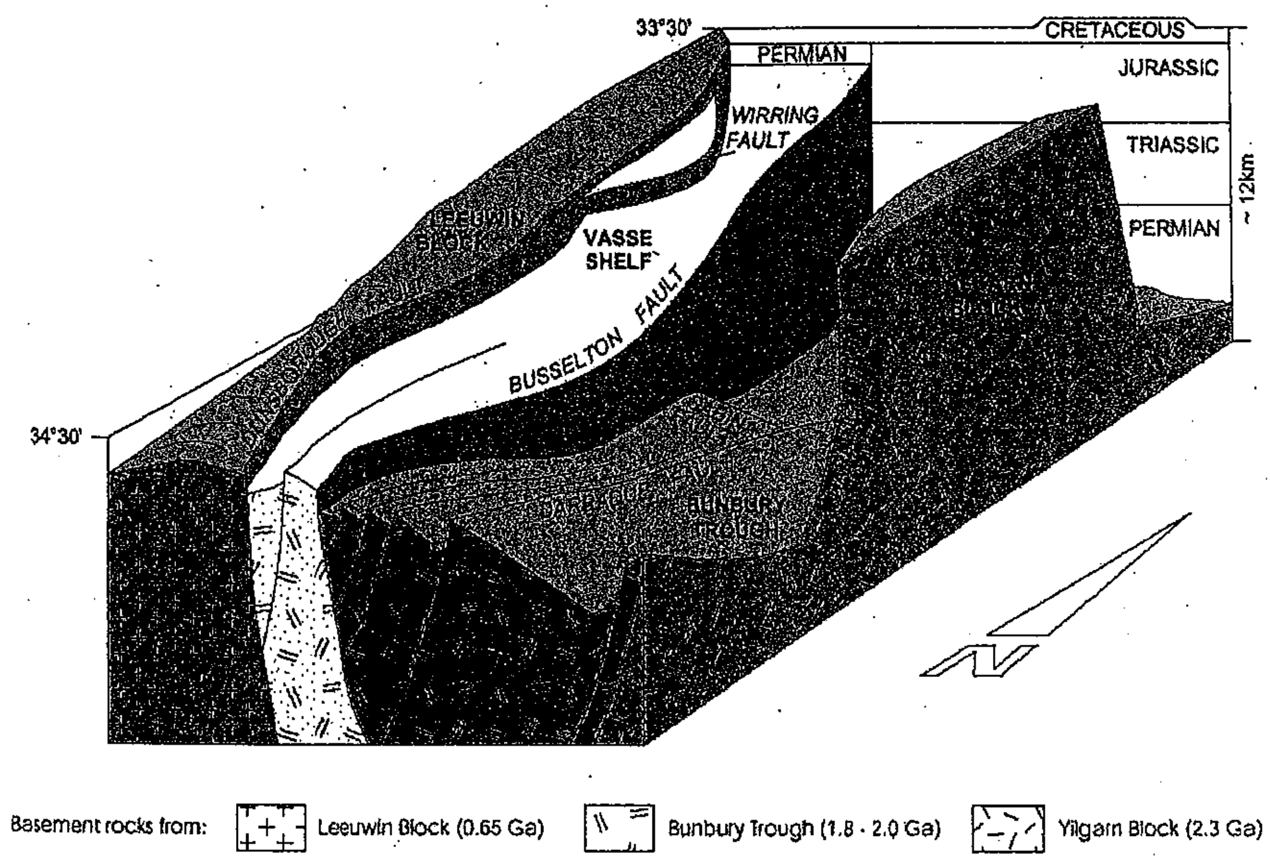


Figure 3: Three-dimensional perspective view of local structure

Basement
Pre-Cambrian crystalline rocks of age 600my are exposed west of the Dunsborough Fault in the Leeuwin Block, its lithology is granitic and metamorphics. From intersections by coal boreholes on the Vasse shelf, the gneissic basement underlying the Bunbury Trough appears more related in age at 2000my to the Yilgarn Craton in the east. See the 3D schematic diagram in Figure 3.

Carboniferous – Early Permian
The major tectonic episodes in the south Perth Basin were initiated during the Proterozoic when transcurrent movement on the Darling Fault initiated an intra-cratonic Basin. During the Late Carboniferous - Early Permian a rifting phase in the northern offshore part of the Perth Basin was followed by the deposition of glacial sediments extending across the basin in association with the ablation of the Gondwana ice sheet.

The basal Permian section from coal borehole data on the Vasse Shelf is named the Mosswood Formation of the Stockton Group. The Mosswood is a dark-grey shale and siltstone sequence with minor inter-laminated sandstones. It correlates with the Moorhead Formation in the Collie area and the Nangetty Formation in the north Perth Basin.

In the centre of the graben, seismic evidence shows that a substantial unknown sedimentary section of at least 2500m exists below the drilled Permian section.

Early Permian - Late Permian

Late Permian tectonism caused transcurrent reactivation along the major Darling and Busselton Faults and initiated the deep Bunbury Trough. Significant associated faulting occurred within the Basin. The Yilgarn Craton to the east was uplifted and significantly eroded.

The Stockton Group was overlaid by up to 4000m of Early to Late Permian Sue Group. At this point the reader is advised that vast amounts of existing literature refer to the "Sue Coal Measures", the WA Dept of Minerals and Energy has recently changed the stratigraphic nomenclature and the section of interest at Whicher Range is now the "Willespie Formation" of the Sue Group. These continental sediments of alternating fluvial and paludal sequences consist predominantly of sandstones with coals and carbonaceous shales. The coals are bituminous within the lower sequence, but become sub-bituminous in the Late Permian section.

Despite the name, the old Sue Coal Measures, or Willespie Formation, comprise only about 6% coal in thin seams of typically 0.2m to 2.0m in the drilled section at Whicher Range. The section does not possess the massive Permian coal seams seen in the Cooper Basin for example. Some thicker and stratigraphically older coals have been intersected in coal boreholes to the west on the Vasse Shelf and Treeton Terrace in the Redgate and Rosabrook Coal Measures of the lower Sue Group.

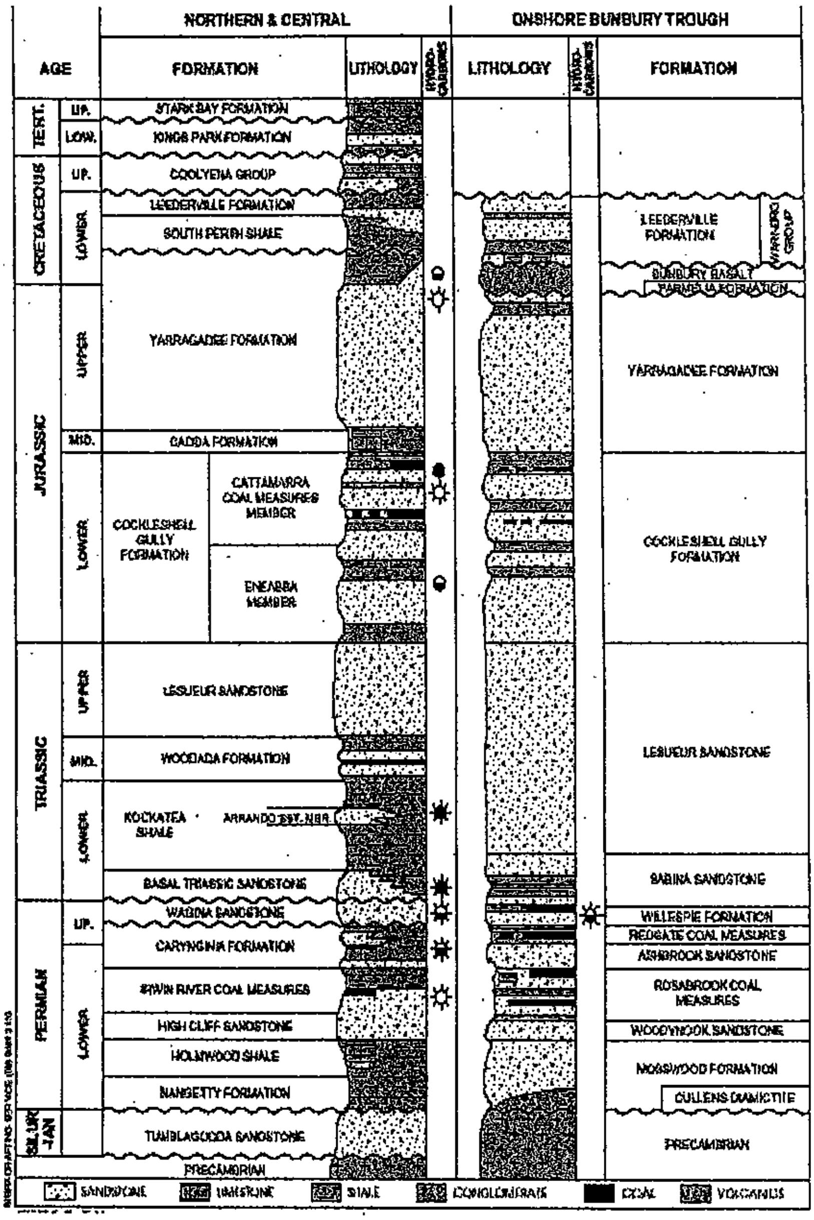


Figure 4: Generalized stratigraphy of Perth Basin

Triassic

The Sabina Sandstone overlies the Willespie Formation apparent conformably, but with a palynostratigraphic break. The Sabina Sandstone is a clayey sandstone interbedded with shale and siltstone.

