1. INTRODUCTION

The comments below are in addition to information previously made available to the Commission by APTPPL.

These comments do not specifically address issues raised at the roundtable meeting on 15 May. APTPPL comments on these issues will be forwarded in a separate public letter to the Commission.

2 COMMENTS ON SPECIFIC ITEMS RAISED IN THE ISSUES PAPER

The following comments address the items identified for comment in the Issues Paper.

2.1 Demand Forecasts

The ACCC seeks comment on whether:

- ***there is additional demand that is currently not being reasonably met by the RBP***

There is little scope for additional gas to be carried by the RBP without substantial capital expenditure.

APTPPL is currently in discussion with several parties concerning the possible expansion of the RBP to meet additional demand. The scope and timing of this expansion are not finalised.

- ***the forecasts for the proposed access arrangement period are reasonable for the determination of reference tariffs and revenues***

The APTPPL demand forecasts, which are an input to the Reference Tariff calculation, reflect current contracted demand in the pipeline.

To use forecasts greater than the pipeline can currently transport would require additional capital costs need to be taken into account. Such costs have not been incorporated into the Total Revenue which is calculated on the basis of the capital and non-capital costs for the current configuration of the pipeline.

- ***the assumed rates of load growth are reasonable for users' assumptions regarding retailers, major users and the power generation sector (timing, fuel source and location);***

Demand forecasts underpinning the Access Arrangement have been identified as reasonable by ACIL Tasman in a report provided to the Commission.

- ***there is significant demand for the reference tariff and services at existing capacity, and future capacity, say up to 305 TJ/day as per the CRA report, both in the forthcoming access arrangement period and beyond***

As noted above APTPPL is currently in discussion with several parties concerning possible expansion of the RBP to meet additional demand.

In addition there are several more requests for capacity in the queue. To date these parties have not been able to further commit to their projects but APTPPL considers it is reasonable to assume that these projects or similar projects will be developed over the forecast period.

The figure of 305 TJ a day aligns reasonably closely with current usage plus projected usage by prospective users in the queue. APTPPL believes that any long term forecast should take account of current usage and usage projected by third parties via the queuing process.

- ***further development of CSM reserves and other sources will affect supply and demand at various receipt points or zones***

APTPPL has confidence that in the longer term additional CSM projects will assist in meeting future demand.

Until the location of future loads and CSM developments are known the impact of these developments on specific receipt and delivery points and "zones" can not be known.

- ***the basis for long term demand forecasts, as used for the capital base, sufficiently reflects the specific needs of users and potential users, for example storage, park and loan for generators***

The APTPPL demand forecasts reflect both current contracts (including contracts with generators) and forecasts of future peak days, throughputs and load profiles. These assumptions include allowance for power station loads and services indicated by requests in the queue.

2.2 Services Policy

The ACCC seeks comments and supporting evidence on whether:

- ***APTPPL's proposed reference service will meet users' anticipated needs during the next access arrangement period***

The Services Policy includes a Reference Service and a Negotiated Service.

The Reference Service reflects the requirements of a significant part of the market based on the previous years of RBP operation where the only significant service sought has been the firm forward haul of gas to Brisbane from the direction of Wallumbilla.

The needs of individual users in relation to storage services, backhaul services, interruptible services and other services can be negotiated on a case by case basis as Negotiated Services. The Reference Tariff may act as a point of reference in these negotiations, dependent on the service and terms being negotiated.

- ***market developments will impact on the demand for additional services (including non forward haul services)***

Market developments such as:

- development of new CSM gas fields and production facilities;
- development of new "traditional" gas fields and production facilities;
- developments of new pipelines; and
- development of new power stations

are not known with certainty. A Negotiated Service gives the Service Provider and User the flexibility to address the circumstances of the developments as they arise.

- ***limiting the reference service to current capacity is appropriate***

APTPPL has addressed this issue in its response dated 7 April 2006 as follows:

The Code requires that an Access Arrangement be established for a Covered Pipeline – not the pipeline as it may subsequently be extended or expanded. The Access Arrangement applies to the Covered Pipeline, being the pipeline and associated facilities as at 31 January 2006. For clarity in the Access Arrangement documentation, APTPPL adopted the term "Existing Capacity".

It is consistent with the operation of the Code that an Access Arrangement does not apply to extensions and expansions unless the Expansions/Extensions Policy in the Access Arrangements so provides1. While the use of the term "Existing Capacity" is perhaps novel to the RBP Access Arrangement, the concept embodied in the use of that term – that the Reference Services is available for existing but not possible future capacity – is consistent with many Access Arrangements. The position reflected in the RBP Access Arrangement is consistent with that applicable under all Access Arrangements except those where the extensions/expansions policy expressly provides that services provided by the extension/expansion will be provided at the Reference Tariff.

1 For example, section 3.16 clearly contemplates a number of possible approaches to establishing tariffs for extensions or expansions.

