SEPARATE MARKETING OF JOINT VENTURE GAS IN WESTERN AUSTRALIA - A REVIEW OF SEPARATE MARKETING ARRANGEMENTS IN THE UNITED STATES AND THEIR IMPLICATIONS FOR AUSTRALIA

A Memorandum to the North West Shelf Joint Venturers (NWS)

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I. INTRODUCTION

The Assignment

1.1 The North West Shelf Project joint venturers are presently reviewing the implications for the long-standing arrangements under which they market gas in Western Australia. As a result, Freehills, acting on behalf of the North West Shelf Gas Pty Ltd has commissioned Jensen Associates to provide a review of the joint marketing issue. The issues are:

- The background to the development of separate marketing arrangements for natural gas in the United States
- The structural features of US natural gas markets that facilitate/underpin separate marketing arrangements
- An overview of the types of contractual arrangements presently used by US

natural gas joint ventures to enable separate marketing to occur: This work would identify the critical elements of borrowing and balancing and other relevant arrangements and why they are important

- The features of the Western Australian gas market (based on material provided) and views as to whether or not separate marketing by the NWS joint venturers is presently feasible; and
- The implications for North West Shelf of the ACCC Gorgon decision

Qualifications

1.2 James T. Jensen, who prepared this memorandum, is President of Jensen Associates. He is a recognized authority on international natural gas supply, demand, trade and pricing

Appendices

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1.3 Mr. Jensen's curriculum vitae is included as Appendix A

1.4 Appendix B includes a list of documents relied on for this assignment.

1.5 Appendix C is a model gas balancing agreement provided for U.S. producers by the American Association of Petroleum Landmen

II. PRINCIPAL CONCLUSIONS

2.1 Gas balancing agreements[1] (balancing and loan agreements) in the United States operate in a very different market environment from that in Western Australia. As a result, the U.S. experience provides little direct guidance for the way in which they might function to facilitate separate marketing of joint venture gas in Western Australia.

2.2 The principal differences between the U.S. and Western Australian markets that make it difficult to use U.S. balancing agreements as a model for Australia include:

- The U.S. has a large, liquid commodity gas market; Western Australia does not
- Long-term contracts predominate in Western Australia; the U.S. has a short-term commodity gas market
- Because of rapid field decline in the U.S., producers seldom use balancing agreements for anything other than short term imbalances; the U.S. experience therefore gives little guidance for the use of balancing agreements as a competitive marketing tool.
- There are a few large customers in Western Australia, substantially complicating an effort to create market share without risking future difficulties in restoring balances

[1] In U.S. terminology, gas borrow and loan agreements are "gas balancing agreements"; borrowers are "overproduced parities" or "overlifters" and lenders are "underproduced parties" or "underlifters". U.S. terminology is used throughout this report

- And despite its large, liquid trading market, U.S. producers strongly prefer in-kind balancing, rarely making use of cash balancing; Why would it be more effective in Western Australia, where a similar liquid commodity does not exist?

2.3 As world gas markets liberalize, separate marketing of LNG by venture partners is becoming more common. This raises the question of whether venture partners can use the international LNG market as a Domgas marketing tool. But the relative size and liquidity of the two markets makes this very difficult.

III. EXECUTIVE SUMMARY

3.1 The U.S. experience with gas balancing agreements does suggest some of the elements that would be required to make them an effective tool for separate marketing. But since many of these elements are lacking in Western Australia, such agreements do not seem to provide a solution to the dilemma - how to facilitate greater competition among joint venture partners while still protecting their equity investments in the venture.

3.2 There are a number of features to the U.S. market that make gas balancing function effectively to protect the equity interests of joint venture partners:

- The U.S. has a very large, liquid and transparent commodity market which enables venture partners to balance their supply portfolios by market trading.
- With an active market in transportation and storage capacity, and with transparent pricing signals at many "hubs" throughout North America, partners can readily seek out the best solutions to any imbalance problems.
- An active market in financial derivatives gives suppliers the option of hedging their transactions in the futures market
- And the existence of many leases in which a joint venture partner controls 100% of a field's working interest, provides additional flexibility to offset joint venture imbalances from sole source supply.

These elements are largely lacking in the immature gas markets of Western Australia.

3.3 But another major difference between the U.S. market and that in Western Australia is the reliance in Western Australia on long term contracting, a practice that has effectively disappeared in North America. U.S. suppliers have little or no concern for long term security of supply and are free to accelerate depletion of their reserves with resulting high production decline rates. Western Australian suppliers must be conscious of their future obligations to their contract customers.

3.4 In the U.S., the fact that the system is operating at or near capacity with rapid rates of field decline has two effects on the way in which gas balancing agreements function - suppliers usually have little to gain from discounting to gain market share since they are operating at capacity. And the rapid decline rate - together with the "reserve risk" that fields may not produce as expected late in field life - makes it difficult to make up a sustained underproduced balance in kind. Since there is a strong prejudice against cash balancing in the U.S., gas balancing agreements are generally utilized to deal with short term operating imbalances and are not usually a part of a company's gas marketing strategy.

3.5 Obviously, with substantial reserves and their implied availability of additional producing capacity, Western Australia is not similarly constrained as is the U.S.

3.6 But the concentration of the market in a few large buyers who protect themselves with long term contracts means that it would be very difficult for the separate marketers to find balanced outlets. Hence, the accrual of substantial and sustained underproduced balances

on the part of some partners is likely. This suggests that Western Australia would need to make greater use of cash balancing to solve the problem.

3.7 In the U.S., the preferred method of settling imbalances is in-kind balancing. However, under certain circumstances - usually at the end of field life or where the field has been inactive for a period of time - cash balancing may be utilized. But in the U.S. - even with its commodity market structure - the problem of finding the right settlement price inhibits the use of cash balancing. If cash balancing is not favored in the U.S., where a highly liquid commodity market should facilitate such a solution, why would it work any better in Western Australia where the commodity market is still immature?

3.8 Without a transparent commodity pricing system in Western Australia, there would appear to be three possible solutions to the pricing problem:

- Settlements could be priced, as in the U.S. model gas balancing agreement, at the realized prices achieved by the overproducing party. While such a system might theoretically be applied in Western Australia it is not clear that it would produce a more competitive outcome. Such a policy would clearly inhibit a separate marketer from discounting to increase his market share, since the resulting discounted price would be applied to the makeup gas he is obligated to deliver to the underproducing parties. In circumstances where large volume, long-term contracts exist, the disincentive to discount would be very significant. This situation is exacerbated in circumstances where

there is no “spare” domestic capacity that might be used by an individual joint venturer where price/terms of supply for export LNG have for many years been more favorable than those achieved in Western Australia.

- Settlements could be priced by internal price negotiation among the venture partners with overproducers settling with underproducers at the negotiated price. Since such a negotiated price would presumably set a floor on the price discounting , it is not clear that it would have the desired competitive effect either, particularly if partners would view this option in the context of LNG sales alternatives in the international market.
- Or a pricing mechanism could be imposed by regulation - such as parity with an alternative fuel such as coal. But the concept of using an imposed and arbitrary pricing mechanism on what is designed to be an exercise in market liberalization, seems incongruous.

3.9 For these reasons, the application of gas balancing agreements does not appear to be a solution to the problem of promoting separate marketing while at the same time protecting the equity interests of investors in natural gas joint ventures in Western Australia.

3.10 The average annual growth of the LNG market over the past five years has been 39 times the average annual growth of the Western Australian domestic market. And the short term market disparity is even greater. In 2008, worldwide short term LNG sales (assuming the

Gorgon Project's estimates for Western Australia of 50 to 70 PJ/D) were 53 to 75 times those of Western Australia.

3.11 There can be significant economic consequences for an effort to balance production liftings by switching from LNG to Domgas and vice versa. If a partner chooses to shift production to the Domgas market, he can remain in balance by reducing his LNG liftings. But if as a result, the project runs below capacity, he will still presumably still be covering his share of fixed costs. This will be true even if the plant restores capacity level operation and he takes his proportionate share of the resulting output.

3.12 But even if the LNG output were restored to capacity levels, the LNG-underlifting partner would have less LNG to sell in international markets. Until the recent economic downturn, Asian LNG spot markets have been extremely strong with very high prices. Thus the decision to forego LNG for Domgas would have had a significant loss of a financial opportunity.

IV. THE INHERENT CONFLICT BETWEEN EFFICIENT RESOURCE MANAGEMENT AND MARKET COMPETITION

The Management of Petroleum Reservoirs as Units

4.1 The East Texas oil field, the largest oil field ever discovered in the lower 48 states of the United States, was discovered in 1930 at a time when the U.S. oil industry was in its infancy. In the U.S., the "rule of capture" applies to hydrocarbon ownership. Thus, regardless of the original occurrence of hydrocarbons under a given lease, the ultimate ownership of the minerals belongs to the one whose well produces it. "What comes up through my well is mine; what comes up through your well is yours."

4.2 In 1930 there was virtually no state regulation of oil and gas in Texas. Very quickly the development of the field became intensely competitive. Producers drilled as many wells as they could, regardless of spacing, and produced them at the maximum rates the wells could sustain. Some even began storing produced oil above ground in open pits to maximize their "capture" of the oil. The competitive production led to a supply glut that quickly drove prices down to $0.10 per barrel.

4.3 To bring some order to the chaotic conditions, the Texas Government invoked martial law and then created a regulatory system for oil and gas. It assigned the task to an agency originally set up to regulate railroads, the Texas Railroad Commission. The Railroad

Commission was concerned with the mineral ownership rights of the leaseholder, termed "correlative rights", and wanted to prevent "drainage", the capture of hydrocarbons from adjoining leases. Its approach was to develop a system of well spacing regulations and to limit production from individual wells through a system of well "allowables", the maximum production permitted that well per month.

4.4 For oil, it also introduced a system of "market demand proration", that keyed the allowables to the total estimated demand for Texas oil. This procedure often came under fire as an anti-competitive device that supported oil prices. For gas, the market demand feature was never adopted. Instead individual well allowables were based on well tests at some percentage of the maximum open flow potential of the well.

4.5 This system, while it worked to prevent drainage, came to be regarded as a clumsy way to manage oil and gas reservoirs. A more modern system, "unitization", became widely adopted. In unitization, the owners of the adjoining leases pool their property interests, creating a "unit" with a single operator to manage development and production. Each leaseholder acquires a share of the unit based on his estimated share of the unit's reserves. Commonly there are provisions to reevaluate the shares at later times based on changes in the reserve estimates gained from the performance of the field.

4.6 The great advantage of unitization is that it permits efficient management of the field by timing the drilling of in fill wells, selecting the optimum location of the wells on the

structure, and the managing of such things as enhanced oil recovery and gas injection. It is widely practiced on a voluntary basis and most states now have compulsory unitization regulations that force leases into units. The regulation in many states is controlled by a state agency, often known as its “Conservation Commission”.