Reactivation of the Basin margin faults and uplift of basement blocks resulted in the rapid deposition of the fluvial-alluvial Lesueur Sandstone, a coarse grained sandstone with thin sequences of siltstone. The Lesueur Sandstone is up to 3000m thick on the northeastern side of the Bunbury Trough.

Jurassic

By early Jurassic times the uplifted basement blocks had been largely eroded and the continental sequence of the Cockleshell Gully Formation was deposited. This fluvial sequence consists of fine to coarse grained sandstones with interbedded clays, siltstones and coals. This formation reaches a maximum known thickness of 1000m in the northeastern Bunbury Trough.

During Middle Jurassic, continental break-up along the northern margins resulted in rapid basin subsidence in the southern Perth Basin. The Yarragadee Formation, a fluvial sequence of sandstone and siltstones with occasional shales and conglomerates was laid down. This sequence has a maximum known thickness of at least 1000m but has variable in thickness within the Bunbury Trough due to differential erosion during the Neocomian tectonic event.

Cretaceous
The Late Jurassic-Early Cretaceous Parmelia Formation, consisting of continental to shallow marine sediments conformably overlies the Yarragadee. This sequence is primarily sandstone with interbedded shales and silts. It is very thin in the onshore south Perth Basin and is scattered as small pockets within the Bunbury Trough. This, again, is related to differential erosion during the Neocomian Tectonic event.

The Bunbury Basalt, which is widespread in the southern Perth Basin, is related to the Neocomian breakup of Australia and India and consists of mostly sub-aerial basalt lava flows within valleys eroded into the Yarragadee and Parmelia Formations. Associated feeder dykes and sills intrude the Triassic Lesueur Sandstones and Permian Sue Coal Measures, as seen in Whicher Range-2, Wonnerup-1 and Sue-1.

The Neocomian tectonic event was the last major faulting event in the South Perth Basin. Locally a transtensional regime is interpreted, which resulted in a right lateral shear that pushed up the Vasse Shelf alongside Whicher Range by as much as 2000m.

The post-tectonic sequence of the Warnbro Group conformably overlies the Yarragadee and Parmelia Formation. This sequence of interbedded continental sandstones and conglomerates with thin lignites and coals extends as a thin, less than 300m, blanket across the Vasse Shelf and Bunbury Trough.

Tertiary
Some uplift of the Yilgarn Craton continued during the Tertiary resulting in erosion. The entire Perth Basin area was subjected to lateritic weathering conditions in the Miocene to Pliocene with the development of thick weathering profiles, (up to 60m thick), having iron oxide rich or aluminous bauxitic crusts.

A thin sequence of Cainozoic sediment, up to 100m thick, extends across the entire South Perth Basin. These include extensive Pleistocene to Recent marine sands and aeolinite, (Tamala limestone), developed during rapid sea level changes.

3.2 Whicher Range Stratigraphy

The Whicher Range stratigraphy is detailed below with an indicative range of sub-sea depths encountered on the structure. See also Figure 4.

Willespie Formation (formerly Sue Group Coal Measures) -3700m to -4500mss
The Top Willespie Formation is well defined by a significant change in lithology, with an increase in the frequency and amount of coals and carbonaceous shales, a dramatic change in the composition of the sandstones, and a significant change in the characteristics of all logs. Additionally, the hydrocarbon shows have a change in magnitude. Interpretation of the logs correlated with this lithologic change indicates that there is an unconformity at Top Willespie.

The most obvious change is the presence of discrete coals varying in thickness from more than 1m to less than 5cm as seen in the cores. Additionally, there are many carbonaceous sands and silts throughout the section. The coals appear to be transitional with many of the coals capping a fining-up sequence in which the coals are the culmination of an increasingly fine and carbon-rich progression. The upper contact is usually sharp and may mark a stream channel switch into the paludal environment in which the coals were deposited.

Sandstones in the Willespie Formation are highly variable, ranging from conglomerates through to very fine sands. Generally grains are angular to sub-angular, although they can be rounded to sub-rounded and moderately well sorted. Matrix grains are dominantly quartz with sub-dominant components of plagioclase and orthoclase felspar, garnet, micas and heavy minerals (magnetite, goethite, ilmenite etc.).

Bedforms in the cores include crossbeds, thin, parallel laminations and scour and current features. The sandstones are diagenetically imprinted with clays, quartz overgrowths, ferruginous and calcareous cements. Shales are black and carbonaceous.

The lithologic composition of the Willespie Formation, its vertical succession and depositional features suggest a depositional environment of braided streams alternating with paludal, back-levee deposits. The best reservoirs are associated with the highest energy stream and bar facies.

Hydrocarbon shows are recorded throughout the Willespie Formation. Virtually all porous sands encountered have good gas shows with peaks up to 1000 units with C4 and above. The entire section displays fluorescence. All wells have reached TD in good gas shows, with the deepest well Whicher Range-1 recording 740m of shows down to -4500mss.

Sabina Sandstone -3450mss to -3700mss

The Top Sabina Sandstone is defined from logs by an increase in sonic porosity and a decrease in resistivity. The sequence consists of predominantly sandstones with thin carbonaceous shales and coals. Sandstones are friable, poor to fairly sorted angular to sub-rounded and occasionally stained and cemented in small aggregates. The sand has poor permeability due to pore throats being choked with clays.

Shales are thin, dark grey to green in color, laminated and fissile. Coals within the Sabina are thin and are not recognized during drilling.

Gas shows increase from a very low baseline through the Sabina section, but only reach 25 units near the contact with the Willespie Formation with an increasing concentration of C2 to C4 components. No testing is generally undertaken in the Sabina as log analysis indicates the section to be water wet.

Lesueur Formation -2000mss to -3450mss

The Lesueur Formation is generally a massive sandstone with occasional interbeds of thin shales and siltstones. The top is picked from logs by subtle changes in the gamma-ray, spontaneous potential (SP) and resistivity log responses. There is little lithologic change from the overlying Cockleshell Gully Formation, other than a loss of the yellow, orange and brown staining characteristic of the lower unit and a reduction in the amount of calcareous cement. The subtle nature of the top means that many of the well picks in the area are inconsistent.

Most of the sandstones within the Lesueur are angular to sub-angular, although occasionally sub-rounded. Sandstones vary from hard and quartz-cemented to simply disaggregated. Sonic indicates decreasing porosity with depth and grain size also decreases with depth. There can be drilling problems within the Lesueur Formation indicative of high-angle or vertical fracturing within the brittle rock.

Shales within the Lesueur are typically massive, blocky and non-fissile, grey to green in colour and very thin. Siltstones are rare and are grey to green and argillaceous.

There can be very minor gas shows but no fluorescence in the upper part of the Lesueur Formation. Below 3300mss there may be a slight but continuous background gas reading of 1-2 units but no fluorescence. This reflects the increasing tightness of the lower Lesueur sandstones.

Whicher Range-2 encountered dolerite intrusives in the Lesueur in three zones totaling 202m. The zones are believed to be dipping at 70 degrees.

Cockleshell Gully Formation -800mss to -2000mss

The top of the Cockleshell Gully Formation is picked from logs by a marked decrease in gamma and sonic response and by a decrease in resistivity. A well defined siltstone is logged at the top of this formation that can be correlated to Whicher Range-1 and Whicher Range-2.

The Cockleshell Gully Formation can be subdivided into two units. The upper unit to 1200m is predominantly a sandstone with thin interbeds of siltstones and coals. Sandstones are pale yellow with orange to brown staining indicating oxidation. They vary from friable to well cemented; are medium to coarse grained, subangular to angular and are moderately sorted. Log interpretation indicates some laminations that are not discriminated in cuttings where both siltstones and sandstones display significant carbonaceous fragments.

The lower unit below –1200m is distinguished on logs by a separation of the shallow and deep resistivity tools, a massive, well-developed sand signature on the gamma and SP logs, and an increase in sonic. The unit is a massive sand sequence with little indication of siltstones or carbonaceous fragments in cuttings. Sands are pale yellow with orange to brown staining indicating oxidation. They vary from friable to well cemented; are medium to coarse grained, subangular to angular and are moderately sorted. Occasionally sands show blotchy calcareous cements and calcareous aggregates. There have been no hydrocarbon shows within the Cockleshell Gully Formation.

Yarragadee Formation 0mss to -800mss

The top of the Yarragadee Formation is defined on logs by sharp decreases in both gamma and sonic and an increase in resistivity.

The upper part of the Yarragadee is almost 100% sandstone. It is a medium to coarse, poor to moderately sorted, angular to sub-rounded sandstone varying from friable to well cemented, having poor to good visible porosity and containing occasional to common pyrites. This formation is the major fresh water aquifer for the south Perth Basin.

From –450m the Yarragadee becomes more laminated with common siltstone and carbonaceous beds. Sands become tighter and display common calcareous cemented aggregates. There have been no hydrocarbon shows within the Yarragadee Formation.