While APTPPL is considering expansion of the RBP, the timing, capacity size and capital cost of the capacity expansion are not known. APTPPL therefore decided not to include forecast capital expenditure and volumes in respect of such possible expansion in the calculation of Total Revenue.

A Reference Tariff applying only to the capacity available under the Covered Pipeline as it currently exists is reasonable and is consistent with the Code.

- ***there are any other services likely to be sought by a significant segment of market participants that should be included in the services policy, particularly if the pipeline capacity is increased. Submissions should include an estimate of the volumes and specify the location(s)***

APTPPL has nothing to add on this issue at this time.

2.3 Reference tariff

The ACCC seeks comments and supporting evidence on whether:

- ***the capacity-commodity split of the proposed reference tariff is appropriate and conducive to efficient utilisation of the pipeline***

The proposed Reference Tariff structure encourages more efficient utilisation of the pipeline. Pipeline capital costs and operating costs are largely determined by peak usage not total throughput. A tariff structure containing throughput only charges is not cost reflective and as such will not provide price signals which encourage efficient use of the pipeline.

- ***the proposed tariff path is appropriate;***

The proposed Reference Tariff path delivers a tariff in 2011 which approximates the forecast average tariff at 2011 for Existing Capacity under current contracts. This minimises any price shock that may occur as current contracts expire post 2011.

- ***the proposed single zone 'postage stamp' approach reflects the needs of the majority of users;***

The pricing structure under the current Access Arrangement is a "postage stamp" approach rather than zonal or distance based approach.

Zonal or distance based tariffs may encourage shippers to ship relatively large quantities of gas small distances through a pipeline. This will utilise capacity that could have otherwise been used by other shippers to ship gas the full distance of the pipeline. Where

a pipeline is close to capacity, the opportunity cost of this one shipper shipping gas a short distance is that another shipper is prevented from shipping the gas a longer distance. The postage stamp tariff attempts to minimise this opportunity cost.

- ***the proposed additional charges are reasonable and whether they should be rebated from the reference tariff***

The proposed additional charges are similar to additional charges approved on other pipelines. To APTPPL's knowledge these charges have not been treated as rebatable in other Access Arrangements. To change this policy introduces a level of regulatory risk.

While these charges only form a small proportion of total revenue they act as incentive for shippers to act in a manner which facilitates the efficient operation of the pipeline. If these charges were rebated this would reduce the incentives for shippers to act in accordance with good pipeline operating practice.

- ***the proposed reference tariff, as currently structured, allows users to obtain a firm forward haul service which includes only those elements that the users seeks from the service.***

APTPPL considers that the proposed Reference Service contains only those elements which are required for a firm forward haul service, provided on the basis of the proposed Reference Tariff.

2.4 Extensions and expansions policy

The ACCC seeks comments and supporting evidence on:

- ***users' experience with the current, and views on the proposed, extensions and expansions policies to understand how well they work in practice***
- ***circumstances particular to this pipeline that have or may impact the effectiveness of the proposed policy***
- ***how the expansions policy with negotiated tariffs might operate and impact on users***

APTPPL has no comment on the above issues.

- ***whether the definition of a reference service should be expanded to apply to firm forward haul for expanded capacity (and up to what level), if this may mean a higher reference tariff***

APTPPL has addressed this issue above.

- ***users' actual prior and current experiences in accessing additional capacity, including issues arising in negotiating for the additional capacity, the cost of the additional capacity and information provision by the service provider***

APTPPL has no comment on the above issue.

- ***APTPPL's requirement to have firm haulage contracts in place prior to proceeding with pipeline expansions is appropriate***

APTPPL does not generally invest in pipeline expansion on a speculative basis for several reasons:

- increased uncertainty increases the cost of capital. A demonstrated and contracted load can reduce the cost of capital;
- the regulatory cost of capital implicitly assumes contracted loads;
- speculative capital expansion may not be used and hence may be allocatively inefficient;
- such a requirement has been accepted in several other access arrangements approved under the Code, including the Commission (RBP Access Arrangemetn 2002, Carpentaria Gas Pipeline Access Arrangement) and the ERA (Goldfields Gas Pipeline Access Arrangement 2005).

2. 5 Queuing Policy

The ACCC seeks comments and supporting evidence on:

- ***users' experiences with APTPPL's existing queuing policy***
- ***users' experience in using arbitration or other dispute resolution processes***

APTPPL has no comment on the above issues.

- ***whether the queuing policy proposed by APTPPL is reasonable for large and small prospective users and whether it meets the anticipated needs of prospective users of the pipeline***
- ***users' experience with lodging a request for extra capacity, and whether the queue accurately reflects demand for additional capacity***
- ***whether queuing arrangements will facilitate an appropriate expansion of the pipeline***
- ***whether the policy reduces or eliminates the risk that a prospective user will hoard capacity.***

On the issue of whether the queue reflects demand for additional capacity. It is incumbent on the prospective users to queue. APTPPL bases its view on bona fide demand for extra capacity from information provided by those parties on the queue.