4.7 As U.S. exploration moved offshore into the Gulf of Mexico, where the U.S. Minerals Management Service regulates leases, lease blocks were often larger and might contain entire fields. But offshore companies often bid on leases jointly with other companies to diversify the financial risks. These joint venture leases are natural units, although they are often combined with adjoining leases to create larger units.

4.8 In international oil and gas, mineral rights are often owned by the state (certainly for offshore areas) and it is possible to create large production license areas that completely contain one or more fields. But although the combination of adjoining leases that characterizes unitization in the U.S. does not apply, the licenses are natural units and function in the same way. Because of the large financial risks involved, companies commonly joint venture these production licenses. This is clearly the case for most of offshore Western Australia.

The Conflict Between Unitization and Market Competition

4.9 The management of a production unit is explicitly designed to prevent competition among partners that would threaten any joint owner's share of the hydrocarbon reserves. Thus there is an inherent conflict between the policy goal of enhancing market competition through multiplying the number of competitors and the conservation goals in unit operation.

4.10 In some markets, such as the U.S., gas balancing ("borrow and loan") provisions in the unit agreement permit temporary production imbalances that makes it possible for partners to increase market share and thus compete with one another.

Separate Marketing of Gas from Units

4.11 In unit operations in the U.S., the ownership of the production passes from the unit to the individual companies at the wellhead (or sales meter station), where they assume separate responsibility for marketing the offtake. The supplies then become a part of the companies' supply portfolios. Because there are still many leases in which a company either has 100% of the working interest, or as operator acts as a joint venture seller for smaller partners, supply portfolios usually contain some of this "sole source" gas, giving the company some flexibility in its ability to take "must run" gas from its units.

4.12 From time to time, some partners desire more or less than their entitlement from a unit, because of individual marketing situations or pipeline access. Thus, the unit agreements typically include a "gas balancing" provision to permit liftings by the partners that may differ from their ownership shares. The intention of such provisions is to ensure that all partners ultimately obtain a value for their gas proportional to their percentage share of the reserve.

4.13 The gas balancing agreements commonly include a provision for production "nominations", and for partners to go out of balance for a period of time. The "Overproduced Party" is one that wants more than his share of production, while the "Underproduced Party" is the one who wants less. The agreements provide for "makeup provisions" that enable the Underproduced Party to be repaid in kind. But they also usually include a provision by which cash settlements can be used to restore balance instead. The mechanism for placing a value on these cash settlements is often controversial.

4.14 Traditionally, most LNG has been developed by joint ventures and thus are natural units. And historically most LNG has been sold by the joint venture rather than by the individual partners. Thus a sale by Nigeria's Bonny LNG project to Gas Natural in Spain or by Qatar's Qatargas project to Chubu Electric in Japan has been made by the venture. In such cases, imbalances have been a non-issue, since each partner receives his proportionate share of the revenue.

V. HOW WOULD COMPETITION BE ACHIEVED IF COMPANIES WERE REQUIRED TO MARKET INDIVIDUALLY IN WESTERN AUSTRALIA?

The Competitive Decision in a Free Market

5.1 It is often taken for granted that increasing the number of competitors automatically increases the likelihood of creating a workably competitive market. But it is important to understand the actual mechanism by which this is expected to occur to make sure that those expectations are realistic.

5.2 In a workably competitive market, each seller is completely free to trade price for volume. He may choose to seek increased volume by discounting below prevailing price levels. Or he may conclude he is better off by foregoing sales until later when prices strengthen. But in any case, the seller is able to make an independent decision based on his view of the market.

Joint Marketing by a Venture

5.3 Venture marketing (or coordinated marketing, as in North West Shelf) has been criticized as monopolistic since it aggregates the efforts of all partners under one selling agent. The classic view of monopolistic behavior is that it attempts to support prices by restricting volumes. Thus in theory, if the North West Shelf joint venturers were required to compete

with one another, the increased competition would force prices down. For that to happen, clearly one or more partners would have to find it desirable to trade discounted prices for increased market share in the domestic market. Thus they would make the decision to take more than their shares of venture production, thereby becoming the *Overproduced Parties* in the balancing agreement.

5.4 As far as we are aware, the only attempt to date to explain how separate marketing of gas in Western Australia might work is contained in the Western Power submission to the ACCC of May 13, 1998, which in part states, "If balancing arrangements allow unlimited borrowing and lending between producers this will effectively be the same as a joint sale - the sellers would feel little pressure to effect a sale in order to achieve balance and the market would not benefit from increased liquidity. To be effective balancing arrangements must be tightly drawn and producers must have the incentive to effect a sale (possibly selling into a saturated market)." In this statement, Western Power seems to identify the *Underproduced Parties* as the moving force in price competition. The statement appears to discount the effect of increasing competition by simply increasing the number of competitors. It would appear that Western Power was submitting that, for competition to be effective, the Underproduced Parties must be threatened with loss of ownership gas.

5.5 Workable competition assumes that the ideal goal is a price level that will approach long run marginal costs. But if a partner is threatened with the ultimate loss of his gas, his opportunity cost is zero rather than his long run marginal cost. He is not in a position to

make an independent choice between price and volume since he will effectively be "drained" by his partners if he decides to forego sales. To make the argument that it is desirable for the Underproduced Parties to be forced into the market to protect their ownership shares is tantamount to contending that the destructive competition in the East Texas field was desirable since the threat of drainage provided very low prices for consumers.

VI. GAS BALANCING AGREEMENTS IN THE U.S.

6.1 Because of the size and complexity of the U.S. gas market, it is difficult to generalize about the way in which gas balancing takes place. Nevertheless, certain patterns are common enough to serve as a guide to general practices

6.2 While there are many cases where the leases covering an entire field may be held by a single company, a more common pattern is joint ownership of the field. This will occur either when a lease block is acquired by a joint venture or when a group of leases covering a field is unitized. Producers who do have sole control of individual fields may have the flexibility to adjust their producing rates to market conditions - subject to constraints imposed by royalty holders - but those who are in joint ventures can exercise production flexibility only by producing either more or less than they are entitled to by their equity ownership in the unit. The extent to which individual partners are allowed to go out of balance with their partners is governed by the gas balancing agreement.

6.3 The American Association of Petroleum Landmen publishes a series of model legal documents for oil and gas producers. One of these is a model gas balancing agreement - A.A.P.L. Form 610-E - Gas Balancing Agreement -1992. While it was presumably devised originally to provide a standard format for independent producers, it is now widely used throughout the industry. A copy of this agreement is included as Appendix C. The form has suggested paragraphs, although in some cases alternative wording is provided and in others, there are blanks that permit the parties scope for contract-specific language.

6.4 The agreement provides the procedures whereby the party desiring to produce more than its equity share - the "Overproduced Party" can do so. It also lays out the way in which the "Underproduced Party" can make up for his underlifting of equity gas.

Section 3 - Right of the Parties to Take Gas

6.5 This is the nominations clause in the agreement. Section 3.1 states that, "Each party desiring to take Gas will notify the Operator, or cause the Operator to be notified of the volumes nominated, the name of the transporting pipeline and pipeline contract number (if available) and meter station relating to such delivery, sufficiently in advance for the Operator, acting with reasonable diligence, to meet all nominations and other requirements". Although it is not spelled out specifically, the term "reasonable diligence" implies that the operator will not accept nominations in excess of the producing capacity of the unit. Thus it would appear to eliminate the potential for over nominating as a "gaming" strategy.

Section 4 - In-Kind Balancing

6.6 Section 4.1 of the model agreement provides for in-kind balancing by the parties. It specifies that the Underproduced Party can request makeup gas on a monthly basis and provides a clause which limits how much makeup gas the Overproduced Party is obligated to deliver in any period. Since the percentage limit is blank in the form, the limits are presumably governed by prior agreement among the parties. Sections 4.2 and 4.3 offer some alternative language but do not change the sense of 4.1.

Section 7 - Cash Settlements

6.7 Section 7.1 makes it clear that the preferred method of settlement is in-kind settlement since it appears to limit cash settlements to the end of producing life of the lease. It states, "Upon the earlier of the plugging and abandonment of the last producing interval in the Balancing Area, the termination of the Operating Agreement or any pooling or unit agreement covering the Balancing Area, or at any time no Gas is taken from the Balancing Area for a period of twelve (12) consecutive months, any party may give written notice calling for cash settlement of the gas production imbalances among the Parties".

6.8 While the model agreement discourages cash settlements, presumably some agreements exist in the U.S. that feature their use. Attempting to establish the extent to which there may be clauses with more flexible cash settlement provisions than the model agreement is well

beyond the scope of this assignment. We are of the impression from our discussions that major companies dislike flexible cash settlement provisions because of the difficulty of agreeing on pricing terms and the possibility of "gaming" offtakes.

6.9 While the overall intent of Section 7 appears to restrict cash settlements to the final liquidation of lease ownership, there are provisions in Section 7.4 that provide a basis for such final settlements. Section 7.4 (Alternative 1) provides that the settlement be done on an Historical Sales Basis or (Alternative 2) on a Most Recent Sales Basis. These provide that the Overproducing Party must reimburse the Underproducing Parties based either on the price history over a defined period of arms-length transactions to third parties, or on the basis of prices actually achieved for the overlifting.

6.10 It is interesting to note that these provisions appear to penalize the Overproducing Party if indeed he discounts to achieve market share over a period of time. He in effect is not only selling his own volumes at a discount but reimbursing the Underproducing Parties at the same discounted prices.

VII CHARACTERISTICS OF THE U.S. AND AUSTRALIAN MARKETS

The U.S. Market

7.1 The natural gas market in the U.S. is both large and complex. U.S. consumption is more that 21 times that of Australia. Gas is produced by over fifteen thousand producers in thirty different states. In 2004 there were 363 thousand producing gas wells delivering gas over nearly 300 thousand miles of gas transmission pipelines. And the U.S. also has the highest level of underground storage capacity relative to its demand in the world. The working capacity of U.S. underground storage amounts to nearly 20% of annual marketed production.

7.2 The country also has one of the world's most completely liberalized gas markets with one of the two most completely liquid and transparent market centers at Henry Hub in Louisiana (the U.K.'s National Balancing Point - NBP - is the other). That, together with liquid and transparent pricing transactions at many other hubs, gives U.S. traders instant access to market pricing throughout the country. And an active market in financial derivatives gives suppliers the option of hedging forward prices through futures contracts.

The Role of Long Term Contracting - A Major Difference from Western Australia

7.3 But one of the greatest differences between the U.S. and Western Australia lies in their differing reliance on long term supply contracting and the resulting impact on the rate of gas

field depletion in the two countries. Unlike Western Australia, the U.S. depletes its gas reserves at very high rates. Even before the U.S. began a major liberalization of the gas industry in 1978 with the Natural Gas Policy Act of 1978, the U.S. had effectively abandoned long term contracting for natural gas. By doing so, producers were no longer required to provide long term supply security for buyers and could accelerate field depletion rates. It was assumed that the gas that would ultimately be needed by buyers (for example, for the twentieth year in the future on what had been a twenty year contract) would come from future exploration and development rather than from already discovered reserves.