Warnbro Group +130mss to 0mss

The geological make up of the rocks comprising the Warnbro Group are grey to brown, clayey, sticky shales with some coarse grained cream coloured sandstones and pebbles. The top 20m consists of Cainozoic gravels and sandy clays.

3.3 Reservoir, Source and seal

Reservoir

The reservoirs of the Whicher Range gas field are the fluvial sandstones of the Willespie Formation. This sequence consists of inter-bedded fluvial channel sandstones, carbonaceous siltstones, shales and coals. The stratigraphy was detailed in section 3.2.

The sandstone flow units are of fine to large grain size and comprise quartz, feldspar and heavy mineral grains. Some feldspar grains have been removed by dissolution, and others partially or totally altered to kaolinite clay booklets. A number of flow units have produced gas to surface typically at rates between 0.5 and 1.5mmcfd.

A major petrophysical review was carried out in late 1998 utilizing core, log and test data. The review has been utilized in this summary. Three fundamental sand types were recognized and termed "Red" (best), "Brown" (intermediate), and "Yellow" (unlikely to be productive). The Willespie Formation is about 70% sand, about one third of this sand is classed as Red and Brown pay, or 22% of the gross rock volume.

The characteristic parameters for the sand types at reservoir conditions are:

		Sw	Porosity	Permeability
Good	"Red"	<40%	>13%	>0.5md
Fair	"Brown"	40% to 60%	9% to 13%	0.1 to 0.5md
Poor	"Yellow"	>60%	<9%	<0.1md

Core porosities measured at ambient conditions typically range from 6% to 17%, reducing by 20% at overburden conditions to 4% to 13%. For permeability the reduction in values from ambient to overburden conditions is much larger, typically by a factor of ten, e.g. from 10md to 1md. The best overall tool for assessing porosity has been found to be standard sonic and neutron log data calibrated with core data. The long spacing sonic tool is more affected by gas and an additional correction is required. In good porosity zones elliptical breakouts occur after drilling with the long axis aligned 20° to 200°.

The reservoir study also evaluated the capillary pressure effect on water saturation of the transition zone that will be present in a tight reservoir like Whicher Range. [Figure 5]

The most diagnostically tested well remains Whicher Range-1 that produced at a maximum flow rate of 1.9mmcfd with a cumulative gross rate of 5.5mmcfd from four zones. Well histories are summarized in section 4 of this report.

The Whicher Range-5 well is to be sited 1km southwest of Whicher Range-4 and similar reservoir qualities to that well are expected.

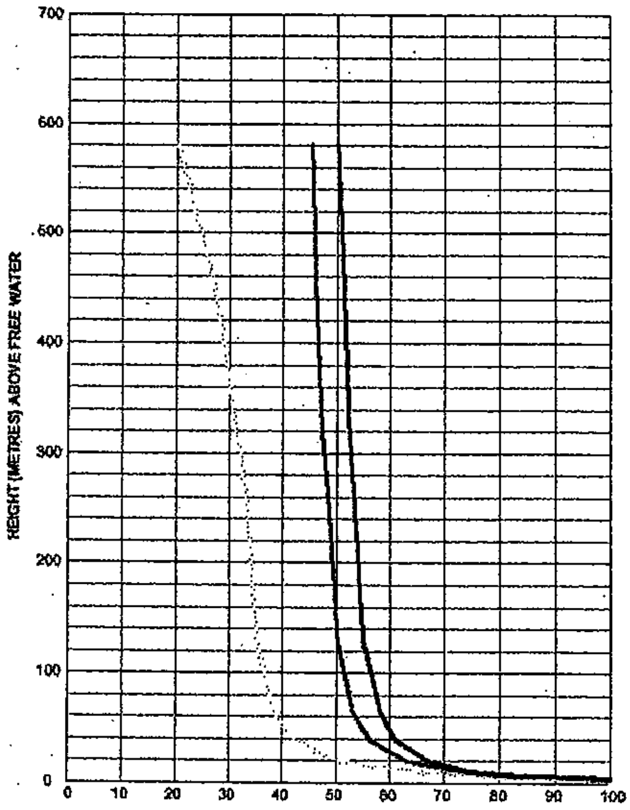


Figure 5: Water saturation versus height for major rock types

Seal

The traditional major shale regional seal is absent in the south Perth Basin. It has puzzled many observers as to what is the seal at Whicher Range, and how to explain this large gas column that is very different from neighboring wells in the region.

The elements contributing to seal are interpreted to be:

- The shales, carbonaceous siltstones, and coals of the Willespie Formation that form intra-formational seals to the sandstone reservoirs. A 10m thick shale seen in all Whicher Range wells occurs at the very top of the Willespie. Gas readings across this shale typically jump from 25 to 1000 units.

- The overlying Sabina Sandstone Formation that is substantially clay choked. The poor permeability and high capillary entry threshold pressure associated with this formation, plus the shale at the Top Willespie, could act as a regional seal for the greater Whicher Range Structure.

- The counter dip on all the fault blocks radiating away from the crest of the Whicher Range reduces dependency on fault seal. It is noted from other tested structures that high side fault closures, with no counter dip on the downthrown side, do not appear to work.

- The present day east-west compressive stresses in the Bunbury Trough helping to close the main north-south fault planes.

- The buttress seal of the Willespie Formation against Leeuwin Block basement on the west side of Whicher Range, see Figure 3.

Source

The coals and carbonaceous shales of the Sue Group are generally believed to be the source of the gas, condensate and oil in the Sue Group Sandstones. In addition to the gas-condensate, a minor amount of black oil was recovered on test in the 1997/8 pre-completion of Whicher Range-1.

The drilled section of the Willespie Formation is only early to mid mature for oil generation in the Bunbury Trough. The basin is locally quite cold, even at 4500mss the vitrinite reflectance is only 0.7 to 0.9 percent of incident light. Hence the generative section for the gas-condensate must underlie Whicher Range at a depth of greater than 4700m, or long distance migration from the north must be invoked, here the geothermal gradient is a little higher.

In the centre of the graben under Whicher Range, seismic evidence shows that a substantial unknown sedimentary section of at least 2500m exists below the drilled section of Willespie. The lower part has a banded, high reflectivity appearance consistent with major inter-bedded sands/shales or sands/shales/coals. This section may be an additional Early to Mid Permian sequence and a richer, and certainly more mature, hydrocarbon source than the drilled section.

Summary of Reservoir Characteristics

Gas productive (reservoir) sands of the Whicher Range field cover a large gross vertical depth interval, generally extending from -3700 to -4500mss depth. They consist of multiple stacked productive sands interbedded with siltstones, shales, coals, and water-bearing sands. Reservoir permeability is low at in-situ stress and saturation conditions, but is in the range of many commercial "tight-gas" projects now being operated in the United States and Canada.

The low permeability, small pore size, and clay content of the reservoir sands makes them extremely sensitive to increased water saturation. The formation has the capacity to imbibe water spontaneously, resulting in an increase in water saturation and a dramatic decrease in effective gas permeability. For this reason, contact with water-based fluids during the drilling and completion process, as well as during production operations, should be minimized.

The gas in-place in the reservoir sands is generally believed to be sourced in the Sue Group coals. However, measurements of thermal maturity of the coals in the reservoir interval suggest that the gas must be generated in deeper, hotter sediments below the reservoir section, or that gas must have migrated from some distance where maturation conditions were more favourable.

In brief, the presence of gas in the Whicher Range field has been established by gas shows while drilling, and by production tests. The key to economic success in this reservoir is to minimize drilling and completion damage, and limit the contact of the gas-bearing sands with water. This involves both the careful selection of completion intervals and use of a non-damaging drilling and stimulation procedure, as proposed here.

4.0 PREVIOUS DRILLING RESULTS

4.1 Whicher Range-1

Whicher Range-1 was drilled in 1968 near the center of a large domal structure, and discovered gas saturated sandstones were discovered with very high mud gas readings in a 738m interval of Permian Willespie Formation. The well reached its planned total-depth at 4653m (-4500mss) still in very high gas readings of over 1000 units.

The well was cased, cemented and a number of zones perforated and flow tested. The best zone flowed gas at 1.9mmcfd and the aggregate of all zones was 5.5mmcfd. The operator at the time concluded that the reservoir was mostly of low permeability and attempted to improve gas flow with a water based fracture stimulation. The fracture stimulation reduced the gas flow to almost zero and in the absence of a satisfactory explanation for the reduction, the well was plugged and abandoned. This discovery well indicated a major in-place gas resource in a low permeability reservoir.

Ten years later, a research study of core samples from Whicher Range-1, conducted by a major petroleum company, confirmed that the reservoirs were of low permeability, and showed that they were subject to damage (reduction of permeability) by water due to the presence of certain clay minerals. The study also showed that the reservoir could be damaged by ionic acids due to the presence of iron-rich chlorite.

4.2 Whicher Range-2

In 1980, Whicher Range-2 was drilled 1km southeast of Whicher Range-1 in the expectation that modern drilling fluids would allow the reservoir to flow gas at commercial rates without fracture stimulation. Like Whicher Range-1, Whicher Range-2 had good gas shows within the Permian sandstones.