If parties seeking capacity join the queue this should facilitate timely expansion of the pipeline as the right signals are sent.

2.6 Trading Policy

The ACCC seeks comments and supporting evidence on:

- ***users' experiences with APTPPL's existing trading policy***
- ***whether sufficient information is available on a timely basis to allow users to determine actual available capacity at each receipt and delivery point to facilitate trading between users with temporary surpluses or shortages of capacity***
- ***whether users and prospective users consider that the proposed trading policy would facilitate trade***
- ***whether the trading policy proposed by APTPPL is reasonable and meets the anticipated needs of users and prospective users of the pipeline***

APTPPL is unaware of any trades between shippers for unutilised capacity but notes they may have occurred without APTPPL being aware of the trade.

APTPPL is not aware of any specific information users consider would be beneficial.

APTPPL notes that the trading policy reflects the Code and other Access Arrangements approved by the Commission.

2.7 Initial capital base

The ACCC seeks comments and supporting evidence on:

- ***the use of DORC as a valuation method (rather than some other valuation consistent with the Code)***
- ***the appropriateness of the NPV of costs approach to calculating DORC***

APTPPL has nothing to add on this issue at this time.

- ***whether the ORC provided by APTPPL is reasonable***

The ORC provided by APTPPL was produced by Venton and Associates. The individuals involved in producing the ORC have extensive experience in pipeline construction and costing in Australia over the last 30 years. CVs for these individuals are attached.

2.8 Capital contributions

The ACCC seeks comments and supporting evidence on:

- ***the amounts that users have paid to APTPPL or previous owners that constitute contributions towards the capital cost of capacity expansions and the additional capacity received in return for those contributions***
- ***the time periods over which these contributions were paid***
- ***the basis on which these contributions were determined***
- ***previous experience in the negotiations on user capital contributions***
- ***the extent to which user capital contributions should be taken into account in the determination of reference tariffs for the forthcoming access arrangement period and the basis for this***

APTPPL has nothing to add on this issue at this time.

2.9 Weighted average cost of capital (WACC)

The ACCC seeks comments and supporting evidence on:

- ***whether the values assumed for the various parameters used in determining the WACC are appropriate for the RBP***
- ***whether the proposed WACC is consistent with the Code***
- ***whether the risk adjusted rate of return is appropriate given the extent to which volume risk is borne by users.***

APTPPL has nothing to add on this issue at this time.

2.10 Forecast non capital costs

The ACCC seeks comments and supporting evidence on whether:

- ***the non capital costs proposed by APTPPL are reasonable and prudent***
- ***the rate of increase for labour costs is appropriate***
- ***the additional costs of security and self insurance are appropriate***
- ***the self insurance assessment has appropriately covered all risks in the category (positive and negative).***

APTPPL has nothing to add on this issue at this time.

2.11 Forecast capital costs

The ACCC seeks comments and supporting evidence on whether:

- ***it is appropriate not to include the cost of future expansions in the calculation of total revenue and reference tariffs***

As the timing, nature and costs of possible future expansions are not known in detail it is appropriate they are not included in the cost base for Reference Tariffs.

- ***the forecast expansions to the existing pipeline (for the DORC calculation) are prudent with regard to their nature, timing and valuation***

APTPPL has nothing to add on this issue at this time.

2.12 Gas specification

The ACCC seeks comments and supporting evidence on whether:

- ***the current Queensland gas specification is appropriate for the purposes of the RBP access arrangement***
- ***the current Queensland gas specification creates any issues for users or prospective users of the RBP***

In 2003 the Queensland Government incorporated AS4564 into gas regulations. Shippers on the RBP are required to deliver gas that complies with AS4564 to customers.

Issues relating to gas specification are best addressed via technical and operational regulation rather than via an economic regulatory instrument such as an Access Arrangement.

- ***the specific limit for carbon dioxide is necessary***

AS4564 specifically identifies limits on inert gases.

APTPPL believes the specific 3% limit for carbon dioxide should be retained for technical reasons. Carbon dioxide is linked to the production of elemental sulphur in pipelines which can lead to blockages in valves, filters and meters, consequently affecting the safe operation of these items.

The 3% limit is consistent with current contracts and the 2002 Access Arrangement.

2.13 System use gas

The ACCC seeks comments and supporting evidence on whether:

- ***it is preferable that shippers provide their own system use gas***
- ***APTPPL should offer the option of providing system use gas***
- ***APTPPL should provide all system use gas***
- ***the proposed approach is likely to result in cross subsidisation among users or any inefficiencies in pipeline operations***

Shippers are best placed to buy system use gas as they currently purchase much greater quantities of gas and can source the relatively small volume at a lower cost than the pipeliner. If APTPPL were to buy SUG this higher cost would have to be passed to the shippers.