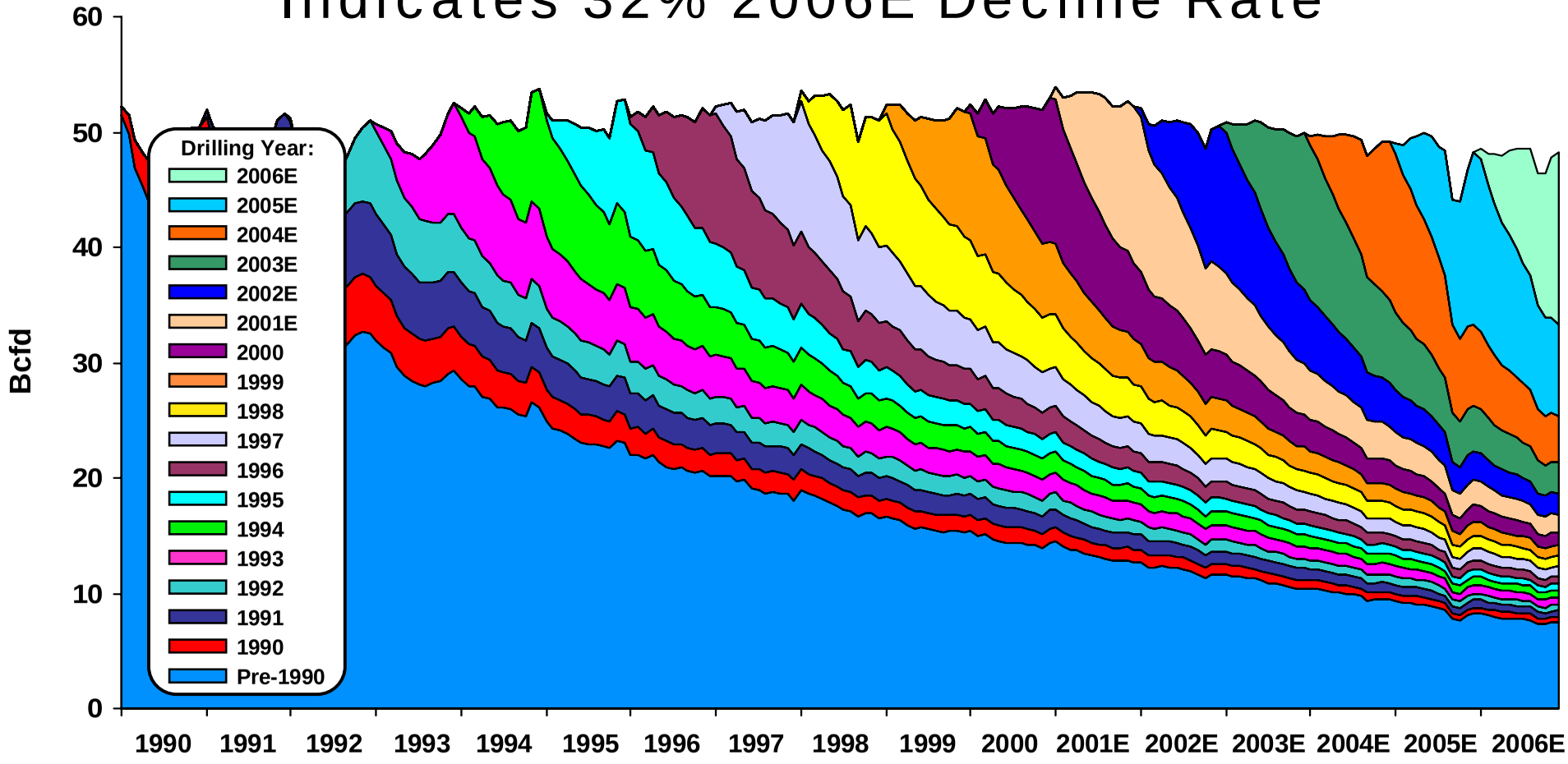
7.4 At the end of 2007, the U.S. had a gas reserve to production ratio of 11.6, but it had been as low as 8.4 in 1997 before the decline in importance of the Gulf of Mexico, with its rapid decline rates, and before growing gas discoveries in the Rockies and in some of the newer shale gas formations were stranded for lack of pipeline take-away capacity.

The Implications of Accelerated Depletion for Gas Balancing

7.5 The effect of these accelerated depletion practices has been two fold. It has led to very high decline rates for new gas discoveries and it has provided little or no readily expandable production capacity in periods when markets are tight. The following Figure illustrates the recent deliverability patterns for U.S. gas, showing how rapidly the production capacity for newly discovered gas declines. This pattern has important implications for the way in which gas balancing operates in the U.S.

US Natural Gas Production History

Indicates 32% 2006E Decline Rate



Production Decline Rate of Base:

17%	17%	16%	18%	19%	19%	20%	21%	23%	23%	25%	24%	27%	28%	29%	30%	32%

eog resources

7.6 For a field with rapid decline rates, a sustained underproduced position may be very difficult to make up in the face of declining production. The problem may be intensified by "reserve risk", the possibility that fields may not perform as expected late in field life. These concerns argue for making sure that any deficit out-of-balance postions are brief, rather than prolonged. Thus one might expect that gas balancing in the U.S. is more likely to be a short term operational tool than a part of longer term gas marketing strategy.

7.7 The Western Power contention in the 1998 authorization process seemed to be that gas balancing works best to create competitive markets when the underproduced party is forced to defend his share of the reserves by aggressive "catch up" marketing. If one rejects this postion on the assumption that a threat of loss of value (a zero opportunity cost) represents a distortion of workably competitive markets, then the real market driver in an overvalued market is that partner who is prepared to assume an overproduced position by discounting. And by the same token, it is the willingness to forego current production (an underproduced postion) in an undervalued market that drives prices back towards market equilibrium.

7.8 Since the North American "gas price shock" in the winter of 2000/2001, most of the time U.S. gas markets have been very tight with little or no spare production capacity. During such periods, one would not expect to see the kind of competitive price discounting that the Australian individual marketing proposal seeks to create, since a producer cannot increase his market share when he has no spare production capacity.

7.9 During the past several years, the shortages have given way to surpluses as the new technology of recovering unconventional gas from tight shales has developed. These shales, which are widely distributed throughout North America (and presumably throughout the world) had previously been viewed as uneconomic. But the combination of horizontal drilling and hydraulic fracturing now makes them accessible. The rapid development of these shale deposits has now converted the U.S. shortages into surpluses.

7.10 Despite the overall tendency of the market towards shortage during much of this recent period, there have been times when the market was weak with prices below expected levels. That is certainly the case during 2009. During such slack periods, one might expect to see some production cutbacks by those producers who feel prices will strengthen in the future. While it is almost impossible to demonstrate statistically, there seems to be little evidence that such behavior is common.

7.11 One recent newsworthy event illustrates its rarity. The announcement in 2007 by one independent gas producer - Chesapeake Energy - that it would cut its production by 6% because of low gas prices, was so unusual that the Governor of Connecticut, a downstream market state, publicly rebuked the company for market manipulation. The company president was then forced to respond to the Governor in an open public letter. It is of note that Chesapeake was able to make its 6% cuts from sole source gas, either 100% working interest leases or those in which it acted as the selling agent for the unit. Interestingly enough, that same president has recently complained that other companies had not followed

his company's lead and it had suffered as a result. Therefore, they would not be doing it in this market.

7.12 As of early Fall 2009, the North American production surplus is being addressed by record underground storage injections, a sharp fall off in drilling activity and the normal rapid decline rate on new production. While the overall U.S. decline rate has been estimated at 29% per year, some of the new shale discoveries deplete as much as 62% of their initial capacity in the first year[2].

7.13 For an extended period of time prior to 2000, the U.S. market experienced a gas surplus - the "gas bubble". During this period it was not uncommon for unit partners to develop significant underproduction gas balances since they were unable to sell the gas. One consequence of this pattern was that some fields were produced at lower than design rates as the underproducing parties allowed their balances to build. In some cases these had undesirable side effects. For some fields, production - and revenue - below plan forced the field into an early negative cash flow position and forced its premature abandonment. In others, the ultimate recovery - particularly for water drive fields - was damaged by the reduced level of production.

7.14 It appears that the common practice in today's U.S. market is for companies to produce wells at their maximum efficient rates and accept the role of price takers of the often volatile

[2] Bernstein Research Report, July 30, 2009, Pages 3 and 4

market prices. An example of this operating philosophy in practice is a group of offshore platforms in the Gulf of Mexico operated by major companies. The various fields are linked to the platform nearest the shore, which includes the only sales meter for the entire system. In lieu of a nomination process, the group simply runs all wells at capacity and allocates revenues among the parties according to periodic well tests. It is difficult to see how a gas balancing provision could be implemented in this case.

7.15 The potential underlifter in the U.S. has a number of alternatives to carrying a sustained underproduced balance that are not available in Western Australia. With pipeline capacity rights and commodity gas freely traded at many hubs around North America, he can readily dispose of his portion of the offtake, even if he had not previously lined up customers. And the existence of traded capacity rights in underground storage enables him some timing flexibility in physical deliveries as does the existence of an active futures market in price hedging. And there are still enough leases where an individual producer controls the entire field that many producers can take their market swings in sole source fields. Thus it should not come as a surprise that the use of gas balancing agreements as a market strategy device appears to be relatively limited in the U.S.

VIII. THE WEST AUSTRALIAN SITUATION - A PRONOUNCED CONTRAST TO THE U.S.

8.1 In the U.S., there are over 28,000 operators[3] of oil and gas fields producing from over 300,000 gas wells. The largest producer accounts for 7.6% of production, the three largest for 18.2% and the ten largest for 42.0%. Working gas storage capacity is 18.9% of consumption.

8.2 In contrast, there are currently seven joint venture producers supplying around 19 gas buyers in Western Australia[4]. The three largest producers account for 95% of the market. Working gas storage capacity is less than 2% of Western Australian demand.[5]

8.3 While in Western Australia there has been some reduction in the duration of some of the newer contracts, traditional sales have been predominantly on long term contracts of 15 to 20 years duration. In the U.S., long term contracts have virtually disappeared. One of the consequences of Western Australian reliance on long term contracts is that depletion rates are relatively low. The Western Australian reserve-to-production ratio in 2006 was 19.8

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[3] U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves - 2006 Annual Report - U.S. Energy Information Administration

[4] Wood Mackenzie - Western Australia Gas Masket Study, 30 November 2009, Page 13, Page 21

[5] Op. Cit. Page 39

years for developed reserves and 55.2 years for total commercial reserves[6]. For the U.S., the RP ratio in 2007 was 11.6, up from a low of 8.4 years in 1997 before extensive discoveries in the Rockies and some of the shale plays became stranded because of lack of pipeline take-away capacity.