A number of drill stem tests were performed, then casing was set and production tests were carried out through perforations. Several tests flowed gas to surface but at rates much less than those from Whicher Range-1. The well was then acidized to try to improve gas flow rates, but after acidization gas flows were reduced. It was concluded that porosities and permeabilities in Whicher Range-2 were lower than those recorded from Whicher Range-1 and the well was plugged and abandoned. Whicher Range-2 penetrated 3 thick, near-vertical, Cretaceous age dolerite dykes in the Lesueur Sandstone above the Permian reservoir. Intrusion of these dykes is likely to have had a detrimental affect on nearby reservoir quality and may be an explanation for the anomalous results. No dolerite has been intersected in any other Whicher Range well.

4.3 Whicher Range-3

In 1982, Whicher Range-3 was drilled 3.5kms south of Whicher Range-2, with the objective of obtaining commercial gas flow rates by applying hydraulic fracture stimulation. This well was located on the southern flank of the large Whicher Range dome, so that the Permian reservoir was intersected 147m down dip of Whicher Range-2. Despite the down-dip location, significant gas shows were encountered while drilling to total depth of 4496m (-4359mss).

The well was cased and a number of zones were drill stem tested through perforations. The deepest zone tested was deliberately located in a sand believed to be water bearing from log analysis, and flowed 200 bbls per day of gas cut water indicating permeability of 5md. The highest perforation in DST-1 was at 4438m (-4271mss).

Low gas flow rates were obtained in further DSTs higher in the hole. The well was acidized to try to improve gas flow, but flows were actually reduced by approximately half. In a final attempt to increase gas flow a fracture stimulation was carried out using a water based frac fluid. However, gas flows after the frac job were reduced to about one fifth of the pre-frac flow rate. Following these disappointing results the well was plugged and abandoned.

4.4 Whicher Range-4

After the failures of Whicher Range-2 and 3, work on the area ceased and eventually the permit was relinquished.

In late 1996, Amity and its joint venture participants won a competitive bid for exploration permit EP 408 that included the Whicher Range gas field. After successfully negotiating the first Native Title Agreement for the grant of a petroleum permit in Australia, the permit was granted in May 1997.

The permit was farmed into with the objective of bringing the Sue Group reservoirs to production using modern hydraulic fracture stimulation techniques. The operator of the well drilled and fracture stimulated the Whicher Range-4 well and re-entered and fracture stimulated the Whicher Range-1 well between October 1997 and June 1998.

In Whicher Range-4, significant gas shows were obtained over the full 693 m of Permian drilled to a TD of 4575m (-4435mss). The well was cased to TD and 4 zones were perforated over the gross interval 4045m to 4390m and hydraulically fracture-stimulated using gelled water. A 10m perforated zone between 4215 and 4225m flowed gas to surface at rates exceeding 1.8 mmcfd prior to frac. After frac'ing, flow from this zone reduced six fold to 0.3 mmcfd. After frac'ing of all four zones, the combined sustainable rate was a disappointing 1.4 mmcfd from a ½ inch choke.

The frac crew then moved onto Whicher Range-1. The re-entered well was found to be in surprisingly good mechanical condition. However as with Whicher Range-4, a similar flow rate of 1.2mmcfd was obtained from 3 gelled water fracs in comparison with the original aggregate rate of 5.5mmcfd. At the completion of testing, both wells were making about 50 bbls of water per day with the gas flows, the water was assessed to be a mixture of water of condensation, formation water and frac water still in the process of being recovered.

4.5 Whicher Range-4 re-entry

Post Whicher Range-4 studies

After the Whicher Range-4 campaign, extensive core studies established that water-based drilling and stimulation fluids adversely affect the Sue Group sandstone reservoir permeability. A classical "water-block" traps stimulation fluid around the artificial fractures due to a combination of pore geometry and clay swelling. Reservoir pressure is insufficient to overcome the water block and force water back to the well bore. The water block thus prevents much of the gas in the reservoir from reaching the well bore.

The studies concluded that water should not be used in stimulation and preferably not in drilling. Whicher Range-4 mini-frac results showed evidence of natural fracture permeability, which was compromised by the use of cross-linked borate gels during stimulation. Water based fluids will not be used in the frac program proposed for Whicher Range-5.

Corporate changes

It was proposed to drill a further well with a non-aqueous frac treatment when a merger between the operator and Devon Energy (Devon) was announced in March 1999. The Devon take-over (essentially a merger) was completed in August 1999, and after some negotiation, Amity assumed ownership and operatorship and conducted the pilot carbon dioxide frac program described below in July-September 1999.

Amity carbon dioxide frac operation

The Stim-Lab, Inc. study for Amity recommended a re-stimulation of Whicher Range-4 using liquid carbon dioxide to attempt to reduce the water block and increase gas flow. The well was first flowed prior to carbon dioxide stimulation to provide a comparison. The well flowed gas at rates of 1.1 mmcfd, which was similar to the last testing. Water production was also maintained at a similar rate, i.e. about 50 bwpd, but a reduction in salinity was noted.

The zones below the base of the Whicher Range-4 frac interval number two at 4225mKB were then plugged off. The carbon dioxide re-stimulation, a first for Australia, was carried out by Amity in late 1999 and successfully increased flow rate on production test from 1.4mmcfd to a stabilized 2.8mmcfd on a 3/8 inch choke. This was the first stimulation operation that increased flow rate at Whicher Range. The best measurement of water production is from the Memory Production Logging Survey which estimated approximately 40 bwpd per mmcf gas, or 130 bwpd at a gas rate of 3.15mmcfd. The history of the production test, pressure and flow rate vs time, is illustrated in Figure 6.

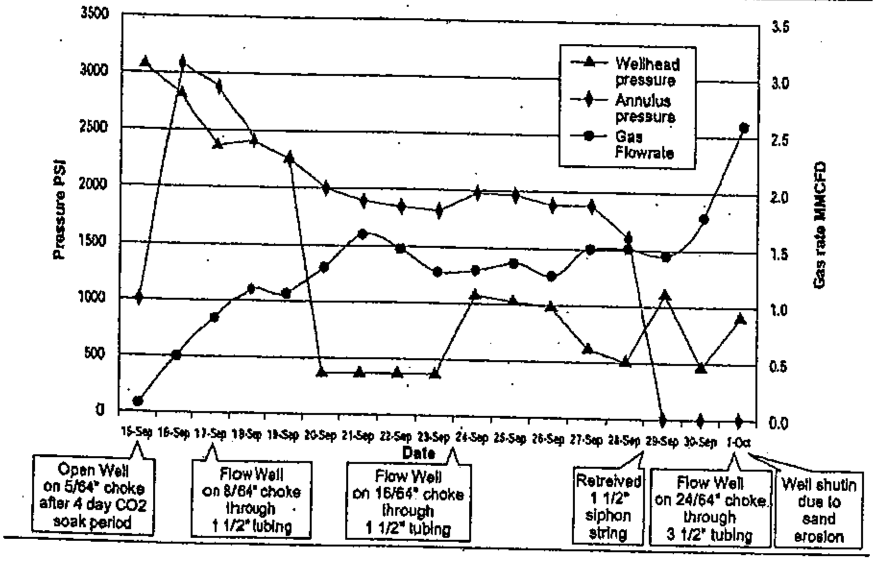


Figure 6: Post carbon-dioxide re-stimulation production history of Whicher Range-4

4.6 Summary of lessons learned

Below is a list of key points learned from the Whicher Range wells.

- A very large gas column exists at Whicher Range as evidenced by gas shows, logs and tests.
- At Whicher Range-1 gas flows from 0.55 to 1.8 mmcfd were obtained from five separate cased hole tests across a gross Willespie Formation section of 322m. Cumulative rate was 5.5 mmcfd with no formation water produced.
- At Whicher Range-4 gas flows were obtained from four intervals over a 335m gross section of Willespie Formation. Post frac final flow rate from four zones was 1.4 mmcfd, less than the pre-frac rate of 1.8mmcfd from one zone.
- Prior to the July 1999 carbon dioxide re-stimulation, the reservoir has always flowed better on initial test than after stimulation.
- In all cases where conventional water based fracs and acid treatments have been performed the flow rate has been reduced, typically by a factor of two to sixfold.
- Core studies show that the permeability to gas at overburden conditions is in the range 0.1md to 1.5md for potential pay sands. Porosity is in the range 9% to 13%.
- Further core studies established that water-based drilling and stimulation fluids adversely affect the Sue Group sandstone reservoir permeability with "water-block" or aqueous phase trapping. The studies concluded that carbon dioxide and oil would be the best frac fluids, and that traditional water based muds should not be used in drilling.

- A pilot carbon dioxide frac on Whicher Range-4 improved productivity to 2.8 mmcfd from less than 500 mcfd.

- Gas market studies conducted by Amity with respect to Whicher Range have identified several industrial consumers as candidates for near term gas sales.

5.0 SEISMIC MAPPING

5.1 General Overview

The current seismic time interpretation was produced from digital 1980's through 2000 data using industry accepted seismic data processing software. The Petroseis mapping package was used to convert seismic travel time to depth using an average velocity field contoured around the Whicher Range gas field. Seismic coverage is of three generations; firstly analogue data from the mid 1960's, secondly a series of surveys shot in the early 1980's, and finally surveys shot by Amity in 1997, 1998 and 2000. Some parts of the onshore Bunbury Trough are forested and access is restricted to existing tracks. The 1997 and 1998 surveys are over the Rutile-1 and Whicher Range South area, the 2000 survey is essentially a re-shoot of older lines on Whicher Range along existing tracks.