For purposes of consistency and equity all shippers should be treated identically in relation to system use gas.

The current and proposed approach where shippers provide their own system use gas is unlikely to result in cross subsidisation as shippers pay on the basis of their actual throughput (with the exception of the supply to Dalby Town Council which is a very small load).

The fact that shippers provide system use gas does not result in operational inefficiencies. The costs of compressor operation (including maintenance) are directly linked to running hours, therefore it is in APTPPL's interests to reduce running hours (and therefore system use gas).

2.14 Terms and conditions

The ACCC seeks comments and supporting evidence on:

- ***the experience of existing customers with APTPPL's current terms and conditions for the RBP***

APTPPL has no comment on the above.

- ***whether the terms and conditions for pipeline access now proposed by APTPPL are reasonable and whether they meet the anticipated needs of users and prospective users;. For example:***
  - ***the appropriate quantity of linepack to be provided by APTPPL***

RBP linepack is owned by both APTPPL and shippers. The system and ratios by which linepack is owned has been fixed for a long period of time. It is reflected in current Gas Transport Agreements.

There is no operational reason to change linepack management.

- ***the reasonableness of the authorised overrun provision***

Authorised Overrun provisions are designed to provide the APTPPL with the ability to control and operate the pipeline, and to provide an incentive to shippers to reserve the appropriate amount of capacity for their anticipated requirements..

If shippers require authorised overruns on a regular basis then it is evident that the shipper has not reserved sufficient firm capacity to meet their needs. The shipper should contract for additional firm capacity or address the issue via some other means (eg interruptible contracts).

- whether APTPPL's request that daily nominations be submitted 24 hours in advance is considered reasonable by users

Nominations for firm services are required 24 hours in advance to ensure that compressors are operating at appropriate levels and times to meet demand. The numerous receipt points and delivery points and load profile requirements of power stations make this a relatively complex task on the RBP.

The use of 24 hour nominations is common in the Australian pipeline industry.

2.15 Incentive mechanism

The ACCC seeks comments and supporting evidence on:

- ***whether this incentive mechanism is reasonable and sufficient or if there might be other incentive mechanisms which would be more appropriate to include in the access arrangement***
- ***whether the incentive mechanism should take account of revenues from non-reference services sought by users***
- ***whether revenue from non-reference services should be rebated from reference service tariffs***

Under the Code (preamble to Chapter 8) the incentive mechanism is intended to

to provide the Service Provider with the ability to earn greater profits (or less profits) than anticipated between reviews if it outperforms (or underperforms against) the benchmarks that were adopted in setting the Reference Tariffs. The intention is that, to

the extent possible, Service Providers be given a market-based incentive to improve efficiency and to promote efficient growth of the gas market (an Incentive Mechanism).

APTPPL believes the current incentive mechanism is appropriate to provide an incentive to reduce costs and to develop the market for Reference and other Services. APTPPL also notes that a mechanism of this sort is contained in many other approved Access Arrangements.

2.16 Major events trigger

APTPPL believes that trigger events are more appropriate for Access Arrangement with longer time frames and consequently greater uncertainty. This is clear from the context of sections 3.17 and 3.18 of the Code. APTPPL notes the RBP Access Arrangement Revisions submission date in 2010 is only 4 years from the current commencement date.

The ACCC seeks comments and supporting evidence on whether:

- ***it is reasonable to assume that the proposed PNG Pipeline will have no impact on the demand for services from the RBP before 2011***

Under its current configuration the RBP is effectively fully contracted until 2012. Thus it is reasonable to assume that PNG Pipeline will have no impact on the demand for Reference Services from the RBP before 2011.

Published plans of the PNG pipeline show it possibly connecting to Brisbane via two routes

1. Gladstone - Wallumbilla - Brisbane
2. Ballera / Moomba - Wallumbilla - Brisbane.

If one or both of these routes eventuate PNG gas will enter the Brisbane market via Wallumbilla and consequently, most likely via the RBP. APTPPL would not expect this to impact on demand for RBP services before 2010.

- ***a decision to proceed with the PNG Pipeline, or the commissioning of that pipeline, should trigger an obligation on APTPPL to submit revisions prior to 30 November 2010***

A decision to proceed with the PNG pipeline is not an appropriate trigger event. Such a decision may possibly be made in the next twelve months. This will lead to a review of the then current Access Arrangement for little benefit and considerable cost.

The commissioning of the PNG pipeline is not an appropriate trigger event. Based on published timeframes any decision to proceed with the PNG project in 2006-7 is unlikely to result in PNG gas into south east Queensland before 2009-10. In this event it would

seem as though the 30 November 2010 date in the Access Arrangement is an appropriate time to consider the impact of the PNG pipeline.