8.4 In the U.S. operating environment, concern for future security of supply is normally not an issue and producers are free to produce at capacity without worrying about long-term market implications of their actions. And since most of them have been producing at capacity, there is very little potential for any producers to trade reduced price for increased market share.

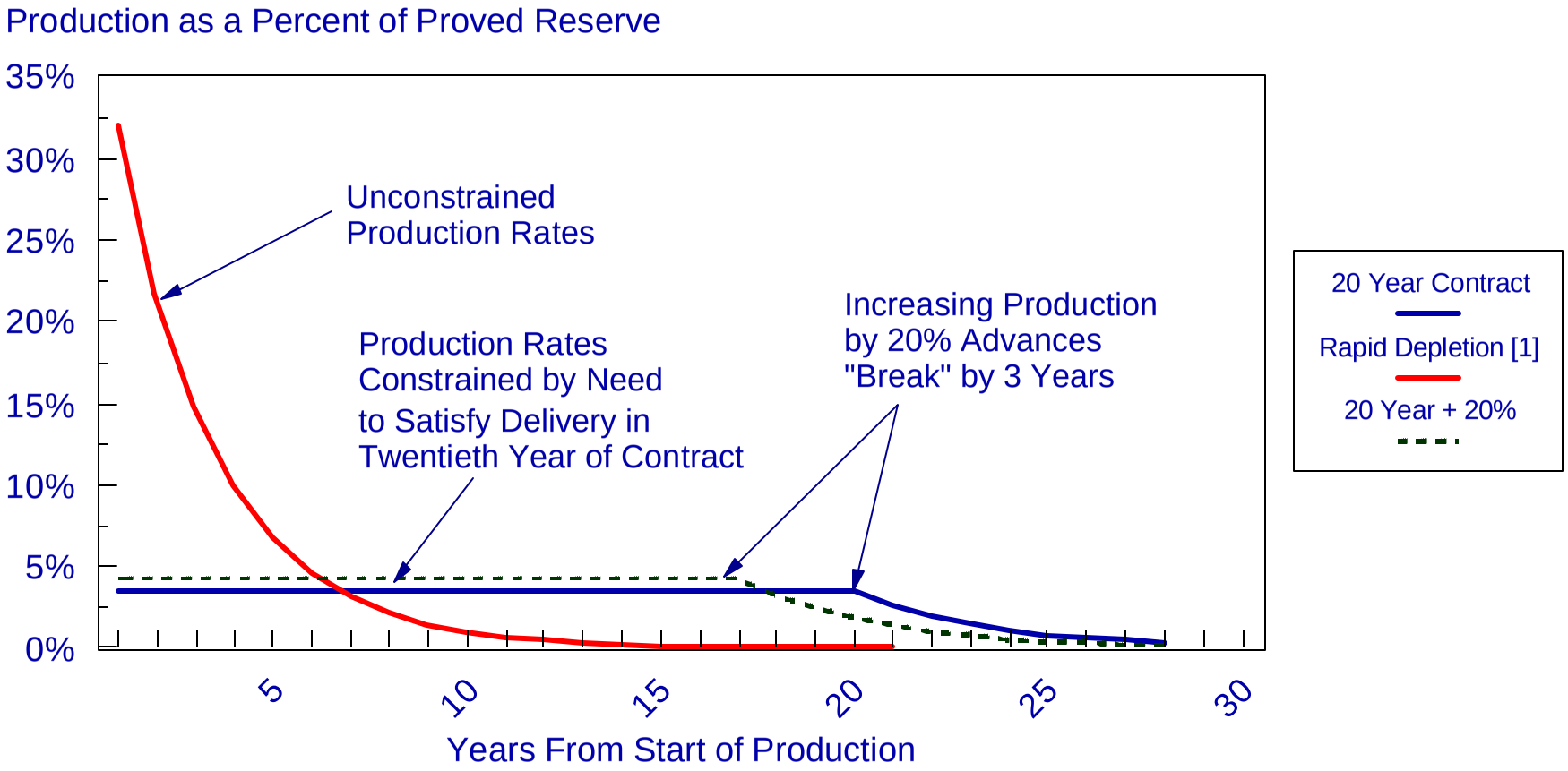
8.5 In Western Australia, however, with much lower depletion rates, the potential for some producers to make similar trades of price for volume certainly exists. But in a market where most buyers purchase on long term contract for security of supply, the critical issue is not whether production can be increased in the short term, but whether the dedicated reserves will still be able to sustain market commitments in the last year of the contract.

8.6 The following Figure illustrates depletion patterns for the U.S. with no contractual delivery commitments in the future. It then compares how the same reserve would be developed if it were committed on a twenty-year contract. In order to maintain producing capacity in the twentieth year, it is necessary both to limit production in the early years and to delay the

[6] RISC - Update of competitive conditions in the Western Australian Gas Market, July 2007, Page 8

Figure 2

FIELD DECLINE RATES - ILLUSTRATIVE U.S. RAPID DEPLETION PATTERN COMPARED WITH A PRODUCTION PROFILE FOR A TWENTY YEAR CONTRACT AND ONE WITH A 20% INCREASE IN PRODUCTION



[1] Assumes full initial development and 32% decline rate

drilling of some development wells until later in field life. Presumably, the ability of a separate marketer to increase production by becoming an overproduced party exists in Australia in a way in which it really does not exist today in the U.S.

8.7 However, the critical issue in the administration of a long term contract is whether the reserves will support the required delivery obligation throughout contract life. Figure 2 also illustrates how a 20% increase in production early in field life will shorten "delivery life" by three years. The long term contract obligation shifts the supply concerns from current markets to long term field management.

8.8 The consequences of such early diversions are being graphically illustrated in today's LNG markets. Indonesia's two LNG export facilities, Arun in Western Sumatra and Bontang in Eastern Kalimantan, both started up in 1977/1978 and thus are operating late in their original contract lives (both had contract extensions of original twenty year contracts). But for a variety of reasons, including government diversions of export gas for domestic use, neither plant can currently meet its contract obligations and suppliers are purchasing LNG spot cargoes from other countries to honor their commitments. This failure to provide enough supply for contract commitments has tarnished the reputation of Indonesia as a reliable supplier.

8.9 Although Australia's overall average RP ratio is much greater than that in the U.S., many individual fields are producing at much higher depletion rates than the average figure

implies. The North West Shelf shipped its first LNG cargo twenty years ago so it is much farther along in the depletion process than the newer projects. Some of the first fields on line are getting closer to "break" where declining deliverability falls below the original planned commitment level. That suggests that some reserves may be entering a period where the "reserve risk " may be greater and the need to invest in additional wells or bring satellite fields on line is now more important than early in project life. And costs of some of these new field developments may be higher than the existing cost structure, complicating the investment decision process.

8.10 The joint venturers in the North West Shelf project make their own individual assessments of reserves and depletion behavior, but new investment decisions must be taken unanimously. A venture partner who has a more pessimistic view of reserves and future production performance may well feel threatened by one who wants to expand in order to enable him to market separately. While joint marketing facilitates joint decision making, separate marketing may slow or frustrate new investment decisions.

IX. HOW TO RESTORE GAS IMBALANCES - IN KIND OR IN CASH?

9.1 The concentration of demand in a few very large purchasers and their interest in long term contracts to provide supply security suggests that separate deals made by individual partners could be quite large. It would also seem unlikely that a larger number of independent sellers

would be able to achieve lifting balance while competing for the demand of the same limited number of concentrated buyers.

9.2 There are two implications for this pattern. First, there is the likelihood that some partners will be forced to carry sustained underproduced balances for an extended period of time. This potentially reduces overall project cash flow and overall project rate of return. And second, the alternative of cash settlement raises the difficult question of how to price the settlement in a market without a liquid and transparent pricing system.

9.3 Producers in the U.S. appear to avoid cash settlements wherever possible, and this is in a market with arguably the most liquid and transparent trading system in the world. For Australia, without such a market, there are three possible solutions. Using the U.S. model agreement approach, settlements could be priced at the realization that the overproduced party was able to obtain. This would have the effect of requiring the overproduced party to sell an offsetting volume to the underproduced parties at the same discounted price he received for his overproduction. Presumably this would inhibit competition.

9.4 Or the settlement prices could be negotiated among the partners within the unit. Presumably, the stronger sellers would argue for lower internal transfer prices and the weaker sellers would try to keep them as close to LNG netback parity as possible. But it is important to recognize that whatever price were determined by this approach would set an effective floor price on domestic competition from the group.

9.5 The third alternative would be an imposed transfer price for cash settlements. Western Power has argued for this approach when it suggests, "In relation to cash balancing, if there is no well defined gas traded market then a proxy to a gas market must be employed - this could be a reference to a marginal competitive fuel (eg coal in Western Australia).[7]

9.6 It is important to recognize that such a settlement price, so established, is in fact an externally imposed selling price between the overproduced parties and the underproduced parties. It is somewhat ironic, that in the name of establishing a freer market system for gas, the approach would require a regulated price for internal transactions.

X. IMPLICATIONS OF THE EMERGING SEPARATE MARKETING FOR LNG

Self-Contracting - A Newer Approach to LNG Marketing

10.1 The traditional long-term LNG contract - the Sales and Purchase Agreement or SPA - commonly linked specific buyers' and sellers' facilities in a relatively inflexible pairing. The seller in these contracts was often the production joint venture acting on behalf of the venture partners as a group, although other venture structures were sometimes utilized. For example, Australian tax law discourages the typical joint venture corporate structure. Thus the joint venturers in North West Shelf project write separate contracts with LNG buyers.

[7] Western Power submission to the ACCC of May 13, 1998

While this might appear to be separate marketing, the fact that the contract terms and wording are coordinated among the partners, means that the effect is the same as the more traditional joint venture sale.

10.2 The traditional SPA was a destination-inflexible document. With the worldwide trend towards liberalization of gas markets and trading, there are strong pressures to introduce destination flexibility into world LNG trade. The most obvious form of destination-flexible trade is the growing short-term market.

10.3 But short-term trading is not the only source of destination-flexible volumes. Another form of flexible volumes is the relatively recent development which might be called "self-contracting". Increasingly, one or more partners are contracting with the joint venture for volumes that they can market independently without specifying the ultimate destination. These, like short term volumes, are destination-flexible.

10.4 Nigeria's Bonny LNG project illustrates this new pattern. The first three trains of the project were traditional fixed-destination contracts written by the venture, NLNG, with European buyers. But trains 4 and 5 have contracted with Shell and Total, two of the NLNG partners, which are now free to take their volumes anywhere they see fit.