Data quality varies from occasionally good to usually poor to fair. Despite the data quality, all maps produced by different interpreters over the area consistently show the same general features. The current Amity map and the last map produced by the operator of the permit before Amity, at Top Willespie are very similar. Note that virtually all existing mapping of the Sue Group will refer to this horizon as the "Top Sue Coal Measures".

Whicher Range and Whicher Range South features. The resulting depth map (Figure 7) has been contoured at 50m, which reflects the maximum precision that could be ascribed to the data. The time and depth interpretation are tied to the Whicher Range wells and Rutile-1. Also see Figure 8.

The structural history of the Bunbury Trough region has been summarized in section 3, and further description is available in two papers by Lasky (1990, 1993), see also Figures 3 and 4.

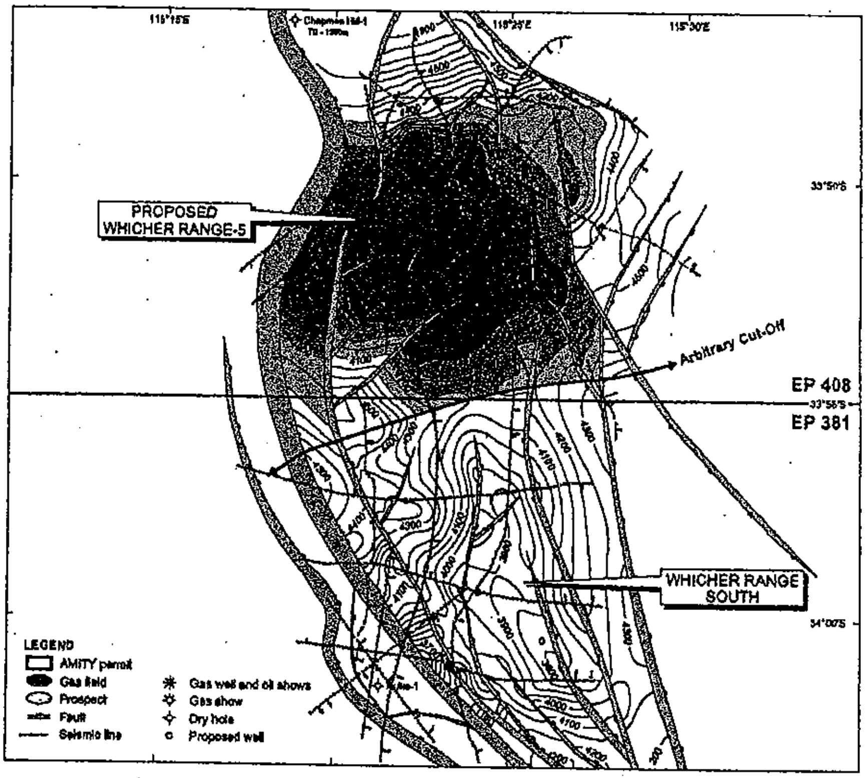


Figure 7: Structure map and well locations

5.2 Whicher Range Mapping

The Bunbury Trough at top Willespie Formation is characterized by near symmetric normal faulting of the sedimentary section as the rift between the Leeuwin Block and the Yilgarn Craton opened. The Whicher Range feature is the first major structure onshore in the Bunbury Trough, and sits centrally across the north-south axis as a mid-trough high. It essentially captures any hydrocarbon migration that may be focused along the strike of the basin as it comes onshore from down-dip to the north. The normal rotation of the major fault blocks across the trough has produced symmetrical counter dip, down to the east and west bounding faults. This also aids in focusing any hydrocarbons to the axis of the trough and the Whicher Range feature. As stated earlier in this report the two-sided nature of the Bunbury Trough is unusual for the Perth Basin.

Whicher Range is thus a focus for hydrocarbons from an area of several hundred square kilometers to the east, north and west. The overall anticlinal closure is cut by several north-south orientated faults. There is evidence from seismic of minor east-west compressive reactivation, which agrees the modern day stress field and borehole break-outs orientated at 20° - 200°. Structural closure details are listed below:

- Closure to the north and east is provided by sufficient dip evident from seismic.

- To the west faulted dip closure exists down to –4000mss, below that the most likely sealing mechanism is a buttress seal against crystalline basement of the hanging wall of the major Busselton fault. Drilling in coal boreholes on the Treeton Terrace show that Leeuwin Block basement will be juxtaposed against the Willespie Formation about 4km west of Whicher Range-1. See Figure 3.

- To the south it is not proven whether hydrocarbons have spilled through the saddle into the Whicher Range South structure and possibly further. The vertical closure at Whicher Range is estimated from seismic at 600m to 700m from the crest at –3650m to a southerly spill point between –4200mss and -4300mss. This is a reasonable but not good fit with the high gas readings encountered in Whicher Range wells down to –4500mss. It is difficult to close the trap below –4300mss to the south. This could occur if a larger velocity gradient exists to the south, or quite simply the time interpretation (on modest data quality) may be wrong.

- The counter dip in all the fault blocks around Whicher Range no doubt assists the sealing capacity of the trap, and must at least partially explain the large gas column.

A summary of key elevations at Top Willespie Formation is given below:

Crest of structure	-3625mss	
Highest well top	-3739mss	(Whicher Range-2)
Highest tested gas	-3790mss	(Whicher Range-1)
Buttress against Leeuwin Block	-4000mss	
Lowest tested gas	-4085mss	(Whicher Range-4)
Highest known water sand	-4271mss	(Whicher Range-3)
Spill point to Whicher Range South	-4200 to –4300mss	
Lowest gas pay on logs	-4385mss	(Whicher Range-4)
Lowest known large gas show	-4500mss	(Whicher Range-1, 1000 units)

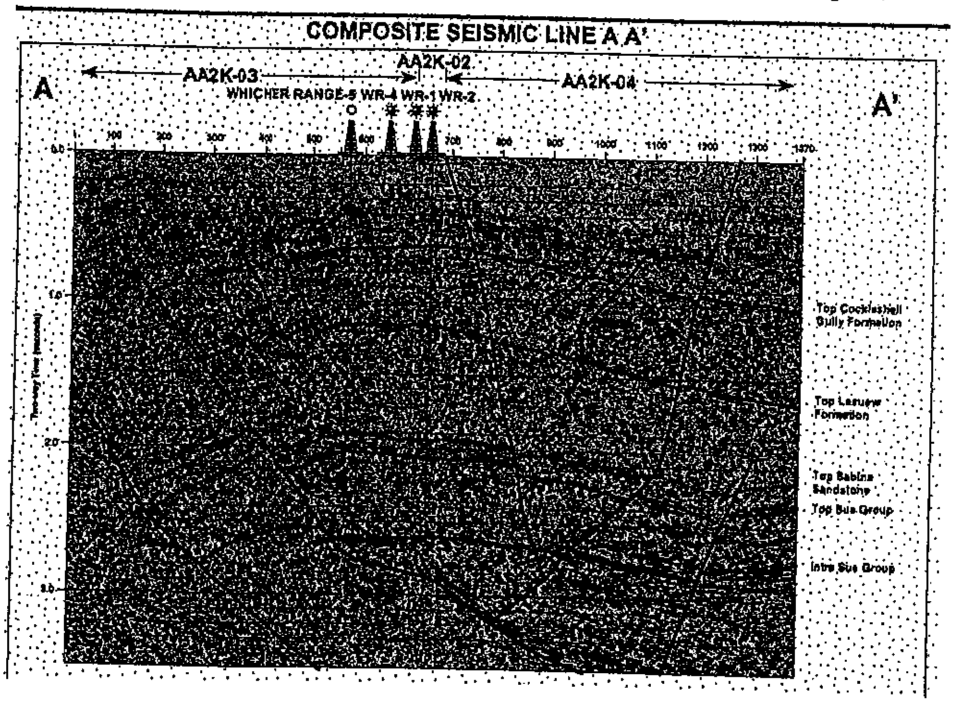


Figure 8: Composite seismic line across Whicher Range

6.0 PROPOSED WELL PROGRAM

6.1 Whicher Range-5

The objective of Whicher Range-5 is to appraise the flow capacity of the gas bearing Sue Group in the same fault compartment as Whicher Range-1 and 4. The recommendations of the Stim-Lab, Inc study will be followed to try to achieve commercial gas deliverability. These are to drill the reservoir section with air to minimise damage to both matrix and natural fracture permeability. Details of the air-mist drilling process are presented in Figure 9. If sufficient gas flow is not obtained, Stim-Lab, Inc recommends running casing and fracture stimulating the gas zones using oil and liquid carbon dioxide as a stimulation fluid. This fluid will avoid water block in the matrix and preserve fracture permeability thereby maximising gas flow.

The proposed stimulation procedure will be carried out with a monobore frac procedure designed to significantly reduce costs while maintaining frac quality. This procedure is known as 'under balanced air-mist drilling and is new to Australia, but has been effectively used in similar stacked tight-gas sands in the United States Greater Green River Basin (GGRB).