- ***other major specific events should be defined as trigger events***

APTPPL believes that no other major specific events should be trigger events.

One of the factors underpinning incentive regulation that it allows a sufficient period between regulatory resets to allow infrastructure owners to seek out and enact efficiency gains before they are returned to users via the regulatory process. The existence of multiple trigger events is likely to shorten regulatory periods and remove incentives for efficiency.

2.17 Arbitration arrangements

The ACCC seeks comments and supporting evidence on:

- ***whether users of the RBP have considered taking matters to arbitration, and the factors that led to the matters not being progressed***
- ***what factors would prospective users consider in deciding whether to initiate an arbitration should a dispute arise during the course of future negotiations relating to additional capacity and/or additional services.***

APTPPL has no comment on the above.

3. CLARIFICATIONS AND ISSUES OF FACT RELATING TO THE ISSUES PAPER

3.1 Number of receipt points

The Issues Paper (p8) notes

There are currently six receipt points on the pipeline with another three under construction.

Since January, construction of two receipt points has been completed and there are now 8 operating receipt points. Kogan North was connected in early 2006 and Windibri was connected in May 2006.

3.2 Reference Services under 2002 Access Arrangements

The Issues paper notes (p10)

In the 2002 assessment of the RBP Access Arrangement, a number of additional services were identified by users as potentially being beneficial to electricity generators, including:

- *Pressure service;*
- *Interruptible service; Backhaul service;*
- *Spot service; and*
- *Park and loan service.*

Under APTPPL's current proposal, users requiring such services will need to reach a negotiated agreement with the service provider on the tariff and other terms.

The approved 2002 Access Arrangement Reference Service was firm forward haul. After consideration of users; submissions, the ACCC accepted that a firm forward service was the only service which should be provided as a Reference Service. Other services (such as pressure service, interruptible service, backhaul service, spot service or park and loan service) were available through negotiation.

Electricity generators on the RBP have negotiated agreements for a number of the services outlined above.

3.3 ICB Definition

The issues Paper (p14) footnote 6 notes that

APTPPL labels the $342.6 million as the proposed ICB (p. 6 of the access arrangement information). However, the ICB is the term used for the value at the beginning of the access arrangement period, not the date of the DORC calculation. Thus the value APTPPL proposed for July 2006 ($343.9 million) is the value it proposes for the ICB.

Table 2 of the Access Arrangement Information (p6) identifies the ICB as $342.6 million. Footnote 6 of the Access Arrangement Information (p6) indicates that the ICB is at October 2005. The ICB has to be set at a date on or before the commencement of the Access Arrangement to enable calculation of Reference Tariffs. Where the ICB reflects a calculated value at a specific time (such as NPV DORC which relies on an ORC value) the ICB should be set at that time. This practice has been used in other decisions under the Code.

This figure has been inflated by forecast CPI and adjusted for depreciation to obtain a July 2006 value for the Capital Base. This Capital Base is the value of the capital assets that form the Covered Pipeline at the commencement of the Access Arrangement.

3.4 PNG pipeline assumption

The Issues paper (p19) states

The proposed revised access arrangement includes an assumption that the proposed PNG Pipeline commences operation during 2009 and will have no impact on operation of the RBP during the access arrangement period. That is, no shipper in the PNG Pipeline will adjust its usage of RBP services before mid 2011.

APTPPL has assumed that any gas supply to SE Queensland from the proposed PNG pipe will flow through the RBP and replace gas from current sources (ie there will be no major initial change to RBP volumes). APTPPL has not necessarily assumed any particular date as to if and when the PNG pipeline commences operation.

3.5 Minor Error

There is an apparent typographical error, the Throughput Tariff quoted at Issues paper p11 is 10 times higher than the Throughput Tariff quoted on page 7. The correct figure is the one on page 7.

ATTACHMENT 1 – CV OF ORC CONSULTANTS: PHIL VENTON

EDUCATION AND QUALIFICATIONS: BE (Chemical), University of Queensland 1969

Chairman – Standards Australia Committee ME/38 : AS 2885 Pipelines: gas and liquid petroleum

Chairman – Standards Australia Committee ME/38/1 : AS 2885 Pipelines: gas and liquid petroleum Part 1: Design and construction

Chairman - APIA – WTIA Panel 7 Pipeline

KEY EXPERIENCE

Phil has 30 years experience in high pressure oil and gas pipeline system design, operation and commissioning, and has particular experience in the design and operation of long distance slurry transport pipelines.

His experience includes two years engineering and maintaining a natural gas transmission pipeline and associated compression, and 28 years of conceptual and detailed design of high pressure pipeline systems including construction management and pipeline system commissioning.

Phil currently works through Venton & Associates as an independent high pressure pipeline consultant. He has recently managed the engineering of natural gas transmission pipelines to Tasmania and NSW from Victoria for Duke Energy. He is current chairman of the Australian Standards Committee for petroleum pipelines, and also of the design subcommittee.

