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Gas Balancing: What happens if there is No Agreement?

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SUMMARY

Gas balancing agreements require, first and fundamentally, the parties to a joint venture agreement with gas for sale to enter into an agreement. Many commercially sensitive issues need to be resolved with the result that the process involved in reaching agreement can be and often is fraught. Achieving agreement is not a certainty. The contracts individual joint venture participants conclude with their gas customers may provide substantial commercial incentives not to settle a gas balancing agreement or may encourage one or more of the participants to hold out for terms that are commercially unacceptable to the other participants.

While the provisions vary, most petroleum joint venture agreements include provisions giving the parties both a right and an obligation to take their petroleum entitlements. There are usually vague statements about natural gas being different, with the parties acknowledging that arrangements relating to the disposal of natural gas require a separate agreement. Joint venture agreements typically also give the Operating Committee for a joint venture broad powers to supervise the conduct of operations.

This paper explores the extent to which gas production could commence without a gas balancing agreement in place and how, using the mechanisms found in most petroleum joint venture agreements, some of the commercial issues can be addressed through the forum of the Operating Committee. The paper will also explore the pitfalls, problems and not insubstantial risks joint venture participants face if it becomes necessary to commence gas production activities without any gas balancing agreement in place.

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INTRODUCTION

Alastair Coulthard's paper is a comprehensive review of the commercial rationale for gas balancing agreements and the issues required to be addressed in such agreements. Andrew Smith has provided practical examples of how different (and difficult) issues can be addressed. On even the most casual review of these papers it is apparent there are complex commercial issues for joint venture participants to wrestle with where competing commercial interests, the long-term nature of gas balancing agreements, and the often lengthy documentation needed, all conspire to make the negotiation and settlement of a gas balancing agreement a daunting undertaking.

This paper was intended originally to be a commentary on gas balancing in a New Zealand context. Unfortunately, there is only a limited specifically New Zealand context. The components of gas systems as described in Coulthard's paper – the causes of imbalance, the need for a gas balancing agreement and the broad commercial framework – are the same in New Zealand as they are in Australia or elsewhere. There is also a somewhat more fundamental problem, namely that in New Zealand, as at the date of this paper, no formal separate gas balancing agreement between field participants has yet been concluded.

The principal reason for the absence of any gas balancing agreements is that until relatively recently it has been accepted commercial and legal wisdom that gas discoveries require the parties to work together to achieve gas sales. Most gas in New Zealand has, until now, been sold on a joint basis and, in such circumstances, the need for gas balancing agreements has not arisen. Several key changes have driven a change to this situation:

(a) the regulatory and physical infrastructure for gas is now more developed such that it is possible for individual gas producers to contract with pipeline owners to get gas to market, which in turn facilitates the separate marketing of gas by gas producers;
(b) the market for gas sales is more sophisticated with many different contract models in use; and
(c) joint marketing of gas by substantial market participants encounters the same or similar competition issues as in Australia.

It was in the context of an application to the New Zealand Commerce Commission for approval of a joint marketing proposal regarding the offshore Pohokura gas field that gas balancing issues received their first significant public airing. Some of the comments in the Commerce Commission report[1] are revealing: The Petroleum Exploration Association of New Zealand submitted that gas balancing agreements are "notoriously complex and a frequent source of litigation".[2] The Commission accepted that "GBAs can be complex and susceptible to disputes",[3] and that "the gas balancing agreements are likely to be

[1] Commerce Commission Decision 505, 1 September 2003.
[2] Ibid p 71.
[3] Ibid p 36.

the most contentious issue facing the Pohokura JV parties if required to separately market gas from Pohokura".[4]

It is apparent from the above comments that the difficulty of the negotiations involved in a gas balancing agreement should not be underestimated. Alastair Coulthard's comment that gas balancing takes place in an environment where there may be aggressive competing market positions by the negotiating participants only underscores the point. The whole process can take months, if not years.

It is also salutary to bear in mind the following comment: "Gas balancing agreements can be an interesting mental challenge but, in truth, they add little value to the NPV [Net Present Value] of a development, but can easily destroy it."[5]

Gas balancing agreements require, first and fundamentally, the parties to a joint venture agreement with gas for sale to enter into an agreement. Achieving agreement is not a certainty. The contracts individual joint venture participants have concluded with their gas customers may provide substantial commercial incentives not to settle a gas balancing agreement or may encourage one or more of the participants to hold out for terms that are commercially unacceptable to the other participants. While the prospect of the potential for value destruction ought to be sufficient economic encouragement to persuade otherwise reluctant parties to come to terms, it may prove too difficult to do so.

Such an outcome will be undesirable for some, a majority or even all the participants in the venture. Vital commercial issues, as canvassed in Alastair Coulthard's and Andrew Smith's papers, would remain unresolved. The prospect of no gas balancing agreement being settled invites an examination as to what else can or should be done by concerned participants who desire certainty.

Contract Law Framework

Before turning to the typical contractual provisions that have a role to play it is useful to remind ourselves of the approach the courts are likely to adopt when considering contractual disputes. There are two general observations:

(a) the courts will not write bargains for the parties; but
(b) the courts will endeavour to make contracts work as best they can.