10.5 While the most common self-contracting pattern is a sale to one of the venture partners, other variations are possible. A producer that is not a partner, such as BG in Equatorial

Guinea, may be the buyer or the venture itself, as Qatargas, which is a part owner of the South Hook terminal in the U.K., may commit to sales volumes. An even newer approach is that of Gorgon which has adopted a structure which directly permits the venture partners to market independently. The common theme in all of these structures is that the seller is not contractually committed to a specific market and thus has destination flexibility. And the sellers are free to write independent contracts with different buyers.

The Emergence of Separate Marketing of LNG

10.6 Clearly this new trend enables the self-contracting partner to make separate sales to customers and thus can be described as "separate marketing" of LNG. This new marketing pattern raises the obvious question, "If the venture partners can make individual sales for LNG, why can't they also separately market Domgas in Western Australia?" Clearly, the ease with which the partners can make similar independent sales in the Domgas market is a function both of the internal constraints on the partners in their joint venture agreements and the nature of the two markets - LNG versus Domgas.

10.7 While the specific terms of partnership agreements are proprietary, one can assume that they prevent the partners from taking any independent action which threatens either the economics of the overall project or the resource ownership positions of other partners. For the major offshore projects, such as North West Shelf or Gorgon, the much larger size of the LNG market commonly is required to justify field development. Thus any individual

partner action which makes it difficult to assemble enough reserves to justify the liquefaction investment decision (FID), or delays it, is usually not in the interest of the other partners nor of the Government.

10.8 The newer partnership agreements would presumably also include constraints on individual production decisions. This would protect the other partners from one partner's drawing down reserves to the point where early field decline threatens the project or the other partners. This would include an inability to honor out year contract delivery commitments or to impose "reserve risk" (the possibility that reserve estimates will be downgraded by unexpectedly poor production experience) on the fields. In some cases where liquids recoveries deteriorate with production history, it would prevent a partner from skimming off the richer liquids reserves ahead of the others.

10.9 In these newer, more flexible agreements, the partners would presumably be able to choose whether to sell their production as LNG or as Domgas. Thus a partner who chose to concentrate on the Domgas market need not have an unbalanced position relative to the partner that preferred LNG sales. But since the agreement would also presumably contain the obligations that the partners have for joint investment in the liquefaction facilities and in absorbing fixed cost recovery, there would be an interaction between the price expectations in the two markets. It is difficult to see a partner choosing to commit to a discounted contract to obtain increased market share in the Domgas market below his netback expectations from the LNG market.

Balancing in a Separate LNG Marketing Structure

10.10 There are strong economic incentives to operate an LNG plant at capacity, so that one would normally expect that each partner would dispose of his share from some combination of long-term contracting and short-term LNG sales. In such a case, the partners would normally be in production balance. Problems may arise if short term upsets in intended flows take place, but these would usually be handled by short term internal balancing transactions. A deliberately planned longer term imbalance might be somewhat more challenging.

Relative Market Liquidity

10.11 A drop in expected sales, such as from a contract customer operating at minimum - rather than expected - levels could in theory be balanced by increased sales into the Domgas market. But the international LNG market is far larger than the Domgas market, raising significant potential problems for the partners when they consider such rebalancing.

10.12 Because the International LNG market and the Western Australian Domgas market are so very different in overall size and in the extent of short term trading, partners encounter far less liquidity in the Domgas market. For the five years ending 2008, world LNG demand increased by an average of 1,115 MMcfd, the Asia Pacific growth accounting for 822 MMcfd of the total. That increase would have absorbed the equivalent of the out put of 1.8

recent Northwest Shelf-sized liquefaction trains each year at the world growth rate and 1.4 trains for the Asia Pacific region alone In contrast, the annual increase in the Western Australian market over the same period was only 28.5 MMcfd, or slightly less than 3.5% of the typical 4.4 MMT train feed input.

10.13 The disparities in the short term market are similar. In 2008 the volume in the world short term LNG market was 3,541 MMcfd while in the Asian market it was 1,848 MMcfd. In its 31 July 2009 Submission to the Australian Competition and Consumer Commission, the Gorgon Project estimated the average Western Australian spot market as 50 to 70 TJ/d. That would be the equivalent of 47.5 to 66.5 MMcfd, or 5 to 8% of the 4.4 MMT train input. The options for balancing over or underlifting positions in the LNG markets are very large. In Western Australia, they are very small.

10.14 The reverse balancing problem - a decision, for example, for one partner to increase his Domgas market share aggressively, could theoretically be rebalanced by foregoing some LNG sales. But there may be significant financial disincentives for a strategy of deliberately underlifting LNG.

Pricing Issues

10.15 If the wellhead production balance is maintained after the Domgas diversion, then LNG production is reduced. However, because of the capital intensity of LNG liquefaction, the

marginal cost of increasing LNG output to full capacity from a deliberately planned lower level is quite low. If the other partners protect themselves by requiring the underlifting partner to absorb the lost revenue, his opportunity cost would approach LNG parity, rather than inlet feedstock value. This is likely to be much higher than Domgas pricing.

10.16 But even if the facility continues to operate at capacity, the LNG underlifter would still reduce his relative share of the LNG market. This raises the possible foregoing of an opportunity to benefit from an overheated LNG short-term market. For a number of years, Northeast Asian LNG shortages created a spot market pricing regime that was substantially above the level of long-term contract prices. Both Japan and Korea bought spot cargoes from Pacific Basin and Middle East suppliers during the period. By 2006, the shortages were sufficiently severe that Northeast Asia was attracting spot cargoes from Atlantic Basin suppliers at substantial premiums.

10.17 Japanese import statistics report LNG landed prices by country of origin, but since they do not distinguish between spot and contract cargo transactions, the data do not provide spot prices for countries having a long-term contract relationship with Japanese customers. However, none of the Atlantic Basin suppliers have long-term contracts with Japan, so prices shown for those suppliers are clearly spot prices.

10.18 For the five years ending 2008, roughly 10% of the spot imports into Japan originated in the Pacific Basin, while the remainder were split roughly 50/50 between the Middle East and

the Atlantic Basin. For Australia, 6% of the shipments to Japan were classed as short-term sales. If one were to assume that Australian spot shipments into Japan were priced the same as Atlantic Basin spot shipments, it is possible to make separate estimates of contract and spot prices from Australia. For the three years of Atlantic Basin pricing data, the exercise would provide an estimate of Australian contract prices of $7.95, while spot prices were $13.22. This amounts to a premium for the spot shipments of 66%. Netted back to Australia from Japan after deducting transportation provides an even greater premium of 75%.

10.19 Clearly, a partner who chose to increase his contractual market share in the Domgas market at the expense of added access to LNG would have paid a significant financial penalty during the recent period . In the current economic climate and the increased availability of LNG supply, the premiums would no longer apply, but the partner would have to weigh the possibility that he might shut himself out of similar opportunities in the future.

XI. CONCLUSIONS

11.1 Because the U.S. market is so very different from the market in Western Australia, U.S. gas balancing agreements (balancing and loan agreements) are not a useful model for Australia.

11.2 The principal differences are:

- Western Australia lacks the large, liquid commodity market of the U.S.

- The U.S. has a competitive commodity market; Western Australia is heavily dependent on long-term contracts
- Because of rapid field decline in the U.S., producers utilize balancing agreements for short-term imbalances; rarely do they use them as a part of marketing strategy
- Because the Western Australian market features a few large customers, it would be difficult for sellers to balance a few large, contracts
- And despite its large, liquid commodity market, U.S. suppliers are reluctant to utilize cash balancing to settle imbalances

11.3 While separate marketing of LNG is becoming more common, the limited size and liquidity of the Domgas market compared with the international LNG market makes it very difficult to rebalance one against the other.

APPENDIX A

A Curriculum Vitae for

James T. Jensen

Mr. Jensen is President of Jensen Associates, a consulting firm in Weston, Massachusetts specializing in energy economics. He has a BS in chemical engineering from M.I.T. and an MBA from Harvard Business School.

He is recognized for his expertise in international natural gas supply, demand, pricing, regulation and trade. He has testified on natural gas issues before U.S. Senate and House Congressional Committees, as well as various regulatory agencies. Mr. Jensen has been a frequent visiting faculty member of the Oxford Energy Seminar at St. Catherine's College, Oxford and often lectures at international conferences. He received The 2001 Award for Outstanding Contributions to the Profession of Energy Economics and its Literature from the International Association for Energy Economics. Some of his papers and presentations are available on his website, JAI-Energy.com.

International gas trade is one of Mr. Jensen's specialties. He has studied LNG prospects for projects involving Algeria, Indonesia, Nigeria, Norway, Qatar, and Trinidad. He has been active in evaluating various pipeline projects between Canada and the U.S. As a part of the 2000 Asia Pacific Energy Research Centre study “Natural Gas Infrastructure Development - Northeast Asia - Costs and Benefits”, he was responsible for the analysis of the comparative economics of pipeline

Pacific Energy Research Centre study “Natural Gas Infrastructure Development - Northeast Asia - Costs and Benefits”, he was responsible for the analysis of the comparative economics of pipeline and LNG supply to China, Japan and Korea. He prepared the LNG policy paper for the National Commission on Energy Policy and has written a Monograph for the Oxford Institute for Energy Studies, entitled, “The Development of a Global LNG Market - Is it Likely? If so, When?”. He recently completed a study for the California Energy Commission entitled, “The Outlook for Global Trade in Liquefied Natural Gas - Projections to the Year 2020". He also was the author of the sections on North American, U.K. and LNG gas pricing in the Energy Charter Secretariat study, “Putting a Price on Energy - International Pricing Mechanisms for Oil and Gas” and the sole author of the follow up study, “Fostering LNG Trade - Developments in Trade and Pricing”

Mr. Jensen has also been active in assessing the role of natural gas in electric power generation. He was in charge of a series of studies for the Electric Power Research Institute on the problems associated with greater natural gas use by the U.S. electric industry.

He is a past President of the Boston Economic Club, a member of International Association for Energy Economics, the National Association of Petroleum Investment Analysts, the IFP Energy, Oil and Gas Club and the Society of Petroleum Engineers.

APPENDIX B

List of Documents Referenced

1 Balancing Agreements. The alternative to joint producer sales. Report for Western Power by Gas Strategies, 5562, May 1998 (provided as a supplementary submission to the ACCC in relation to the North West Shelf Project's 1998 application for authorization).