Prior to his time with PG&E, he was Principal Engineer with Worley Pipeline and Terminals Division and Engineering Manager and Principal Pipeline Engineer with CMPS&F Oil and Gas Division. In these positions he was responsible for project feasibility studies, conceptual and detailed design and project management for a range of oil and gas pipelines and associated facilities.

Prior to entering the pipeline industry, Phil was project engineer and production manager for a soap and speciality chemical manufacturer.

AREAS OF PARTICULAR EXPERTISE

- Project and design management
- Transmission pipeline system conceptual and detailed design
- Pipeline risk assessment
- Slurry pipeline system process and detailed design and operation analysis
- Commissioning.

PROFESSIONAL EXPERIENCE

December 1997 –

Venton & Associates - Consultants, high pressure gas, oil and slurry pipelines.

- Gas transmission pipeline capacity unsteady state modelling for peaking power station in Newcastle area (Moomba-Newcastle).
- Pipeline project development, cost estimating, fracture control, route selection for various clients.
- Delco Australia Pty Ltd – Kambalda-Esperance Pipeline – pipeline design and risk assessment
- Spie Capag Lucas JV – SEA Gas Pipeline – Pipeline engineering consultant, design and risk assessment
- Clough Engineering – Fracture control plan – Yolla gas pipelines
- Slurry Systems Pty Ltd – Goro Nickel Project – pipeline design advice
- Capital Project Services – Macgen Lateral – Fracture control plan
- Duke Energy Tasmanian Gas Pipeline – Consultant.
- Duke Energy International – Engineering Manager – Eastern Gas Pipeline and Tasmanian Gas Pipeline (initially consultant, then term employee).
- Cardno & Davies – Technical advice – Tweed river sand bypassing scheme.
- EAPL – Optimised replacement cost – EAPL pipeline network.
- Epic Energy – Dampier-Bunbury MAOP Upgrade project – fracture risk and project direction analysis.
- Kinhill – Optimised design of Wagga and Albury gas distribution networks.
- A J Lucas -Tender design – Tweed river sand bypassing system.
- OK Tedi Mining Limited - Failure analysis & design review – OkTedi Tailing pipeline project.
- Ok Tedi Mining Limited – Tailing pipeline preliminary design and cost estimate.
- Worley Ltd. - Asset condition assessment, Transmission Pipelines Australia.
- Worley Limited - Coastal Gas - Hydraulic analysis and cost estimating - PG&E Sale.
- CMPS&F - Design review, Ramu Slurry pipeline feasibility study.
- Bechtel-Minproc – Cadia Project, Tailing pipeline installation quality advice.
- Century Minenco Bechtel – Engineering advice, concentrate slurry pipeline. Operating Philosophy, and review of contractor design.
- Worley - Epic Transmission (WA) - Dampier-Bunbury gas pipeline MAOP upgrade.

1997 - 1997

PG&E Corporation, Australia

Principal Project Engineer

Responsible for engineering services supporting the evaluation, development, design and construction of pipelines and associated facilities for PG&E Gas Transmission Australia.

1996 - 1997

Worley Limited

Principal Engineer- Pipelines & Terminals

Philip's role is to provide technical leadership for the Pipelines & Terminals Division in the areas of high pressure oil, gas and slurry pipeline systems.

- Project Manager for a revised feasibility study for the 110 km Ok Tedi gravity tailing pipeline.
- Preliminary engineering and cost estimating for the proposed 1500 km Swan natural gas pipeline.
- Gas pipeline hydraulic and commercial analysis for a range of gas pipeline opportunities considered by PG&E.
- Preliminary design and capital cost estimate for Gold Ridge gravity tailing pipeline.

1989 -August 1996

CMPS& F Pty. Limited.

Engineering Manager and Principal Pipeline Engineer.

Major project work includes:

Gas Pipelines

- Project Manager for detailed feasibility study of 1375 km Moomba to Sydney dense phase ethane pipeline for the Pipeline Authority (1993). Responsible for initial phase of detailed design of this pipeline, and technical advice to project team through final design.
- Project Manager for detailed feasibility study of 1378 km Goldfields Gas Pipeline for Western Mining in WA (1993/4).
- Engineering Manager, Goldfields Gas Pipeline, responsible for initial engineering project office establishment, long lead item specification, compression studies, project studies, and ongoing engineering technical advice to project (1994/95).
- Project Manager, Cost Studies, Longford to Wilton gas transmission pipeline alternatives, undertaken for BHP Petroleum (1994).
- Project Manager for feasibility study of 250 km Moomba to Olympic Dam natural gas pipeline, undertaken for WMC (1994).
- Project Manager for feasibility study of 250 km Moomba to Olympic Dam natural gas pipeline undertaken for WMC (1994).
- Technical advice to tender for Pipelines Authority of South Australia sales (1995).