These issues were comprehensively considered in the New Zealand Court of Appeal decision *Fletcher Challenge Energy Ltd v Electricity Corporation of New Zealand Ltd* (*FCE v ECNZ*).[6] Blanchard J said:

> "If the Court is satisfied that the parties intended to be bound, it will strive to find a means of giving effect to that intention by filling the gap. On the other hand, if the Court takes the view that the parties did not intend to be bound

[4] Ibid p 67.
[5] Paul Nicholson, "Gas balancing", in Martyn R David (ed), *Oil and Gas Infrastructure and Midstream Agreements* (Langham Legal Publishing, London, 1999).
[6] [2002] 2 NZLR 433.

> unless they themselves filled the gap (that they were not content to leave that task to the Court or a third party), then the agreement will not be binding… It will be a matter of fact and degree in each case whether the gap left by the parties is simply too wide to be filled. The Court can supplement, enlarge or clarify the express terms but it cannot properly engage in an exercise of effectively making the contract for the parties by imposing terms which they have not themselves agreed to and for which there are no reliable objective criteria." [7]

In the words of Lord Tomlin in *Hillas v Arcos*, "the problem for a court of construction must always be so to balance matters that, without violation of essential principle, the dealings of men may as far as possible be treated as effective, and that the law may not incur the reproach of being the destroyer of bargains".[8]

In short, the courts will do their best to make contracts work but will not write contracts for the parties. While there may be differences of nuance, the common law position in Australia is likely not materially different.

The conclusion to be drawn from this necessarily general common law background is that, in the end, what always matters most are the specific contractual provisions that a court is called upon to interpret. Similarly, most contractual disputes are framed by specific, and often hotly disputed, factual circumstances. Different contractual terms and different facts mean that the particular outcomes of one contractual dispute will not necessarily apply to all disputes regarding the same type of contract. At best, the approach the courts have adopted in one dispute will be useful guidance in similar circumstances, but in the specific contractual and factual circumstances faced by a petroleum law practitioner contemplating how a joint venture operating agreement is to be interpreted and applied in the context of a difficult gas balancing negotiation, the quest for definitive answers from past cases will prove elusive. Any practitioner delving into this area must focus, first and foremost, on the precise words of the applicable joint operating agreement to which the participants are party and then apply them to the facts. While such agreements will only rarely, if ever, provide a complete answer, nevertheless there is often more in these agreements that will be relevant and helpful (or unhelpful depending on your perspective) than may first appear.

Petroleum Joint Venture Operating Agreements

Petroleum joint venture operating agreements (JVOAs) are all bespoke to a greater or lesser extent so the first and obvious point is that the mechanisms available to participants will always depend upon the particular provisions of the applicable JVOA. That said, most petroleum JVOAs have structural similarities and many have similar provisions relevant to gas balancing issues.

[7] [2002] 2 NZLR 433 at 446-447.
[8] *Hillas & Co Ltd v Arcos Ltd* (1932) 147 LT 503 at 512; [1932] All ER Rep 494 at 499.

For the purposes of this paper it is assumed that most JVOAs allow for decision making on a majority basis (the percentage required for a majority can vary considerably) by a process of joint venture participants voting at Operating Committee meetings. The voting procedures at Operating Committee meetings are not examined in this paper. It is also assumed that most JVOAs provide for an Operator whose role is to conduct the activities of the joint venture under the overall supervision and control of the Operating Committee. Neither of these assumptions will always be free from controversy or the potential for dispute but a discussion about these matters is not addressed here.

The provisions typically found in most petroleum JVOAs and relevant to the subject matter of this paper are:

(a) the provisions dealing with disposal of natural gas;
(b) the clauses dealing with the right and obligation of the participants to take oil or gas;
(c) the procedures relating to the settlement of annual production work programs and budgets; and
(d) the clauses that describe the powers and duties of the Operating Committee.

For the purposes of this paper four JVOAs have been selected which are intended to be illustrative of a range of approaches likely to be encountered. One is from 1993, two are more recent and the fourth is the AIPN International Model Form. The provisions mentioned above as contained in these illustrative JVOAs are all set out in full in the Appendix. A brief review of these provisions before tackling the balance of this paper may help. Most petroleum law practitioners will recognise the general elements of the provisions selected, or variations of them. Throughout this paper the relevant JVOAs are referred to as JVOA 1, JVOA 2, JVOA 3 or the Association of International Petroleum Negotiators (AIPN) Model Form.

Disposal of Natural Gas

Apart from Alternative One in the AIPN Model Form, what is striking about the provisions dealing with disposal of natural gas is their vagueness. Each provision cited amounts to little more than a variation of saying that gas is different and, once the parties know what they have, they will try to come to an agreement about the issue.

JVOAs 1 and 2 require the parties to meet as necessary but JVOA 3 does not require even that low level of obligation. JVOA 2, somewhat unusually, in the last sentence, requires unanimous consent for any arrangements for disposal of natural gas: a distinctly unhelpful provision if the parties are struggling to reach a gas balancing agreement.