2. WA Gas Market Review - A Report to the NES IPGJV on Behalf of Freehills - RISC - April 2005

3. Update of competitive conditions in the Western Australian Gas Market - RISC - July 2007

4. Determination - Application for Authorization - North West Shelf Project - Australian Competition & Consumer Commission - 29 July 1998

5. A.A.P.L. Form 610-E -Gas Balancing Agreement - 1992 - American Association of Petroleum Landmen (Included as Appendix C)

6. U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves - 2006 Annual Report - U.S. Energy Information Administration

7. EOG Resources Inc. - Website

8. Distribution and Production of Oil and Gas Wells by State - Energy Information Administration Website

9. Pipeline 101 Website

10. BP Statistical Review of World Energy - June 2007 - BP p.l.c.

11. The Street.com - 9/5/2007 (Chesapeake Energy comment)

12. Applications for authorization lodged by Chevron Australia Pty & Ors A91139 - A91140 - Initial authorization decision 24 June 2009 - Australian Competition & Consumer Commission

13. Submission to the Australian Competition & Consumer Commission in Support of Application for Interim and Final Authorization - Gorgon Gas Project - 20 May 2009

14. Submission to the Australian Competition & Consumer Commission to Third Party Submissions Regarding the Application for Final Authorization - Gorgon Gas Project - 31 July 2009

15. Draft Determination - Applications for authorization - 17 September 2009 - Australian Competition & Consumer Commission

16. Bernstein Research Study - July 30, 2001

17. Western Australia Gas Market Study - Wood Mackenzie - 30th November 2009

APPENDIX C

A.A.P.L. Form 610-E - Gas Balancing Agreement - 1992

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
APPROVED FORM A.A.P.L. NO. 610-E
MAY BE ORDERED DIRECTLY FROM THE PUBLISHER
KRAFTBILT® P.O. BOX 800 TULSA, OK 74101

NOTE: Instructions For Use of Gas Balancing Agreement MUST be reviewed before finalizing this document.

EXHIBIT "E"
GAS BALANCING AGREEMENT ("AGREEMENT")
ATTACHED TO AND MADE PART OF THAT CERTAIN
OPERATING AGREEMENT DATED _____

BY AND BETWEEN _____, _____,
AND _____ **("OPERATING AGREEMENT")**
RELATING TO THE _____ **AREA,**
_____ **COUNTY/PARISH, STATE OF** _____

1. DEFINITIONS

The following definitions shall apply to this Agreement:

1.01 "Arm's Length Agreement" shall mean any gas sales agreement with an unaffiliated purchaser or any gas sales agreement with an affiliated purchaser where the sales price and delivery conditions under such agreement are representative of prices and delivery conditions existing under other similar agreements in the area between unaffiliated parties at the same time for natural gas of comparable quality and quantity.

1.02 "Balancing Area" shall mean (select one):

☐ each well subject to the Operating Agreement that produces Gas or is allocated a share of Gas production. If a single well is completed in two or more producing intervals, each producing interval from which the Gas production is not commingled in the wellbore shall be considered a separate well.

☐ all of the acreage and depths subject to the Operating Agreement.

☐ _____

1.03 "Full Share of Current Production" shall mean the Percentage Interest of each Party in the Gas actually produced from the Balancing Area during each month.

1.04 "Gas" shall mean all hydrocarbons produced or producible from the Balancing Area, whether from a well classified as an oil well or gas well by the regulatory agency having jurisdiction in such matters, which are or may be made available for sale or separate disposition by the Parties, excluding oil, condensate and other liquids recovered by field equipment operated for the joint account. "Gas" does not include gas used in joint operations, such as for fuel, recycling or reinjection, or which is vented or lost prior to its sale or delivery from the Balancing Area.

1.05 "Makeup Gas" shall mean any Gas taken by an Underproduced Party from the Balancing Area in excess of its Full Share of Current Production, whether pursuant to Section 3.3 or Section 4.1 hereof.

1.06 "Mcf" shall mean one thousand cubic feet. A cubic foot of Gas shall mean the volume of gas contained in one cubic foot of space at a standard pressure base and at a standard temperature base.

1.07 "MMBtu" shall mean one million British Thermal Units. A British Thermal Unit shall mean the quantity of heat required to raise one pound avoirdupois of pure water from 58.5 degrees Fahrenheit to 59.5 degrees Fahrenheit at a constant pressure of 14.73 pounds per square inch absolute.

1.08 "Operator" shall mean the individual or entity designated under the terms of the Operating Agreement or, in the event this Agreement is not employed in connection with an operating agreement, the individual or entity designated as the operator of the well(s) located in the Balancing Area.

1.09 "Overproduced Party" shall mean any Party having taken a greater quantity of Gas from the Balancing Area than the Percentage Interest of such Party in the cumulative quantity of all Gas produced from the Balancing Area.

1.10 "Overproduction" shall mean the cumulative quantity of Gas taken by a Party in excess of its Percentage Interest in the cumulative quantity of all Gas produced from the Balancing Area.

1.11 "Party" shall mean those individuals or entities subject to this Agreement, and their respective heirs, successors, transferees and assigns.

1.12 "Percentage Interest" shall mean the percentage or decimal interest of each Party in the Gas produced from the Balancing Area pursuant to the Operating Agreement covering the Balancing Area.

1.13 "Royalty" shall mean payments on production of Gas from the Balancing Area to all owners of royalties, overriding royalties, production payments or similar interests.

1.14 "Underproduced Party" shall mean any Party having taken a lesser quantity of Gas from the Balancing Area than the Percentage Interest of such Party in the cumulative quantity of all Gas produced from the Balancing Area.

1.15 "Underproduction" shall mean the deficiency between the cumulative quantity of Gas taken by a Party and its Percentage Interest in the cumulative quantity of all Gas produced from the Balancing Area.

1.16 ☐ (Optional) "Winter Period" shall mean the month(s) of _____ in one calendar year and the month(s) of _____ in the succeeding calendar year.

2. BALANCING AREA

2.1 If this Agreement covers more than one Balancing Area, it shall be applied as if each Balancing Area were covered by separate but identical agreements. All balancing hereunder shall be on the basis of Gas taken from the Balancing Area measured in (Alternative 1) ☐ Mcfs or (Alternative 2) ☐ MMBtus.

2.2 In the event that all or part of the Gas deliverable from a Balancing Area is or becomes subject to one or more maximum lawful prices, any Gas not subject to price controls shall be considered as produced from a single Balancing Area and Gas subject to each maximum lawful price category shall be considered produced from a separate Balancing Area.

3. RIGHT OF PARTIES TO TAKE GAS

3.1 Each Party desiring to take Gas will notify the Operator, or cause the Operator to be notified, of the volumes nominated, the name of the transporting pipeline and the pipeline contract number (if available) and meter station relating to such delivery, sufficiently in advance for the Operator, acting with reasonable diligence, to meet all nomination and other

requirements. Operator is authorized to deliver the volumes so nominated and confirmed (if confirmation is required) to the transporting pipeline in accordance with the terms of this Agreement.

3.2 Each Party shall make a reasonable, good faith effort to take its Full Share of Current Production each month, to the extent that such production is required to maintain leases in effect, to protect the producing capacity of a well or reservoir, to preserve correlative rights, or to maintain oil production.

3.3 When a Party fails for any reason to take its Full Share of Current Production (as such Share may be reduced by the right of the other Parties to make up for Underproduction as provided herein), the other Parties shall be entitled to take any Gas which such Party fails to take. To the extent practicable, such Gas shall be made available initially to each Underproduced Party in the proportion that its Percentage Interest in the Balancing Area bears to the total Percentage Interests of all Underproduced Parties desiring to take such Gas. If all such Gas is not taken by the Underproduced Parties, the portion not taken shall then be made available to the other Parties in the proportion that their respective Percentage Interests in the Balancing Area bear to the total Percentage Interests of such Parties.

3.4 All Gas taken by a Party in accordance with the provisions of this Agreement, regardless of whether such Party is underproduced or overproduced, shall be regarded as Gas taken for its own account with title thereto being in such taking Party.

3.5 Notwithstanding the provisions of Section 3.3 hereof, no Overproduced Party shall be entitled in any month to take any Gas in excess of three hundred percent (300%) of its Percentage Interest of the Balancing Area's then-current Maximum Monthly Availability; provided, however, that this limitation shall not apply to the extent that it would preclude production that is required to maintain leases in effect, to protect the producing capacity of a well or reservoir, to preserve correlative rights, or to maintain oil production. "Maximum Monthly Availability" shall mean the maximum average monthly rate of production at which Gas can be delivered from the Balancing Area, as determined by the Operator, considering the maximum efficient well rate for each well within the Balancing Area, the maximum allowable(s) set by the appropriate regulatory agency, mode of operation, production facility capabilities and pipeline pressures.

3.6 In the event that a Party fails to make arrangements to take its Full Share of Current Production required to be produced to maintain leases in effect, to protect the producing capacity of a well or reservoir, to preserve correlative rights, or to maintain oil production, the Operator may sell any part of such Party's Full Share of Current Production that such Party fails to take for the account of such Party and render to such Party, on a current basis, the full proceeds of the sale, less any reasonable marketing, compression, treating, gathering or transportation costs incurred directly in connection with the sale of such Full Share of Current Production. In making the sale contemplated herein, the Operator shall be obligated only to obtain such price and conditions for the sale as are reasonable under the circumstances and shall not be obligated to share any of its markets. Any such sale by Operator under the terms hereof shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the particular circumstances, but in no event for a period in excess of one year. Notwithstanding the provisions of Article 3.4 hereof, Gas sold by Operator for a Party under the provisions hereof shall be deemed to be Gas taken for the account of such Party.

4. IN-KIND BALANCING

4.1 Effective the first day of any calender month following at least _____ (_____) days' prior written notice to the Operator, any Underproduced Party may begin taking, in addition to its Full Share of Current Production and any Makeup Gas taken pursuant to Section 3.3 of this Agreement, a share of current production determined by multiplying _____ percent (_____ %) of the Full Shares of Current Production of all Overproduced Parties by a fraction, the numerator of which is the Percentage Interest of such Underproduced Party and the denominator of which is the total of the Percentage Interests of all Underproduced Parties desiring to take Makeup Gas. In no event will an Overproduced Party be required to provide more than _____ percent (_____ %) of its Full Share of Current Production for Makeup Gas. The Operator will promptly notify all Overproduced Parties of the election of an Underproduced Party to begin taking Makeup Gas.

4.2 ☐ **(Optional - Seasonal Limitation on Makeup - Option 1)** Notwithstanding the provisions of Section 4.1, the average monthly amount of Makeup Gas taken by an Underproduced Party during the Winter Period pursuant to Section 4.1 shall not exceed the average monthly amount of Makeup Gas taken by such Underproduced Party during the _____ (_____) months immediately preceding the Winter Period.

4.2 ☐ **(Optional - Seasonal Limitation on Makeup - Option 2)** Notwithstanding the provisions of Section 4.1, no Overproduced Party will be required to provide more than _____ percent (_____ %) of its Full Share of Current Production for Makeup Gas during the Winter Period.