Hydrocarbon Pipelines

- Design Options Studies for South East Gobe Development, PNG (1993/94).
- Lead Engineer for Kutubu Export Pipeline Pump Station, and pipeline commissioning engineer (1992/3).
- Study for LPG transport pipeline, Botany Bay to Western Sydney (1992).
- Tender design for multiproducts pipeline from Sydney to Canberra (1992/93).

Slurry Transport Pipelines

- Feasibility study, 100 km, 100,000 t/d tailing pipeline for Ok Tedi, Mining Limited.
- Pipeline audit for Freeport Indonesia copper concentrate pipeline within Australia (1995).
- Conceptual detailed process design, design audit and commissioning of Bayswater Power Station Ash Disposal System. This is a world first design transporting 300 t/h of flyash at 72 per cent concentration over a distance of 10 km for disposal using sloped disposal technology (1993-95).
- Pipeline audit for Ok Tedi Mining Limited 150 km copper concentrate pipeline (1992/95).
- Feasibility study for 150 km lead zinc concentrate pipeline for BHP Minerals (1994).
- Feasibility study for 30 km long, 100,000 t/d ore transport pipeline for Placer Pacific. The pipeline considered energy recovery turbines and electricity generation and choke station alternative to dissipate excess static head (1992).
- Project Manager and design leader for tender design for 100 km high pressure sewage sludge pipeline system transporting sludge from Sydney's ocean outfall sewage treatment plants to an inland recycling facility (1989/90).

Petroleum Facilities

- Project Manager for tender design of LPG storage bullet project at Shell Clyde Refinery for Eglo Engineering (1992).
- Project Manager for FEED package, Gore Bay Heating and Pumping systems upgrade (1993/94).
- Design Manager for feasibility study design and cost estimate for PNG Oil Refinery offplots facilities (1992/3).

Other Facilities

- Project Manager and design leader for tender design and turnkey contract for positive displacement mine dewatering pump station, Pasminco South Mine (1989), and subsequent design audit of successful contractor for pump station and rising main (1990).
- Project Manager and design leader for underground positive displacement pump station and 600m single point suspension rising main for KCGM Fimiston mine (1993).
- Design leader for 600m single point suspension rising main for Olympic Dam mine using FRP pipe (1996).

1983 - 1989

Slurry Systems, Sydney

Principal Engineer

Responsible for development, testing, engineering and commissioning of pipeline transportation systems. Projects undertaken during this time included:

- Design of Sand Bypassing system to be installed at Dawesville Channel, by Department of Marine and Harbours, Western Australia.
- Technical review of the operation of the 155 km Ok Tedi Copper concentrate slurry pipeline including on-site supervision of pipeline cleaning operation and advice for pipeline upgrade.
- Study for Dallhold Nickel Management investigating the feasibility of transporting nickel ore between New Caledonia and North Queensland as a slurry. Responsible to project consultants for pipeline engineering including on site pilot plant testing.
- Design and tendering for various slurry handling projects including an 80 km mineral sand pipeline in South Africa.
- Technical investigation and advice regarding the operation of a high concentration tailings disposal system for Argyle Diamond Mines.
- Feasibility of unloading of bulk ship by slurry means, and transporting the material for disposal as landfill.

Project Manager responsible to the Slurry Pipelines (PNG)/Curtain Bros (PNG) Joint Venture for a 155 km high pressure copper concentration pipeline designed and constructed for Ok Tedi Mining Limited, Papua New Guinea. This "fast track" project was designed and constructed during 6 months of 1986 and was commissioned in June, 1987. Responsibilities included design, pump station and terminal facilities construction, pipeline construction supervision, commissioning and performance testing. The design work was completed in Sydney, and other work was undertaken on site.

Project Manager responsible to the turnkey contractor for design, engineering, construction, supervision and commissioning of a buried high pressure ironsands slurry pipeline in New Zealand. This project was a world first, and included a number of significant technical developments. It was successfully commissioned in February 1996, and was demonstrated to operate at the guaranteed throughput and specific energy consumption.

Responsible for technical aspects (including process control) for the Nerang River Entrance Sand Bypassing Scheme. This project automatically to transfer littoral drift sand across the Gold Coast Seaway preventing sandbar formation. The installation is recognised as the world's first sand bypassing scheme.

1982 - 1983

Slurry Systems

Senior Engineer

Responsible for various design and development projects including:

- Supervision of pilot plant test program for coal washery refuse and high density power station ash disposal by the sloped disposal technique.

- Analysis of operating performance of Queensland Cement slurry pipeline after three years of successful operation.
- Design for tender of a 150 km natural gas pipeline in Central Australia.
- Project Manager responsible for conceptual design and detailed feasibility study of a 220 km, 8 mt/a coal slurry pipeline system in Southern Queensland.

1976 to 1982

Williams Brothers -CMPS Engineers.