The AIPN Model Form, in its first alternative, provides useful guidelines about what is to be included in a gas balancing agreement but there is no mechanism or process specified that, if followed, will produce a binding result. Accordingly,

while it could be considered helpful to have a list of some of the issues to be negotiated, the absence of any agreed principles to determine the outcome of such negotiations means the clauses dealing with the disposal of natural gas are not enforceable in any practical way.

Parties cannot make an enforceable agreement to enter into a contract at some time in the future, on terms then to be agreed. If a matter is expressly or impliedly reserved for determination by the later agreement of the parties and by no other means, the parties cannot be considered to have committed themselves to any binding commitment. Where the parties have sought to create a binding obligation to enter into a contract at some later stage but have, in the face of commercial realities, been unwilling to specify what the terms of the future agreement are to be, the courts cannot complete the bargain.[9]

Accordingly, and assuming the provisions in the selected JVOAs are not atypical, one can conclude that the usual petroleum JVOA provides little or no guidance to the parties as to how they will negotiate issues surrounding gas disposal. JVOA 2 is unusual in stating that natural gas disposal arrangements require unanimity: an admirably clear provision but one which makes much of the balance of this paper otiose if the concepts are to be applied to a JVOA with a similar clause.

On balance, however, one is left wondering why joint venture participants bother to include the kind of provisions contained in JVOA 1, JVOA 2 and the first alternative in the AIPN Model Form; they cannot be applied or enforced and appear to serve no purpose.

Right and Obligation to Take Petroleum Entitlements

The provisions found in most petroleum JVOAs dealing with the parties' rights and obligations to take oil and gas are more interesting.

Each of the provisions describes a right and an obligation to take petroleum. Some (JVOA 3 and the AIPN Model Form) do so in the same sentence, while others (JVOA 1 and JVOA 2) describe both the right and the obligation separately. Petroleum law practitioners will be familiar with the concept of a right to take petroleum but an obligation to take raises various questions.

There are two elements to these provisions: first, to what quantities of petroleum does the right and obligation relate? Secondly, is the obligation to take enforceable, and, if so, how? Dealing with the first question, each JVOA takes a slightly different approach.

In JVOAs 1 and 2, the right to take petroleum applies to each party's "Percentage Interest share of the total quantities of Joint Petroleum produced and made available under this Agreement", while the take obligation applies to "all Joint Petroleum which it causes to be produced" and "in accordance with

[9] *FCE v ECNZ* [2002] 2 NZLR 433 at 446-447.

procedures as may be agreed". The first problem with this formulation is that it imposes an obligation to lift only the petroleum that a party causes to be produced. The question arises as to whether and how any party to a JVOA "causes" petroleum to be produced. The second problem is that what must be uplifted is the quantity caused to be produced following agreed procedures. The procedures are not identified (is it nomination procedures?) and neither is any process for getting agreement on such procedures specified.

JVOA 3 combines the two, stating that each party has a right and obligation to dispose of its "Participating Interest share of total production available to the Participants". This right and obligation is qualified by being in accordance with special arrangements for natural gas that may have been agreed. What happens if there are no such special arrangements? Is there still a right and obligation?

The right and obligation in the AIPN Model Form applies to each party's "Entitlement", which is then defined as the quantity of hydrocarbons "of which a Party has the right and obligation to take delivery pursuant to the terms of this Agreement and the Contract, as such rights and obligations may be adjusted by the terms of any lifting, balancing and other disposition agreements entered into".

Thus, the AIPN Model Form envisages that gas balancing agreements may modify the entitlements of the parties but, as a matter of construction, the obligation to take exists irrespective of the existence of a gas balancing agreement. The AIPN Model Form formulation also suffers from being circular because the right and obligation to Petroleum applies to the Entitlement which is in turn defined to mean what the party is entitled to under the Agreement. All in all, it too is not a provision which is particularly clear.

The result of this analysis is that the fundamental value position of a participant in a petroleum joint venture, the right to take petroleum in accordance with their participating interest, is often or even usually not expressed as clearly or definitely as one might expect. There is no statement that the right equates to total reserves, total capacity or field deliverability. Inferring such a right, on the words of most JVOAs, could be something of a stretch.

Conceptually, however, all of the JVOAs define the right and obligation to take in terms of petroleum produced and made available under the agreement. It is suggested that this must be taken to mean under and pursuant to the procedures and arrangements set out in the JVOA or created as a result of decisions pursuant to the JVOA.

The quantity of petroleum that can be made available under a JVOA will be a function of a number of factors. The geological and geophysical characteristics of the field itself (the size of the reservoir, reservoir pressure, porosity, permeability and the nature of the drive mechanism) will be key determinants. No JVOA can have any influence on these factors.

However, there are many other factors involved in determining the amount of petroleum which can be made available which factors are determined by a

decision making process rooted in the JVOA. Decisions surrounding the number of production wells drilled, the size of the pipelines built as part of a development, the capacity of production stations, the secondary recovery methods used and a host of other variables all influence what quantities of petroleum can be made available.