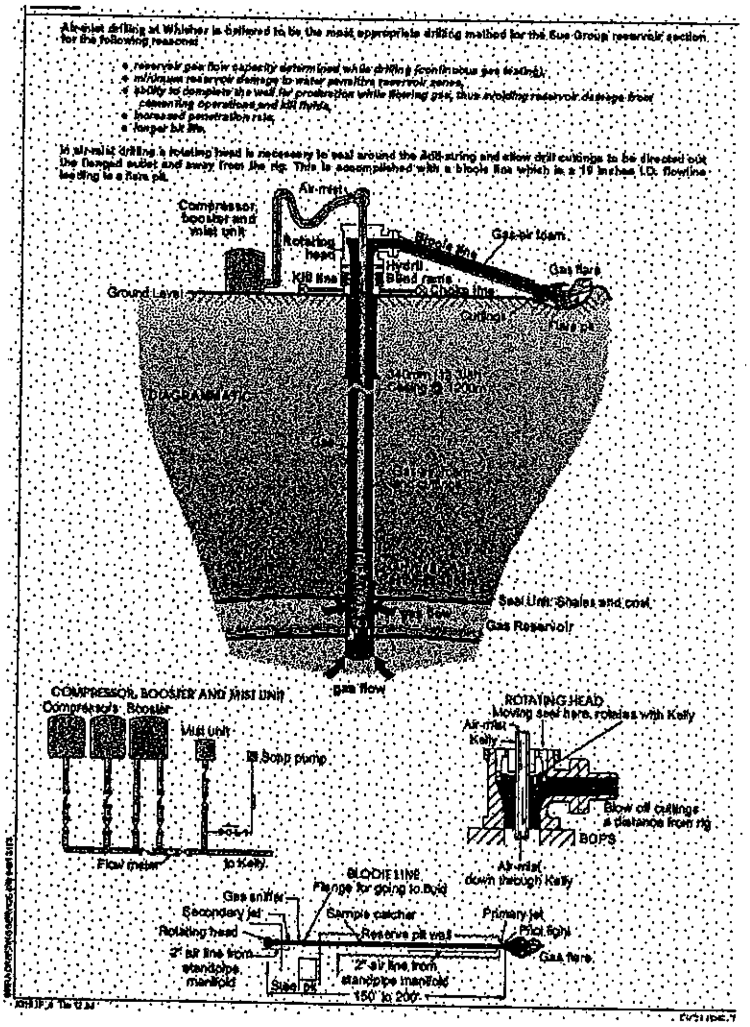


Figure 9: Schematic of under-balanced air-mist drilling process

In these sands, as in previous completion and stimulation attempts at Whicher Range, the low permeability gas producing zones are easily damaged by contact with water. Overbalanced drilling or killing of the well with water results in substantial, and sometimes total, loss of gas productivity. In conventional multi-stage fracturing operations the well must be killed following each frac stage so that a packer or isolation plug can be run to allow separate stimulation of the next up-hole zone. Wells completed in this manner typically show production only from the uppermost frac'd interval. Production from the lower sands in often lost or greatly impaired.

The use of flow-through composite frac plugs as zone isolation tools eliminates the need to repeatedly kill the well. These flow-through plugs also allow the well to flow continuously from all zones while awaiting perforation and stimulation of up-hole intervals. Each flow-through plug is equipped with a check-valve assembly so that stimulation fluids injected into newly completed zones cannot affect previous zones. Figure 10 shows actual well performance for a well in the GGRB that was stimulated with eleven separate fracture treatments in individual stacked sands. Incremental gas production was realized from each successive fracture treatment. In conventional multi-zone fracturing treatments, each zone would be killed and subsequently cleaned up individually. As Figure 10 shows, each of the zones is capable of producing at a rate of approximately 1000mcfd. At this rate, each zone is incapable of lifting the liquid load in the casing, so flowed individually the well would not clean-up. With all zones mutually supporting each other, the well can successively unload each frac treatment and achieve a higher total production rate. This well, and others that were treated similarly, have greatly outperformed conventional offset wells that typically show production from only a portion of the zones treated.

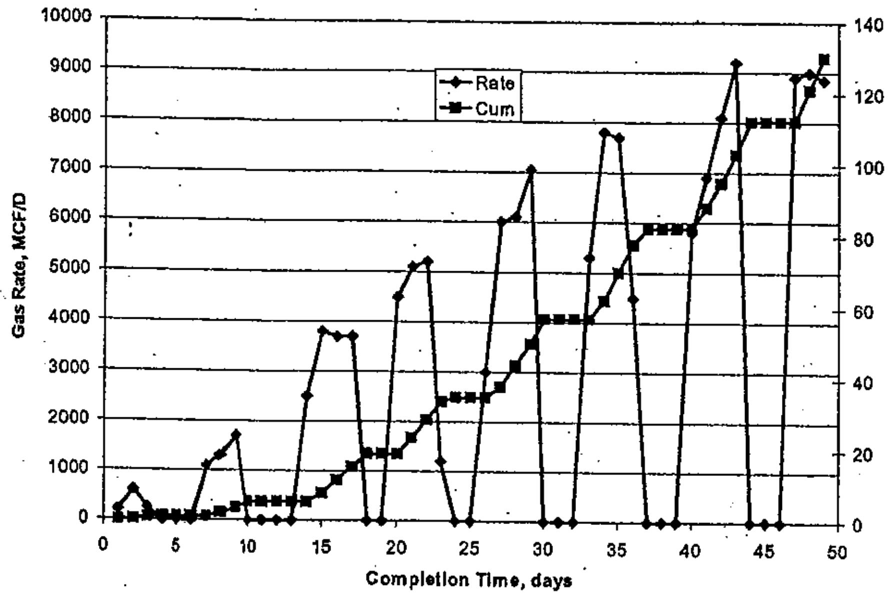


Figure 10: Example of gas production from multi-stage fracture treatment with flow-through plugs

The conventional drilling and stimulation of Whicher Range-4 by the operator before Amity provided valuable drilling operational experience and up-to-date costs on all items and operations. This, together with a detailed knowledge of the stratigraphy, provides a sound basis for design and management of the proposed Whicher Range-5 well. Based on this previous knowledge, a prognosis of the planned drilling and completion operation for Whicher Range-5 has been assembled.

Amity has successfully applied the under-balanced air-mist drilling technique for two wells in Turkey and the drilling of Whicher Range-5 should benefit from that experience. Additionally, experience in Turkey has also demonstrated the adverse effect of "killing" a low to moderate permeability gas well with water-based fluids. The wells drilled and completed with the air-mist system were never subjected to liquid loading and have significantly outperformed offset wells. The performance improvement was so striking that the improved drilling and completion technique has now become the accepted standard in that field.

Figure 11 shows the expected casing setting depths and expected zone tops to

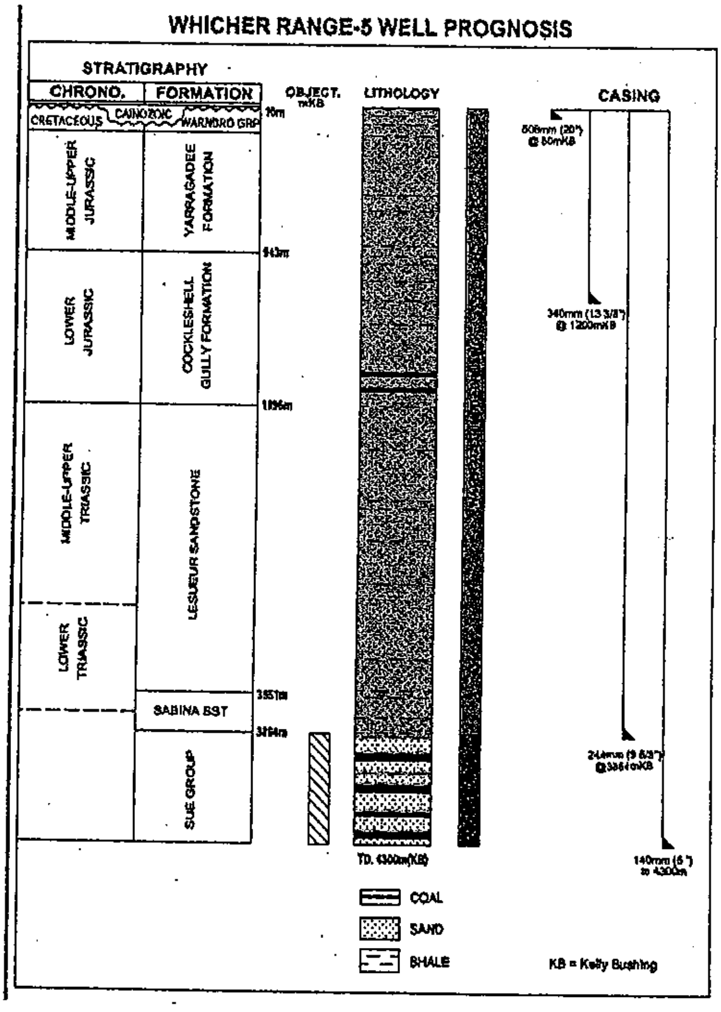


Figure 11: Whicher Range-5 well prognosis

be encountered by the well. Drilling with water-based fluids will be suspended above the top of the Sue Group. Drilling through all potential productive sands with air-mist, while maintaining gas flow from the zone ensures minimal damage to the reservoir and associated natural fracture system from either invasion of water or plugging by drilling fines.