Slurry Engineering Manager

Responsible for slurry transportation projects undertaken by Williams Brothers - CMPS Engineers. Work included studies on coal slurry transportation for the State Electricity Commission of Queensland other clients.

1978 - 1981

Project Manager and Commissioning Supervisor of a 24 km limestone slurry pipeline for the Queensland Cement and Lime Company. This pipeline was successfully commissioned in August 1981.

1978

Seconded to slurry systems group, Williams Brothers Engineering Company, Tulsa, Oklahoma for one year. Engaged in design, feasibility studies and stabilised slurry research.

1976 - 1978

Project Engineer of Slurry Group responsible for the definitive design, specification, route location and cost estimation for a limestone slurry pipeline in Queensland; involved in a number of economic studies slurry pipelines proposed within Australia and involved in field commissioning of the Moomba to Sydney Natural Gas Pipeline.

Commissioning of fired heaters, separators and metering for natural gas distribution station in the Sydney metropolitan area.

1974 - 1976

Associated Pipelines Limited, Brisbane

Pipeline Engineer

Responsible for engineering operation of the Roma - Brisbane Natural Gas Pipeline. This included responsibility for design and construction of additional facilities including gas compression and gathering system extensions, also corrosion control, including design and extension to cathodic protection facilities.

1970 - 1974

Campbell Brothers Limited, Brisbane

1973 - 1974

Production Manager, responsible for a staff of 40 manufacturing wide range of detergents, soaps, chemical specialities and refractories.

1973

Project Manager, responsible for a three month project to establish a branch office and manufacturing plant in Adelaide.

1970 - 1973

Project Engineering responsible for feasibility studies, design and construction of a range of chemical manufacturing plants.

ATTACHMENT 2 – CV OF ORC CONSULTANTS: DEREK BUTLER

Senior Estimating Engineer

TECHNICAL EDUCATION

Diploma of Civil Engineering (QUT) - 1969

TECHNICAL ASSOCIATION MEMBERSHIP

Member of Institution of Engineers, Australia
Registered Professional Engineer, Queensland
Chartered Professional Engineer

SUMMARY OF EXPERIENCE

Thirty three years experience in oil/gas pipeline projects, both in project management and construction. Specialist in both feasibility and construction cost estimating for pipelines and associated infrastructure. Extensive experience in Asia and the Middle East. Involvement with in excess of 230 different oil and gas pipeline projects or studies over the last 21 years. These have been in all Australian states, PNG, Indonesia, the Philippines, Iran, Thailand, Pakistan, India and Malaysia. In Australia, this has included all the major pipelines constructed in Australia since 1984.

EXPERIENCE

1984 - 2005 **AUST-WIDE ESTIMATING PTY LTD**
Manager

Cost estimating, feasibility studies and project management studies for approx 236 oil/gas pipeline projects for offshore and Australian consultants, oil companies and contractors in Australia, Asia and the Middle East.

1982 - 1984 **THIESS CONTRACTORS PTY LTD**
Senior Civil Estimator

Preparation and compilation of tenders for major civil works and mining projects throughout Queensland and the Northern Territory.
Projects included mines, ports, dams, major concrete works,Water supply, pipelines, bridges, roads, railways, etc.

1981 - 1982 **ABIGROUP LIMITED**
Senior Estimating Engineer

Preparation of estimates for heavy civil engineering projects throughout Queensland involving bulk earthworks, highways, mining infrastructure,railways, sewerage plants, pipelines, dams, etc.

1978 - 1981 **MIM HOLDINGS LTD (COLLINSVILLE COAL COMPANY)**
Project Engineer

Project planning and management of Collinsville / Newlands coal mines development including harbour works, rail lines, access roads, water supply,airstrip, township, haul roads, etc.

1977 - 1978 **MOUNT ISA MINES LTD, MT ISA**
Resident Engineer

Supervision of construction and administration of contract for the 270m high lead smelter chimney.

1974 - 1977 **MIM HOLDINGS LTD, BRISBANE**
Project Engineer

Project planning and management of mine developments thoughout Australia and Papua New Guinea.

1973 -1974 **MONIER-BACHY PTY LTD.**
Assistant Manager

Promote, bid and carry out contract administration of heavy foundation contracts throughout Queensland viz. piling and in-situ bored piers.

1971 - 1972 **MONIER LTD.**
Project Manager

Tendering and supervision of 10 large capacity water supply reservoirs. As well, bid estimating and contract administration of eighteen dam foundation and underground grouting projects.

1968-1971 **QUEENSLAND ROADS & PAVEMENTS PTY LTD.**
Works Engineer

Preparation of estimates for bids on roadworks, bridges, earthworks and water supply projects throughout Queensland

1965 - 1968 **MAIN ROADS DEPARTMENT, BRISBANE**
Assistant Engineer

Administration, cost control and supervision of both day labour and contract highway and bridge projects