Other more overtly commercial factors will also be relevant, particularly as regards gas production, namely the kind of end user and the volumes contracted, the specific contractual terms in a gas contract (take or pay or equivalent provisions and the like) and the price applicable under the relevant contract as compared to market prices.

The point of these observations is that the quantity of petroleum to which a joint venturer has a right to and obligation to take is determined only in part by natural forces. Just as powerful will be the decisions made by the joint venturers themselves concerning the manner in which the field is developed and managed.

Accordingly, one can answer the first question (to what quantities does the right and obligation to take petroleum relate?) by saying that it is those quantities of petroleum the relevant field is capable of producing through the facilities and equipment the parties themselves have chosen to install.

The second question (is a take obligation enforceable?) is also relatively straightforward. A party which fails to lift its entitlement (ie, underlifts) would not be ordered to physically uplift gas by an order of specific performance, an order that is as unlikely as it is unnecessary. If a party fails to uplift gas made available to it under the JVOA, the presence of a provision in a JVOA that imposes an obligation to take will give rise to a remedy in damages for breach. A discussion about how such damages could be calculated is beyond the scope of this paper but it may suffice to note that the difficulty a court faces in quantifying or assessing damages is no barrier to a court embarking on that process and reaching a decision. Put another way, it would be a mistake to assume that an obligation to take will be unenforceable if a party has no ability to take gas. The usual remedy for contract breach, damages, will apply.

The conclusion that can be taken from this discussion is that most petroleum JVOAs have provisions that create and impose a right and an obligation to take petroleum. This fundamental right is, on closer scrutiny, not as clear as one might expect. The quantities of petroleum to which this right and obligation attach are not expressed as a share of reserves but instead are largely determined from decisions made by the parties in the context of a field development plan. A failure to take is enforceable, not in the form of a physical requirement to take, but in the form of liability for damages arising from the breach.

Annual Production Work Programs and Budgets

JVOAs usually include provisions requiring Operating Committees to determine annual production work programs and budgets.

Again, these provisions may be worded differently. JVOA 1 requires the Operating Committee to "determine and approve a Programme [of Joint Operations] and Budget for the upcoming year". Production Work Programs and Budgets under JVOA 2 must include "an estimate of the date of commencement of production (if appropriate) and of the total production by month and maximum daily rate to be achieved in each month". JVOA 3 and the AIPN Model Form require a "Work Program and Budget detailing the Joint Operations to be performed" for the following year.

Based on the review of the JVOAs from which excerpts appear in the Appendix, it is not a common feature of JVOAs that forward estimates of expected gas production are expressly required to be components of an annual production budget. It is only explicit in JVOA 2. JVOA 1, JVOA 3 and the AIPN Model Form speak only of approving a program of Joint Operations meaning the activities to be undertaken by the joint venture. The position will likely be better dealt with in a JVOA drafted and agreed with production operations expressly contemplated. Even so, in the JVOA examples used, and if a joint venture is about to or is actually producing petroleum, the requirement detailing proposed future Joint Operations should suffice. A program for future Joint Operations that did not mention or address the actual quantities of petroleum expected to be produced would not be much of a production program. Put another way, it would not be difficult for joint venturers to insist that the issue be addressed in the context of a meeting or resolution to resolve the annual production program. As a result, it is suggested that it is reasonably safe to assume that the production work program and budget determination process will deal with and make decisions about the quantities of gas expected to be produced over the forthcoming year. The quantities to be produced will usually be specified as daily, monthly and annual quantities, could also include proposed shutdowns for maintenance and will most likely have some contingency allowance. The detail in fact agreed will vary considerably between different joint ventures.

There are few constraints around what kind of budget or future production profile the parties can adopt (apart from the obvious physical limits of the field itself). Accordingly, one can conclude that the Operating Committee of a petroleum joint venture, in the context of settling an annual work program and budget, can in substance and detail determine the quantities of gas a participant not only is entitled to take but also is obliged to take.

Powers of the Operating Committee

JVOAs set out the powers of the joint venture's Operating Committee. In most cases, its powers will be defined broadly, for example: the Operating Committee "shall exercise overall supervision and control of all matters pertaining to Joint Operations." (JVOA 1)

What kinds of issues fall within the ambit of the Operating Committee? The answer appears to be that, in most JVOAs, anything that relates to the conduct of

Joint Operations is capable of being the subject of decision making by the Operating Committee. This is a wide brief and typically it is unfettered.

By way of example, it is within the ambit of the Operating Committee to determine:

- the facilities to be installed in a petroleum development;
- the operating methodologies for the facilities installed;
- the maintenance programs for the facilities;
- how the Operator is to manage and how the joint venture participants are to call for the petroleum entitlements they wish to take (ie, nomination procedures);
- the manner in which the reservoir itself is to be managed (rates of drawdown, secondary recovery methods etc);
- how and when (and against what criteria) additional wells are to be drilled or new facilities installed; and
- the expected performance of interconnected systems (for example, capacity constraints of pipeline networks etc).

Many of these issues will have a direct and indirect impact on the "the total quantities of Joint Petroleum produced and made available under" a JVOA and thus the quantities of petroleum that participants are entitled and obliged to take. Moreover, for the most part and in most JVOAs, some or all of these matters can be determined by a majority vote – unanimity is not essential. In short, in most JVOAs the mechanisms exist for the parties to determine, through majority decision making, individual participant petroleum offtake entitlements.