The success of the Whicher Range-4 carbon dioxide remediation treatment strongly suggests that damage from drilling and completion fluids contributed to the severe productivity impairment observed in that and earlier well flow tests. Initial DSTs on all earlier wells make it clear that economically productive gas reserves exist in these sands.

Detailed analysis of the previous drilling efforts on Whicher Range gas field and subsequent testing indicate that the proposed drilling technique is appropriate for the drilling of Whicher Range-5. Use of an underbalanced air-mist drilling technique coupled with a non-aqueous stimulation fluid is supported by all previous experience in the Whicher Range gas field as the most appropriate completion method available for this reservoir.

Figure 12 shows the strong well-to-well correlation from Whicher Range-1 to Whicher Range-4. This relationship is expected to continue to the proposed Whicher Range-5 location.

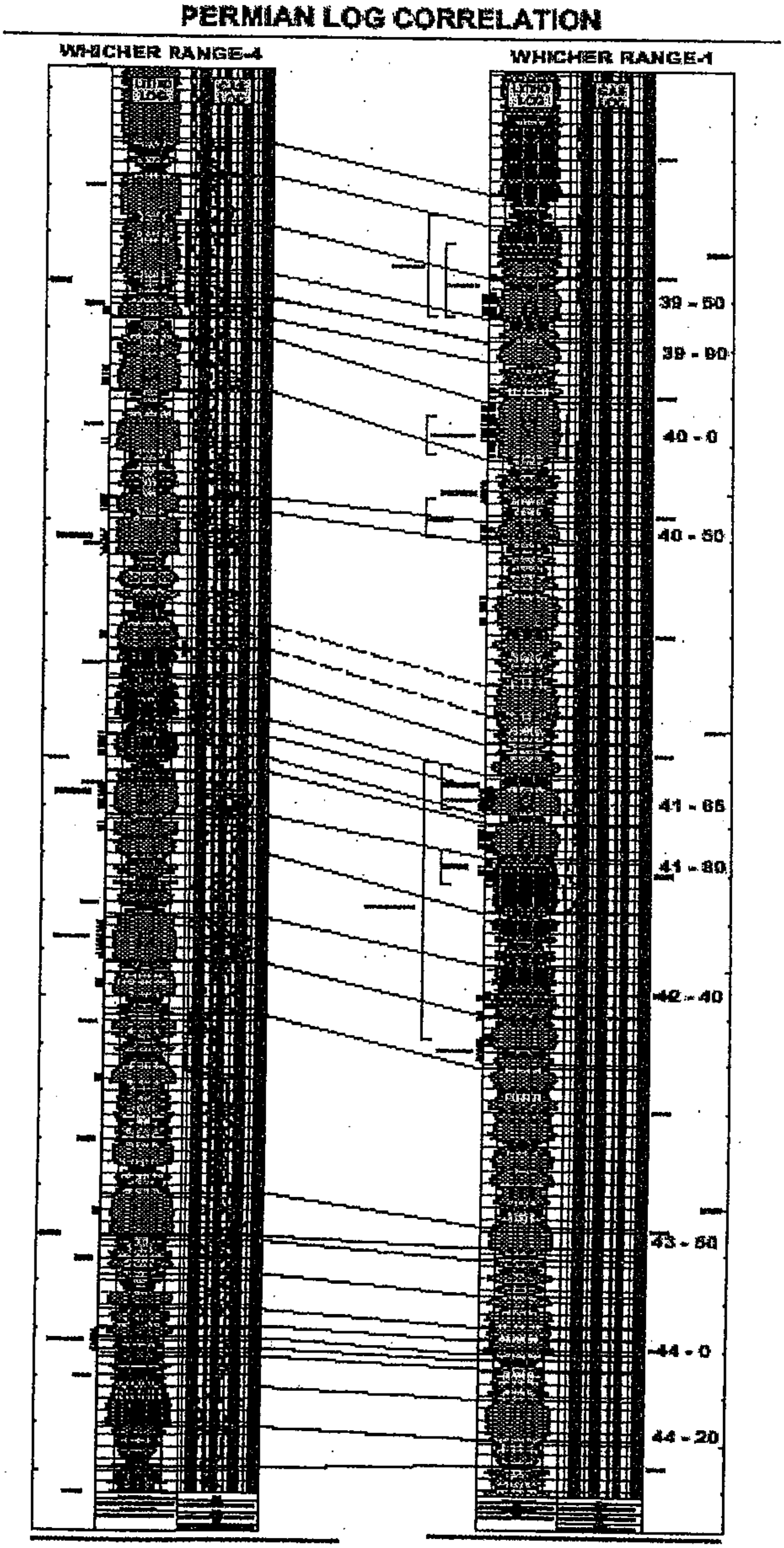


Figure 12: Log correlation from Whicher Range-1 to Whicher Range-4

6.2 EP 381 Exploration

If Whicher Range-5 is proven capable of delivering commercial rates, additional exploration will be undertaken to test for commercial gas reserves in the Whicher Range South area in EP 381. This exploration target represents a similar domal structure with equivalent geologic setting as the primary Whicher Range field. It is anticipated that the same sequence of productive gas-bearing sands will be encountered in this structure.

As in Whicher Range-5, the exploration well will be drilled so that contact between the formation and water-based fluids will be minimized. The under-balanced air-mist system will be employed to drill through the productive sands. Producing capacity will be investigated through flow tests and production monitoring. Stimulation will be considered only if the gas rate achieved by natural completion is unsatisfactory.

7.0 EXPLORATION PROGRAM OVERVIEW

The presence of gas resources in the permits into which Whicher Range Gasfields Limited is farming has been well established by previous well flow tests and drill stem tests. Based on my experience it is likely that these earlier wells failed to reach economic production rates because of the drilling, completion and stimulation strategies employed. The program proposed for Whicher Range-5 and the exploration drilling in EP 381 are well devised, based on all the available core and field data.

In my personal experience, I have observed similar low permeability gas reservoirs that have been irrevocably damaged by contact with completion fluids, especially water-based drilling and fracturing fluids. In many cases the use of a relatively dry, under-balanced drilling system such as the system which Amity is proposing to use for Whicher-5 can alleviate the need for stimulation. In other cases the use of an oil-carbon dioxide miscible fracturing fluid system has been shown to maintain effective gas permeability.

Some risk is involved in virtually all petroleum exploration. However, the risks associated with this exploration program have been minimized by extensive use of previously obtained data and experience.

8.0 SOURCES OF INFORMATION

This report has been compiled based on information supplied by Amity, the operator of the permits, and Stim-Lab, Inc.

9.0 APPROPRIATENESS OF EXPLORATION PROGRAM

I consider that the operator of the referenced permits, which are the subject of this report, has a clearly defined exploration and expenditure program which is well founded and supported by previous exploration activities in the Whicher Range gas field. The plans set forth in this Prospectus represent the next necessary step in confirming the economic production potential of the field.

Previous experience has confirmed beyond any reasonable doubt that productive gas reserves exist in the Sue Group sands underlying the Whicher Range field. Initial flow tests and carbon dioxide remediation treatments already conducted have strongly suggested that previous wells have suffered from extreme completion fluid damage. The drilling, completion, and stimulation plans described here offer the best possible chance to achieve sustained commercial gas production rates from the field.

10. INDEPENDENCE

The undersigned has no direct or indirect interest in the permits that are the subject of this report, nor in the securities of Whicher Range Gasfields Limited. The undersigned is to be paid his usual fee for the preparation of this report. Payment for this service is not dependent on the success of this Prospectus in raising the funds sought by Whicher Range Gasfields Limited.

11. QUALIFICATIONS

The undersigned graduated from the Pennsylvania State University, University Park, Pennsylvania, USA with the degree of Bachelor of Science in Petroleum and Natural Gas Engineering. He subsequently graduated from the Colorado School of Mines, Golden, Colorado, USA with the degree of Doctor of Philosophy in Petroleum Engineering. He has 25 years experience in the petroleum industry.

He is a member of the Society of Petroleum Engineers, the author of more than 24 technical publications, and has served as a Distinguished Lecturer for the Society of Petroleum Engineers on the subject of hydraulic fracture stimulation in tight gas sands. The undersigned is also a registered Professional Engineer in the State of Colorado, USA.

12. LIMITATIONS & CONSENT

In preparing this report I have relied on data provided by Amity Oil NL, the operator of the permits that are the subject of this report, and data provided by Stim-Lab, Inc. concerning the producing capacity of the reservoir and previous formation damage studies. A draft of this report was provided to Whicher Range Gasfields Limited for comments regarding any errors in relation to background or information. As is considered normal when dealing with petroleum exploration permits, it has not been deemed necessary to visit the areas concerned.

The undersigned consents to the inclusion of this report in the form and context in which it appears in this Prospectus, and to the references to this report in the Prospectus.

Yours faithfully,

Robert D. Barree, PE, PhD.