4.3 ☐ **(Optional)** Notwithstanding any other provision of this Agreement, at such time and for so long as Operator, or (insofar as concerns production by the Operator) any Underproduced Party, determines in good faith that an Overproduced Party has produced all of its share of the ultimately recoverable reserves in the Balancing Area, such Overproduced Party may be required to make available for Makeup Gas, upon the demand of the Operator or any Underproduced Party, up to _____ percent (_____ %) of such Overproduced Party's Full Share of Current Production.

5. STATEMENT OF GAS BALANCES

5.1 The Operator will maintain appropriate accounting on a monthly and cumulative basis of the volumes of Gas that each Party is entitled to receive and the volumes of Gas actually taken or sold for each Party's account. Within forty-five (45) days after the month of production, the Operator will furnish a statement for such month showing (1) each Party's Full Share of Current Production, (2) the total volume of Gas actually taken or sold for each Party's account, (3) the difference between the volume taken by each Party and that Party's Full Share of Current Production, (4) the Overproduction or Underproduction of each Party, and (5) other data as recommended by the provisions of the Council of Petroleum Accountants Societies Bulletin No. 24, as amended or supplemented hereafter. Each Party taking Gas will promptly provide to the Operator any data required by the Operator for preparation of the statements required hereunder.

5.2 If any Party fails to provide the data required herein for four (4) consecutive production months, the Operator, or where the Operator has failed to provide data, another Party, may audit the production and Gas sales and transportation volumes of the non-reporting Party to provide the required data. Such audit shall be conducted only after reasonable notice and during normal business hours in the office of the Party whose records are being audited. All costs associated with such audit will be charged to the account of the Party failing to provide the required data.

6. PAYMENTS ON PRODUCTION

6.1 Each Party taking Gas shall pay or cause to be paid all production and severance taxes due on all volumes of Gas actually taken by such Party.

6.2 ☐ **(Alternative 1 - Entitlements)** Each Party shall pay or cause to be paid all Royalty due with respect to Royalty

owners to whom it is accountable as if such Party were taking its Full Share of Current Production, and only its Full Share of Current Production.

6.2.1 ☐ **(Optional - For use only with Section 6.2 - Alternative 1 - Entitlement)** Upon written request of a Party taking less than its Full Share of Current Production in a given month ("Current Underproducer"), any Party taking more than its Full Share of Current Production in such month ("Current Overproducer") will pay to such Current Underproducer an amount each month equal to the Royalty percentage of the proceeds received by the Current Overproducer for that portion of the Current Underproducer's Full Share of Current Production taken by the Current Overproducer; provided, however, that such payment will not exceed the Royalty percentage that is common to all Royalty burdens in the Balancing Area. Payments made pursuant to this Section 6.2.1 will be deemed payments to the Underproduced Party's Royalty owners for purposes of Section 7.5.

6.2 ☐ **(Alternative 2 - Sales)** Each Party shall pay or cause to be paid Royalty due with respect to Royalty owners to whom it is accountable based on the volume of Gas actually taken for its account.

6.3 In the event that any governmental authority requires that Royalty payments be made on any other basis than that provided for in this Section 6, each Party agrees to make such Royalty payments accordingly, commencing on the effective date required by such governmental authority, and the method provided for herein shall be thereby superseded.

7. CASH SETTLEMENTS

7.1 Upon the earlier of the plugging and abandonment of the last producing interval in the Balancing Area, the termination of the Operating Agreement or any pooling or unit agreement covering the Balancing Area, or at any time no Gas is taken from the Balancing Area for a period of twelve (12) consecutive months, any Party may give written notice calling for cash settlement of the Gas production imbalances among the Parties. Such notice shall be given to all Parties in the Balancing Area.

7.2 Within sixty (60) days after the notice calling for cash settlement under Section 7.1, the Operator will distribute to each Party a Final Gas Settlement Statement detailing the quantity of Overproduction owed by each Overproduced Party to each Underproduced Party and identifying the month to which such Overproduction is attributed, pursuant to the methodology set out in Section 7.4.

7.3 ☐ **(Alternative 1 - Direct Party-to-Party Settlement)** Within sixty (60) days after receipt of the Final Gas Settlement Statement, each Overproduced Party will pay to each Underproduced Party entitled to settlement the appropriate cash settlement, accompanied by appropriate accounting detail. At the time of payment, the Overproduced Party will notify the Operator of the Gas imbalance settled by the Overproduced Party's payment.

7.3 ☐ **(Alternative 2 - Settlement Through Operator)** Within sixty (60) days after receipt of the Final Gas Settlement Statement, each Overproduced Party will send its cash settlement, accompanied by appropriate accounting detail, to the Operator. The Operator will distribute the monies so received, along with any settlement owed by the Operator as an Overproduced Party, to each Underproduced Party to whom settlement is due within ninety (90) days after issuance of the Final Gas Settlement Statement. In the event that any Overproduced Party fails to pay any settlement due hereunder, the Operator may turn over responsibility for the collection of such settlement to the Party to whom it is owed, and the Operator will have no further responsibility with regard to such settlement.

7.3.1 ☐ **(Optional - For use only with Section 7.3, Alternative 2 - Settlement Through Operator)** Any Party shall have the right at any time upon thirty (30) days' prior written notice to all other Parties to demand that any settlements due such Party for Overproduction be paid directly to such Party by the Overproduced Party, rather than being paid through the Operator. In the event that an Overproduced Party pays the Operator any sums due to an Underproduced Party at any time after thirty (30) days following the receipt of the notice provided for herein, the Overproduced Party will continue to be liable to such Underproduced Party for any sums so paid, until payment is actually received by the Underproduced Party.

7.4 ☐ **(Alternative 1 - Historical Sales Basis)** The amount of the cash settlement will be based on the proceeds received by the Overproduced Party under an Arm's Length Agreement for the Gas taken from time to time by the Overproduced Party in excess of the Overproduced Party's Full Share of Current Production. Any Makeup Gas taken by the Underproduced Party prior to monetary settlement hereunder will be applied to offset Overproduction chronologically in the order of accrual.

7.4 ☐ **(Alternative 2 - Most Recent Sales Basis)** The amount of the cash settlement will be based on the proceeds received by the Overproduced Party under an Arm's Length Agreement for the volume of Gas that constituted Overproduction by the Overproduced Party from the Balancing Area. For the purpose of implementing the cash settlement provision of the Section 7, an Overproduced Party will not be considered to have produced any of an Underproduced Party's share of Gas until the Overproduced Party has produced cumulatively all of its Percentage Interest share of the Gas ultimately produced from the Balancing Area.

7.5 The values used for calculating the cash settlement under Section 7.4 will include all proceeds received for the sale of the Gas by the Overproduced Party calculated at the Balancing Area, after deducting any production or severance taxes paid and any Royalty actually paid by the Overproduced Party to an Underproduced Party's Royalty owner(s), to the extent said payments amounted to a discharge of said Underproduced Party's Royalty obligation, as well as any reasonable marketing, compression, treating, gathering or transportation costs incurred directly in connection with the sale of the Overproduction.

7.5.1 ☐ **(Optional - For Valuation Under Percentage of Proceeds Contracts)** For Overproduction sold under a gas purchase contract providing for payment based on a percentage of the proceeds obtained by the purchaser upon resale of residue gas and liquid hydrocarbons extracted at a gas processing plant, the values used for calculating cash settlement will include proceeds received by the Overproduced Party for both the liquid hydrocarbons and the residue gas attributable to the Overproduction.

7.5.2 ☐ **(Optional - Valuation for Processed Gas - Option 1)** For Overproduction processed for the account of the Overproduced Party at a gas processing plant for the extraction of liquid hydrocarbons, the full quantity of the Overproduction will be valued for purposes of cash settlement at the prices received by the Overproduced Party for the sale of the residue gas attributable to the Overproduction without regard to proceeds attributable to liquid hydrocarbons which may have been extracted from the Overproduction.

7.5.2 ☐ **(Optional - Valuation for Processed Gas - Option 2)** For Overproduction processed for the account of the Overproduced Party at a gas processing plant for the extraction of liquid hydrocarbons, the values used for calculating cash settlement will include the proceeds received by the Overproduced Party for the sale of the liquid hydrocarbons extracted from the Overproduction, less the actual reasonable costs incurred by the Overproduced Party to process the Overproduction and to transport, fractionate and handle the liquid hydrocarbons extracted therefrom prior to sale.

7.6 To the extent the Overproduced Party did not sell all Overproduction under an Arm's Length Agreement, the cash settlement will be based on the weighted average price received by the Overproduced Party for any gas sold from the

Balancing Area under Arm's Length Agreements during the months to which such Overproduction is attributed. In the event that no sales under Arm's Length Agreements were made during any such month, the cash settlement for such month will be based on the spot sales prices published for the applicable geographic area during such month in a mutually acceptable pricing bulletin.

7.7 Interest compounded at the rate of _____ percent (_____ %) per annum or the maximum lawful rate of interest applicable to the Balancing Area, whichever is less, will accrue for all amounts due under Section 7.1, beginning the first day following the date payment is due pursuant to Section 7.3. Such interest shall be borne by the Operator or any Overproduced Party in the proportion that their respective delays beyond the deadlines set out in Sections 7.2 and 7.3 contributed to the accrual of the interest.

7.8 In lieu of the cash settlement required by Section 7.3, an Overproduced Party may deliver to the Underproduced Party an offer to settle its Overproduction in-kind and at such rates, quantities, times and sources as may be agreed upon by the Underproduced Party. If the Parties are unable to agree upon the manner in which such in-kind settlement gas will be furnished within sixty (60) days after the Overproduced Party's offer to settle in kind, which period may be extended by agreement of said Parties, the Overproduced Party shall make a cash settlement as provided in Section 7.3. The making of an in-kind settlement offer under this Section 7.8 will not delay the accrual of interest on the cash settlement should the Parties fail to reach agreement on an in-kind settlement.

7.9 ☐ **(Optional - For Balancing Areas Subject to Federal Price Regulation)** That portion of any monies collected by an Overproduced Party for Overproduction which is subject to refund by orders of the Federal Energy Regulatory Commission or other governmental authority may be withheld by the Overproduced Party until such prices are fully approved by such governmental authority, unless the Underproduced Party furnishes a corporate undertaking, acceptable to the Overproduced Party, agreeing to hold the Overproduced Party harmless from financial loss due to refund orders by such governmental authority.

7.10 ☐ **(Optional - Interim Cash Balancing)** At any time during the term of this Agreement, any Overproduced Party may, in its sole discretion, make cash settlement(s) with the Underproduced Parties covering all or part of its outstanding Gas imbalance, provided that such settlements must be made with all Underproduced Parties proportionately based on the relative imbalances of the Underproduced Parties, and provided further that such settlements may not be made more often than once every twenty-four (24) months. Such settlements will be calculated in the same manner provided above for final cash settlements. The Overproduced Party will provide Operator a detailed accounting of any such cash settlement within thirty (30) days after the settlement is made.