JVOAs and Gas Balancing

Both Andrew Smith and Alastair Coulthard have recommended that gas balancing agreements become part of the JVOA. They do not comment on the issue of whether the mechanisms in the JVOA can be used, if not to create a gas balancing agreement per se, but to achieve some or all of that which a gas balancing agreement will achieve.

As has been noted earlier, many JVOAs, including the four illustrative JVOAs described in the Appendix, recognise that a specific gas balancing agreement may be required and, by necessary implication, such an agreement is desirable or even essential. It is important to recognise why a separate gas balancing agreement is needed. As the above review notes, the kind of provisions typically found in most petroleum JVOAs address issues relating to the right and obligation to take gas with a degree of vagueness that is somewhat disconcerting giving the economic importance of the issue. Any outcome derived from the provisions of the JVOA above (as discussed below) will always face legal and practical uncertainties and will be something of a blunt instrument.

By contrast, a gas balancing agreement commences with acceptance of the premise that some level of offtake flexibility is desirable or even necessary. By introducing an element of flexibility in offtake the flip side of the coin, re balancing, becomes essential. A gas balancing regime therefore requires the following elements to be addressed:

- offtake rights;
- flexibility rights and limits; and
- the rebalancing mechanism.

Some JVOAs give guidance as to the essential elements of a gas balancing agreement (for example, Alternative One in the AIPN Model Form) but, as already noted, a statement of principles to be negotiated falls well short of a binding or enforceable agreement. In the situation of no agreement being reached, the question then becomes, what provisions typically found in most JVOAs could be used to achieve a workable gas balancing regime, or, less ambitiously, could be used to at least set some parameters for a gas balancing negotiation.

This in turn requires some discussion about what is meant by a workable gas balancing regime without a gas balancing agreement. The start point of this discussion is to consider the dominant concerns of participants in a gas field, namely:

(a) preventing an overlifter from gaining access to more than their equity share of the three elements identified by Alastair Coulthard (total reserves, facilities capacity and reservoir capacity or deliverability); and
(b) not being thwarted in their production (and revenue) ambitions by an underlifter.

Overlifting

Overlifting can arise when a participant (Party A) has contractual arrangements with its customers such that on each and every day that participant is able to take their equity share of what the field can produce. If the customers of the other participants (Parties B and C) do not have equivalent arrangements then, over time, Party A will take more than its equity share and become an overlifter. Without a gas balancing agreement Parties B and C may have no contractual mechanism to get themselves back to a balanced position, and their perceived right to their equity share of reservoir performance may also be downgraded.

The overlifter (Party A) might contend that it has the right to take its share of all the petroleum the field can produce. However, in the scenario described above, Party A begins progressively to take more than its equity share. The concern of Parties B and C will be to curtail excess take of petroleum by the overlifting Party A and to have in place mechanisms by which the underlifting Parties B and C can catch up.

The steps that could be taken to address the concerns of Parties B and C could involve:

(a) in the annual production work program and budget framework, the expected future production over the forthcoming days, weeks, months and year will be identified. There will be an element of contingency;
(b) the Operating Committee when voting upon the production work program and budget could, in substance and effect, determine the total quantity that participants can take for that year. To use the language of the JVOAs discussed earlier in this paper, the Operating Committee, in the course of setting work programs and budgets, determines "the total quantities of Joint Petroleum produced and made available" or the Entitlement (as used in the AIPN Model Form) of the parties. The exercise of such a power is well within the broad powers typically given to an Operating Committee to "exercise overall supervision and control of all matters pertaining to Joint Operations"; and
(c) voting for nomination procedures that prevent any Party being able to nominate for more than their programmed entitlement as determined by the annual production program.

Underlifting

Underlifting becomes a concern when one party has not been able to obtain a gas contract on commercially acceptable terms and becomes unable to take any of the gas made available or, on a lesser scale, has a contract whereby that party has limited ability to control the amount its customers will call for. The majority participants, on the other hand, have acceptable arrangements in place and want to monetise their gas production as rapidly as they can.

Again, the inability of the underlifter to take can be addressed by the majority in the context of an Operating Committee resolution specifying the quantities to be made available and the nomination procedures to apply. The underlifter may not be able to take what has been offered, but if there is an obligation to take, the underlifter will have difficulties relying on its own wrong to constrain the take of those who can. As already noted, few JVOAs state that the parties are entitled to their respective percentage shares of the reserves of a field, a concept which may be considered by some to be implicit but which is not in fact stated as such.

The position for the underlifter in the scenario outlined is that it becomes entitled in each year to its equity share of expected future production for that year but if it fails to take, it in effect loses that entitlement (and will have breached its obligation to take its entitlement) but, nevertheless, will still retain its entitlement to the quantities to be made available in the forthcoming year. The underlifters aggregate equity entitlement over the life of the field progressively reduces in this situation.