GLOSSARY

Anticline:	a tectonic structure in which strata are folded so as to form an arch or dome (i.e. convex on top).
Anticlinal trap:	a hydrocarbon trap formed by the upward bowing of strata into a dome or arch.
Barrel:	the unit of volume measurement used for petroleum and its products.
1 barrel: (bbl)	42 U.S. Gallons 35 Imperial gallons (approx.) or 159 litres (approx.) 7.3 barrels = 1 ton (approx.) 6.29 barrels = 1 cubic metre.
Basement:	a segment of otherwise non-prospective rocks underlying a sedimentary basin.
Basin:	a depression of large size in which sediments have accumulated.
BCF	gas volume, billion standard cubic feet.
Bed:	a geological term describing a stratum (layer of sediments or sedimentary rock) of considerable thickness and uniform composition and texture.
bwpd:	water production rate, barrels of water per day.
Cn (C2, C4, etc):	carbon number; hydrocarbon gas is composed of a mixture of compounds composed of carbon and hydrogen atoms which are characterized by the number of carbon atoms in a molecule.
Carbonates:	sedimentary rocks composed of calcium and/or magnesium carbonate e.g. limestone.
Clastics:	fragments of rocks or organic structures which have moved individually from their places of origin.
Closure:	the vertical distance from the top of a structure and the area within the lowest closing contour of a structure.
cm:	Centimetre(s).
Condensate:	hydrocarbons (predominantly pentane and heavier compounds) which spontaneously separate out from natural gas at the wellhead and condense to liquid.
Cretaceous Period:	the period of geological time which began roughly 130 million years ago and ended roughly 60 million years ago.
Depocentre:	an area or site of maximum deposition in a sedimentary basin
Depression:	a low place of any size on the earth's surface and referring to portions of basins or troughs which often have a topographically low surface expression.
Deposition/ Depositional:	laying down of potential rock forming material i.e. sediments.
Devonian:	the period of geological time which began roughly 410 million years ago and ended roughly 355 million years ago.
Dip:	the angle of the plane of a bed relative to the horizontal.
Dry hole:	a well drilled without finding gas or oil in commercial quantities.
DST:	drill-stem test conducted to measure producing rate prior to setting casing in the well.
Embayment:	a geosynclinal or downwarped area containing stratified rocks either sedimentary or volcanic that extends into a terrain of other rocks.
Exploration drilling:	drilling carried out to determine whether hydrocarbons are present in a particular area or structure.
Exploration Licence:	a licence to explore for oil and gas in a particular area issued to a company by the governing state.
Facies/lithofacies:	the rock record of any sedimentary environment, including both physical and organic characters.
Fault:	a fracture in the earth's crust along which the rocks on one side are displaced relative to those on the other.
Fault trap:	a trap where a reservoir layer is faulted and brought against an impervious formation.

Field:	a geographical area under which an oil or gas reservoir lies.
Flouresence:	the emission of visible light by atoms excited by some incident energy, used to identify certain minerals or hydrocarbon content in rocks.
Fold/Folding:	A band in strata, commonly a product of deformation.
Formation:	a unit in stratigraphy defining a succession of rocks of the same type.
Frac; Frac'ing; Frac'ed:	the artificial creation of cracks in the reservoir through hydraulic fracturing.
Ga:	
Gamma ray:	electromagnetic radiation spontaneously emitted by some elements and detected by instruments in the wellbore, used to identify lithology.
Geochemical:	a term meaning the study and measurements of the earth's chemical composition.
Geology:	the science relating to the history and development of the Earth's crust.
Geophysics:	the physics of the Earth; a hybrid discipline involving a combination of physical and geological principles.
Hydrocarbons:	compounds containing only the elements hydrogen and carbon. They may exist as solids, liquids or gases.
Intra-formational:	existing in and formed more or less contemporaneously with a sedimentary formation.
KB or RKB:	datum elevation for well depth measurements; Kelly bushing or rotary Kelly bushing on drill-rig floor.
km:	kilometre(s).
Lacustrine:	sediments deposited in a lake environment.
Lead:	inferred geologic feature or structural pattern requiring investigation.
Licence:	an authority to explore for or produce oil or gas in a particular area issued to a company by the governing state; see Exploration Licence.
Limestone:	a rock composed of calcium carbonate.
Lithology/Lithologic:	the physical and mineralogical characteristics of a rock.
m:	metre(s).
Marine:	deposited in the sea.
Mature (source):	the condition, caused by pressure, temperature and time, in which organic matter in a potential source rock will be converted to hydrocarbons.
md:	unit of permeability, one millidarcy is 0.001 darcy; one darcy is the permeability that will allow a 1 cc/sec water flow-rate through a 1 cm^2 area with a potential gradient of one atmosphere per cm.
Migration:	the movement of hydrocarbons from regions of higher to lower pressure.
mKB:	depth measurement in meters below Kelly bushing (KB).
	millions of standard barrels
mcscf:	thousand standard cubic feet of natural gas.
mscf:	million standard cubic feet of gas.
mscfd:	gas flow rate, thousand standard cubic feet per day.
mmscfd:	gas flow rate, million standard cubic feet per day.
mss:	well depth measured from mean sea level; meters sub-sea.
my:	time period indicating million years before present.
Net pay:	the subsurface geological layer where a deposit of oil or gas is found in potentially commercial quantities.
Oil:	a mixture of liquid hydrocarbons of different molecular weights.
Oil Field:	a geographical area under which an oil reservoir lies.

Oil in place (OIP):	an estimated measure of the total amount of oil contained in a reservoir, and, as such, a higher figure than the recoverable reserves of oil.
Orogeny/orogenic:	the process of forming mountains, particularly by folding and thrusting.
Palaeozoic era:	the era of geological time (comprising the Cambrian, Ordovician, Silurian, Devonian, Carboniferous and Permian Periods) which began roughly 600 million years ago and ended roughly 230 million years ago.
Permeability:	a measure of the capacity of rock or stratum to allow water or other fluids such as oil to pass through it.
Permian:	the period of geological time which began roughly 300 million years ago and ended roughly 240 million years ago.
Petroleum:	a generic name for hydrocarbons, including crude oil, natural gas liquids, natural gas and their products.
Pipeline:	a pipe through which oil, its products, or gas is pumped between two points, either offshore or onshore.
Porosity:	the ratio of the volume of pore space in rock to its total volume, expressed as a percentage.
Producing Horizon:	rock from which oil or gas is produced.
Prospect:	an anomaly or feature sufficiently defined to warrant the drilling of a well without further investigation.
Quartz:	a mineral composed of silicon dioxide.
Recovery factor:	the ratio of recoverable oil and/or gas reserves to the estimated oil and/or gas in place in the reservoir.
Reflector:	An horizon on a seismic section resulting from a reflection of sound energy.
Reservoir:	Pervious and porous rocks (usually sandstones, limestone or dolomites) capable of containing significant quantities of hydrocarbons.
resistivity:	resistance to flow of electric current times the distance of the current flow path, used to detect the presence of non-conductive materials such as hydrocarbons.
Reverse fault:	a fault alon
Sandstone:	a type of rock composed primarily of quartz grains.
Seal:	an impermeable rock (usually claystone or shale) which prevents the passage of hydrocarbons.
Seismic survey:	a technique for determining the detailed structure of the rocks underlying a particular area by passing acoustic shock waves into the strata and detecting and measuring the reflected signals.
Sedimentary rocks:	rocks which have resulted from the consolidation of loose sediments arising from weathering.
Show:	an indication of oil or gas from an exploratory well.
Silt/siltstone:	rock intermediate in texture and grain size between sand and shale.
Sonic:	referring to the velocity of sound waves in some medium, measured by wellbore instruments and used to determine various rock properties
Source Rocks:	rocks (usually claystones or shales) that have generated or are in the process of generating significant quantities of hydrocarbons.
Spontaneous potential:	an electro-chemical potential field set up by differences in ionic content of wellbore and formation fluids, measured by wellbore instruments
Stratigraphy:	the study of stratified rocks, especially their age, correlation and character.
Structural Trap:	a trap formed as a result of folding, faulting or a combination of both.
Structure:	deformed sedimentary rocks, where the resultant bed configuration is such as to form a potential trap of migrating hydrocarbons.

SW: water saturation in pore space, either fraction or percent of total pore volume.

Syncline: a basin shaped fold.

TD: total depth of well, indicating end of drilling process.

Tectonics: a branch of geology dealing with the regional assembling of structural or deformational features, a study of their mutual relations, their origin, and their historical evolution.

Tertiary era: the era of geological time which began roughly 60 million years ago and ended roughly one million years ago.

Thrust fault: a reverse fault that is characterised by a low angle of inclination with reference to a horizontal plane.

Trap: a body of reservoir rock, vertically or laterally sealed, the attitude of which allows it to retain the hydrocarbons that have migrated into it.

Terrigenous: sediments derived from a non marine (crustal) environment.

Trend: a strike direction of a geological feature.

Unconformity: A tectonic feature in which strata are eroded and subsequently overlaid with younger strata (sometimes angularly), which are said to lie unconformably on the older strata; the actual boundary between the two sets of strata.

Units of Measurements:

bbl	barrel of oil
km	kilometers
m	meter

Updip: a well located higher on a structure where the hydrocarbon-bearing formation is found at a shallower depth.

Uplift: elevation of any extensive part of the earth's surface relative to some other part.

vitrinite reflectance: a measure of the thermal maturity of coal minerals, relative to their capacity to generate methane gas, measured in % of incident light reflected.

Well-log: a recording of rock properties obtained by lowering various instruments down a drilled well.

Wildcat: a petroleum exploration well drilled on a structure which has not previously been tested by drilling.

Wrench: lateral movement resulting in faulting.