8. TESTING

Notwithstanding any provision of this Agreement to the contrary, any Party shall have the right, from time to time, to produce and take up to one hundred percent (100%) of a well's entire Gas stream to meet the reasonable deliverability test(s) required by such Party's Gas purchaser, and the right to take any Makeup Gas shall be subordinate to the right of any Party to conduct such tests; provided, however, that such tests shall be conducted in accordance with prudent operating practices only after _____ (_____) days' prior written notice to the Operator and shall last no longer than _____ (_____) hours.

9. OPERATING COSTS

Nothing in this Agreement shall change or affect any Party's obligation to pay its proportionate share of all costs and liabilities incurred in operations on or in connection with the Balancing Area, as its share thereof is set forth in the Operating Agreement, irrespective of whether any Party is at any time selling and using Gas or whether such sales or use are in proportion to its Percentage Interest in the Balancing Area.

10. LIQUIDS

The Parties shall share proportionately in and own all liquid hydrocarbons recovered with Gas by field equipment operated for the joint account in accordance with their Percentage Interests in the Balancing Area.

11. AUDIT RIGHTS

Notwithstanding any provision in this Agreement or any other agreement between the Parties hereto, and further notwithstanding any termination or cancellation of this Agreement, for a period of two (2) years from the end of the calendar year in which any information to be furnished under Section 5 or 7 hereof is supplied, any Party shall have the right to audit the records of any other Party regarding quantity, including but not limited to information regarding Btu-content. Any Underproduced Party shall have the right for a period of two (2) years from the end of the calendar year in which any cash settlement is received pursuant to Section 7 to audit the records of any Overproduced Party as to all matters concerning values, including but not limited to information regarding prices and disposition of Gas from the Balancing Area. Any such audit shall be conducted at the expense of the Party or Parties desiring such audit, and shall be conducted, after reasonable notice, during normal business hours in the office of the Party whose records are being audited. Each Party hereto agrees to maintain records as to the volumes and prices of Gas sold each month and the volumes of Gas used in its own operations, along with the Royalty paid on any such Gas used by a Party in its own operations. The audit rights provided for in this Section 11 shall be in addition to those provided for in Section 5.2 of this Agreement.

12. MISCELLANEOUS

12.1 As between the Parties, in the event of any conflict between the provisions of this Agreement and the provisions of any gas sales contract, or in the event of any conflict between the provisions of this Agreement and the provisions of the Operating Agreement, the provisions of this Agreement shall govern.

12.2 Each Party agrees to defend, indemnify and hold harmless all other Parties from and against any and all liability for any claims, which may be asserted by any third party which now or hereafter stands in a contractual relationship with such indemnifying Party and which arise out of the operation of this Agreement or any activities of such indemnifying Party under the provisions of this Agreement, and does further agree to save the other Parties harmless from all judgments or damages sustained and costs incurred in connection therewith.

12.3 Except as otherwise provided in this Agreement, Operator is authorized to administer the provisions of this Agreement, but shall have no liability to the other Parties for losses sustained or liability incurred which arise out of or in connection with the performance of Operator's duties hereunder, except such as may result from Operator's gross negligence or willful misconduct. Operator shall not be liable to any Underproduced Party for the failure of any Overproduced Party (other than Operator) to pay any amounts owed pursuant to the terms hereof.

12.4 This Agreement shall remain in full force and effect for as long as the Operating Agreement shall remain in force and effect as to the Balancing Area, and thereafter until the Gas accounts between the Parties are settled in full, and shall inure to the benefit of and be binding upon the Parties hereto, and their respective heirs, successors, legal representatives

and assigns, if any. The Parties hereto agree to give notice of the existence of this Agreement to any successor in interest of any such Party and to provide that any such successor shall be bound by this Agreement, and shall further make any transfer of any interest subject to the Operating Agreement, or any part thereof, also subject to the terms of this Agreement.

12.5 Unless the context clearly indicates otherwise, words used in the singular include the plural, the plural includes the singular, and the neuter gender includes the masculine and the feminine.

12.6 In the event that any "Optional" provision of this Agreement is not adopted by the Parties to this Agreement by a typed, printed or handwritten indication, such provision shall not form a part of this Agreement, and no inference shall be made concerning the intent of the Parties in such event. In the event that any "Alternative" provision of this Agreement is not so adopted by the Parties, Alternative 1 in each such instance shall be deemed to have been adopted by the Parties as a result of any such omission. In those cases where it is indicated that an Optional provision may be used only if a specific Alternative is selected: (i) an election to include said Optional provision shall not be effective unless the Alternative in question is selected; and (ii) the election to include said Optional provision must be expressly indicated hereon, it being understood that the selection of an Alternative either expressly or by default as provided herein shall not, in and of itself, constitute an election to include an associated Optional provision.

12.7 This Agreement shall bind the Parties in accordance with the provisions hereof, and nothing herein shall be construed or interpreted as creating any rights in any person or entity not a signatory hereto, or as being a stipulation in favor of any such person or entity.

12.8 If contemporaneously with this Agreement becoming effective, or thereafter, any Party requests that any other Party execute an appropriate memorandum or notice of this Agreement in order to give third parties notice of record of same and submits same for execution in recordable form, such memorandum or notice shall be duly executed by the Party to which such request is made and delivered promptly thereafter to the Party making the request. Upon receipt, the Party making the request shall cause the memorandum or notice to be duly recorded in the appropriate real property or other records affecting the Balancing Area.

12.9 In the event Internal Revenue Service regulations require a uniform method of computing taxable income by all Parties, each Party agrees to compute and report income to the Internal Revenue Service (select one) ☐ as if such Party were taking its Full Share of Current Production during each relevant tax period in accordance with such regulations, insofar as same relate to entitlement method tax computations; or ☐ based on the quantity of Gas taken for its account in accordance with such regulations, insofar as same relate to sales method tax computations.

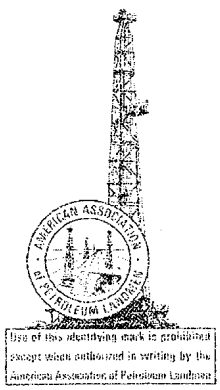
13. ASSIGNMENT AND RIGHTS UPON ASSIGNMENT

13.1 Subject to the provisions of Sections 13.2 (if elected) and 13.3 hereof, and notwithstanding anything in this Agreement or in the Operating Agreement to the contrary, if any Party assigns (including any sale, exchange or other transfer) any of its working interest in the Balancing Area when such Party is an Underproduced or Overproduced Party, the assignment or other act of transfer shall, insofar as the Parties hereto are concerned, include all interest of the assigning or transferring Party in the Gas, all rights to receive or obligations to provide or take Makeup Gas and all rights to receive or obligations to make any monetary payment which may ultimately be due hereunder, as applicable. Operator and each of the other Parties hereto shall thereafter treat the assignment accordingly, and the assigning or transferring Party shall look solely to its assignee or other transferee for any interest in the Gas or monetary payment that such Party may have or to which it may be entitled, and shall cause its assignee or other transferee to assume its obligations hereunder.

13.2 ☐ **(Optional - Cash Settlement Upon Assignment)** Notwithstanding anything in this Agreement (including but not limited to the provisions of Section 13.1 hereof) or in the Operating Agreement to the contrary, and subject to the provisions of Section 13.3 hereof, in the event an Overproduced Party intends to sell, assign, exchange or otherwise transfer any of its interest in a Balancing Area, such Overproduced Party shall notify in writing the other working interest owners who are Parties hereto in such Balancing Area of such fact at least _____ (_____) days prior to closing the transaction. Thereafter, any Underproduced Party may demand from such Overproduced Party in writing, within _____ (_____) days after receipt of the Overproduced Party's notice, a cash settlement of its Underproduction from the Balancing Area. The Operator shall be notified of any such demand and of any cash settlement pursuant to this Section 13, and the Overproduction and Underproduction of each Party shall be adjusted accordingly. Any cash settlement pursuant to this Section 13 shall be paid by the Overproduced Party on or before the earlier to occur (i) of sixty (60) days after receipt of the Underproduced Party's demand or (ii) at the closing of the transaction in which the Overproduced Party sells, assigns, exchanges or otherwise transfers its interest in a Balancing Area on the same basis as otherwise set forth in Sections 7.3 through 7.6 hereof, and shall bear interest at the rate set forth in Section 7.7 hereof, beginning sixty (60) days after the Overproduced Party's sale, assignment, exchange or transfer of its interest in the Balancing Area for any amounts not paid. Provided, however, if any Underproduced Party does not so demand such cash settlement of its Underproduction from the Balancing Area, such Underproduced Party shall look exclusively to the assignee or other successor in interest of the Overproduced Party giving notice hereunder for the satisfaction of such Underproduced Party's Underproduction in accordance with the provisions of Section 13.1 hereof.

13.3 The provisions of this Section 13 shall not be applicable in the event any Party mortgages its interest or disposes of its interest by merger, reorganization, consolidation or sale of substantially all of its assets to a subsidiary or parent company, or to any company in which any parent or subsidiary of such Party owns a majority of the stock of such company.

14. OTHER PROVISIONS



15. COUNTERPARTS

This Agreement may be executed in counterparts, each of which when taken with all other counterparts shall constitute a binding agreement between the Parties hereto; provided, however, that if a Party or Parties owning a Percentage Interest in the Balancing Area equal to or greater than a _____ percent (_____%) therein fail(s) to execute this Agreement on or before _____, this Agreement shall not be binding upon any Party and shall be of no further force and effect.

IN WITNESS WHEREOF, this Agreement shall be effective as of the _____ day of _____, 20 _____.

ATTEST OR WITNESS:

_____

_____

OPERATOR

_____

BY: _____

_____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

_____

_____

BY: _____

_____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

_____

_____

BY: _____

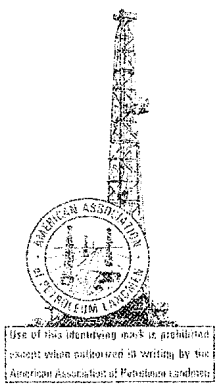
_____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____



ACKNOWLEDGMENTS

Note: The following forms of acknowledgment are the short forms approved by the Uniform Law on Notarial Acts. The validity and effect of these forms in any state will depend upon the statutes of that state.

Individual acknowledgment:

State of _____)

) ss.

County of _____)

This instrument was acknowledged before me on _____

_____ by _____.

(Seal, if any) _____

Title (and Rank) _____

My commission expires: _____

Acknowledgment in representative capacity:

State of _____)

) ss.

County of _____)

This instrument was acknowledged before me on _____

_____ by _____ as

_____ of _____.

(Seal, if any) _____

Title (and Rank) _____

My commission expires: _____