Problems and Pitfalls

The above scenarios do not address such matters as how any liquids produced in conjunction with gas are to be allocated, the complex issues as to who has title to petroleum when produced and the effect of the provisions of a JVOA on the title position nor how operating costs and capital costs are to be allocated between the parties in circumstances where parties are seeking to lift other than their equity share of total production.

It is also apparent that the provisions in JVOAs dealing with this matter are capable of different meanings with little contractual certainty about how a court may apply those provisions if and when called upon to do so. On any analysis, attempting gas production in a situation where the participants have separate gas contractual arrangements without a gas balancing agreement may well risk significant value destruction relative to the expectations of all parties, irrespective of whether they are underlifters or overlifters.

CONCLUSION

It is clear that the many and varied issues required to be addressed in the situation where joint venture participants have separate gas contracts are best dealt with in the form of a comprehensive gas balancing agreement. Such an agreement will provide a large measure of contractual and procedural certainty and should considerably reduce, if not entirely eliminate, the range and scope of potential future dispute. For the most part, settling a gas balancing agreement is the economically rational course for the participants. Put another way, the potential for dispute between participants (and the loss of value such disputes will cause) if production commences without a gas balancing agreement in place is such that it is difficult to imagine that setting out to avoid entering into a gas balancing agreement is an economically attractive course of action.

That said, the tensions involved can be considerable. The party with gas marketing opportunities that call for high rates of take may be disinclined to be generous in its accommodation of a party which is seeking to market more flexible gas contracts. Even if there is early conceptual agreement on the broad principles to be included in the gas balancing arrangements, resolving all the detail could well delay development decisions on a field or the commencement of production in respect of a completed development.

This paper suggests that any practitioner about to embark on a gas balancing agreement should carefully scrutinise the provisions of the applicable JVOA to determine precisely how that JVOA describes the obligation and entitlement to take, what is required to be included in an annual production program and whether the provision dealing with the disposal of gas has any requirement for unanimity. The next step is to ascertain what gas offtake arrangements can be settled in the context of the JVOA processes upon which the flexibility and re-balancing

provisions may be added by negotiation (for example, by resolution of the Operating Committee). Consideration must be given to the likely parameters of any gas contracts of the various participants, because no participant is likely to be willing to concede matters valuable to themselves and their customers simply to accommodate one of the other participants. Looking at this issue more broadly it is suggested that the kind of provisions discussed in this paper relating to the disposal of natural gas and gas balancing are inadequate. There is, in the view of the writer, a clear case for paying more attention to these provisions at the outset of a joint venture in the form of describing both a process that must be followed if a gas balancing agreement is needed and a more precise description of petroleum entitlements.

Nevertheless the toolbox for the practitioner faced with the possibility of a gas balancing agreement being needed but which is proving difficult to obtain, is not entirely empty. As in so many other aspects of the upstream petroleum industry, the systematic application of established practice, combined with creativity and ingenuity, will have a substantial role to play.

APPENDIX – RELEVANT JVOA CLAUSES

A. JVOA 1

Section 4.01 Establishment and Powers

There is hereby established an Operating Committee which shall exercise overall supervision and control of all matters pertaining to the Joint Operations. Without limiting the generality of the foregoing, but subject as otherwise provided in this Agreement, the powers and duties of the Operating Committee shall include:

(i) the consideration and determination of all matters relating to general policies, procedures and methods of operation hereunder including observance of the Safety Health and Environmental Protection Policy set out in Appendix C;

(ii) the consideration, revision and approval or disapproval of all proposed programs, budgets and AFEs prepared and submitted to it pursuant to the provisions of this Agreement;

(iii) the receipt and consideration of regular and any special reports of compliance or any non-compliance with safety, health and environmental requirements, submitted to it by the Operator pursuant to this Agreement;

(iv) the consideration and, if so required, the determination of any other matter relating to the Joint Operations which may be referred to it by the Parties or any of them (other than any proposal to amend this Agreement) or which is otherwise designated under this Agreement for reference to it; and

(v) the determination of the timing and location of all wells drilled under the Joint Operations and any change in the use or status of a well.

Section 5.05 Review of Development Work Programs and Budgets

5.05(a) To provide for development of production facilities and for production of Petroleum discovered including, if required, the drilling of further Development Wells, the Operator shall not later than 1st May in each Year submit to the Parties a review of each Development Work Program and Budget approved under section 5.04(c) or section 5.04(j) and, if necessary, an update of each such Development Work Program and Budget dealing separately with the next Year and the remaining phases of the approved Development Program.

5.04(b) The Operating Committee shall, not later than July 31 in each year, taking into consideration to the minimum work and expenditure conditions (if any) contained in the Mining Permit, if necessary, determine and approve the amendments to the Development Work Program and Budget for the next Year and remaining phases.

Section 9.01 Right and Obligation

Subject to Articles 6, 7 and 10 and to the provisions hereinafter contained:

(i) each of the Parties shall have the right to take in kind and separately dispose of its Percentage Interest in the total quantities of Joint Petroleum available under this Agreement, provided always that the Operator shall have the right

to use in any Joint Operations as much of the Joint Petroleum as may be reasonably required by it therefore; and the quantities to be so used shall be excluded from the estimates to be provided by the Operator; and

(ii) each of the Parties shall have the obligation to lift and separately dispose of all Joint Petroleum which it causes to be produced and stored in any jointly owned storage facilities at such times, in such quantities and in accordance with such procedures as may be agreed by all the Parties prior to the commencement of production.

Section 9.04 Natural Gas

The Parties recognise that, in the event of any discovery of Natural Gas, it may or will be or become desirable for them to enter into special arrangements for the disposal of the same and they agree that, in such event and upon the request of any of them, their respective representatives shall meet together as necessary to consider their entry into such arrangements and that, if and to the extent that any such arrangements are agreed, they will adopt and undertake the same.

B. JVOA 2

5.1. Establishment and Powers

There is hereby established an Operating Committee which shall exercise overall supervision and control of all matters pertaining to Joint Operations. Without limiting the generality of the foregoing, but subject as otherwise provided in this Agreement, the powers and duties of the Operating committee shall include:

(a) consideration and Determination of all matters relating to general policies, procedures and methods of operation hereunder;

(b) consideration, revision and approval or disapproval of all proposed Programs, Budgets and AFEs prepared and submitted to it pursuant to the provisions of this Agreement;

(c) Determination of the timing and location of all geophysical seismic programs and of all wells drilled and Testing Programs conducted as part of Joint Operations and any change in the use or status of a well;

(d) consideration and, if so required, the Determination of any other matter relating to Joint Operations which may be referred to it by the Parties or any of them (other than a dispute between the Parties or any of them, or any proposal to amend this Agreement) or which is otherwise designated under this Agreement for reference to it; and

(e) consideration and Determination of all matters relating to general policies, procedures and methods of operation hereunder including observance of the Safety Health and Environmental Protection Policy set out in Appendix F.

9.1. Annual Production Work Program/Budget

(a) Following the grant of a Mining Permit, the Operator shall, not later than 60 days prior to commencement of the following Financial Year, submit to the relevant Developing Parties a proposed Production Work Program and Budget for the following Financial Year which shall include:

(i) the facilities to be constructed and other work to be undertaken;

(ii) the information required under Clause 10; (*this deals with AFE requirements*)
(iii) an estimate of the date of commencement of production (if appropriate) and of the total production by month and maximum daily rate to be achieved in each month; and
(iv) estimated monthly cash call requirements.

(b) After such submittal an Operating Committee comprising representatives of the Developing Parties (in this Clause "Development Operating Committee") shall endeavour to Determine such Production Work Program and Budget, including any necessary or appropriate revisions to the Program and Budget within 30 days, and shall in any event Determine a Production Work Program and Budget prior to the commencement of teat Financial Year. Until a Production Program and Budget is approved, the Production Work Program and Budget proposed by the Operator, to the extent that it achieves the planned production profile in accordance with the relevant Development Work Program and Budget and is generally in accordance with good and prudent oil and gas field practice, shall be deemed to be approved.

14.2. Rights and Obligations

Subject to clause 13 and to the provisions hereinafter contained:

(a) Each of the Parties other than a Defaulting Party shall be entitled to separately take in kind and dispose of its Percentage Interest share of the total quantities of Joint Petroleum produced and made available under this Agreement, provided that the Operator shall have the right to use in any Joint Operations as much of the Joint Petroleum as may be reasonably required by it therefore; and the quantities to be so used shall be excluded from the estimates to be provided by the Operator. Except as otherwise provided in this Agreement a Party's right to take Joint Petroleum shall be in proportion to that Party's Percentage Interest.

(b) Each of the Parties shall have the obligation to separately lift and dispose of all Joint Petroleum which it causes to be produced at those times, in the quantities and in accordance with the procedures as may be agreed by all the Parties prior to the commencement of production but so that the rights of each of the Parties to separately lift and dispose of Joint Petroleum to which it is entitled shall not be prejudiced.

14.4. Natural Gas

The Parties recognise that, in the event of any discovery of natural gas, it may or will become desirable for them to enter into special interim arrangements for the disposal of the same and they agree that, in that event and upon the request of any of them, their respective representatives shall meet together as necessary to consider their entry into the interim arrangements and if agreed, they will adopt and undertake the same. Until the special interim arrangements are formalised the provisions of this Agreement shall apply mutatis mutandis to natural gas. For the avoidance of doubt, unanimous consent of all Parties is required for any arrangements for disposal of natural gas.

C. JVOA 3

5.2. Powers and Duties of Operating Committee

The Operating Committee shall have the power and duty to authorise and supervise Joint Operations that are necessary or desirable to fulfil the obligations arising under the Title and properly explore and exploit the Title Area in accordance with this Agreement and in a manner appropriate in the circumstances. The Operator shall perform only such duties and services as are provided in this Agreement or as directed by the Operating Committee.

6.3. Production

On or before the 1st day of June of each Calendar Year (midyear) beginning with the Calendar Year prior to that in which production commences, Operator shall submit to the Participants a preliminary proposal for a production Work Program and Budget detailing the Joint Operations to be performed under the Production Licence and the best estimates of the projected production schedule for the following Calendar Year. Within fifteen (15) days of receiving the preliminary proposal, the Operating Committee shall meet to review the progress of the current production Work Program and Budget and to provide review and advise on the preliminary proposal. On or before the 1st day of September of each Calendar Year Operator shall submit to the Participants a final proposed production Work Program and Budget detailing the Joint Operations to be performed under the Production Licence and the projected production schedule for the following Calendar Year. Within forty-five (45) Days of such delivery, the Operating Committee shall endeavour to agree upon a production Work Program and Budget.

(NB: Joint Operations are "those operations and activities carried out by Operator pursuant to this Agreement, the costs of which are chargeable to all Participants", Article 1.2)

9.1. Right and Obligation to Take in Kind

Except as otherwise provided in this Article and in Article VIII, each Participant shall have the right and obligation to own, take in kind at the loading flange of export vessel or any other point decided by the Operating Committee, and separately dispose of its Participating Interest share of total production available to the Participants pursuant to any Production Licence in such quantities and in accordance with such procedures as may be set forth in the offtake agreement referred to in Article 9.2 or in the special arrangements for natural gas referred to in Article 9.3.

9.3. Separate Agreement for Natural Gas

The Participants recognise that if natural gas is discovered it shall be necessary for the Participants to enter into special arrangements for the development, production and disposal of the natural gas, which are consistent with the Development Plan and subject to the terms of the Production Lease.

D. 2002 Association of International Petroleum Negotiators Model Form International Operating Agreement (AIPN Model Form)

5.2. Powers and Duties of Operating Committee

The Operating Committee shall have power and duty to authorise and supervise Joint Operations that are necessary or desirable to fulfil the Contract and properly explore and exploit the Contract Area in accordance with this Agreement and in a manner appropriate in the circumstances.

6.3. Production

On or before the Day of of each Calendar Year, Operator shall deliver to the Parties a proposed production Work Program and Budget detailing the Joint Operations to be performed in the Exploitation Area and the projected schedule for the following Calendar Year. Within ( ) Days of such delivery, the Operating Committee shall agree upon a production Work Program and Budget, failing which the provisions of Article 6.1(D) shall be applied mutatis mutandis.

9.1. Right and Obligation to Take in Kind

Except as otherwise provided in this Article 9 or in Article 8, each Party shall have the right and obligation to own, take in kind and separately dispose of its Entitlement.

9.3. Disposition of Natural Gas

[ ] *Alternative No 1 (from paragraph (A) to (B))*

(A) Natural Gas to be produced from an Exploitation Area shall be taken and disposed of in accordance with the rules and procedures set forth in this Article 9.3. The Parties recognise that, in the event of individual disposition of Natural Gas, imbalances may arise with the result being that a Party will temporarily have disposed of more than its Participating Interest share of production of Natural Gas. Accordingly, if Natural Gas is to be produced from an Exploitation Area, the Parties shall, in good faith and no later than the date on which the Development Plan for Natural Gas production is approved by the Operating Committee, negotiate and conclude the terms of a balancing agreement to cover the disposition of Natural Gas produced under the Contract regardless of whether all of the Parties have entered into a sales arrangement or sales contract for their respective Entitlement of Natural Gas. The Natural Gas balancing agreement shall, subject to the terms of the Contract, make provision for:

(1) the right of a Party not in default to take delivery of Natural Gas (and to thereby use all relevant facilities) in excess of its Participating Interest share of production, subject to the right of an under-taking Party to take later delivery of make-up Natural Gas; provided that, such make-up Natural Gas shall in no month exceed [ ] percent of total Natural Gas production produced monthly from the Exploitation Area, and further provided the such under-taking Party shall lose its right to such make-up Natural Gas if it has

not taken delivery of the make-up Natural Gas within [ ] [months/years] after the excess Natural Gas was originally taken.

Check if desired

[ ] OPTIONAL PROVISION

and further provided that in the event any Party takes delivery of Natural Gas in excess of its Participating Interest share of production, such overproduction shall in no month exceed [ ] percent of such Party's Participating Interest share of production;

(2) balancing of overproduction and underproduction on a gross calorific value basis, determined by comparison of the Natural Gas taken by a Party with that Party's Participating Interest share of production for the period of time;

(3) Natural Gas taken by a Party being regarded as Natural Gas taken and owned exclusively for its own account with title thereto being in such party, regardless of whether such Natural Gas is (i) attributable to such Party's Participating Interest share of production; (ii) taken as overproduction; or (iii) taken as make-up for past underproduction;

(4) unless otherwise agreed, no agency relationship or other relationship of trust and confidence being created between the Parties in regard to disposition of Natural Gas;

(5) unless otherwise agreed, the delivery point (at which title and risk of loss of Entitlements of Natural Gas shall pass to the Party taking delivery of such Natural Gas) being the point where fiscal calculations are made consistent with the Contract;

(6) each Party's provision to Operator of such information respecting such Party's arrangements for the disposition of its Entitlement of Natural Gas production as Operator may reasonably require in order to conduct Joint Operations in accordance with Article 4.2;

(7) each party's regular periodic nominations to Operator of the amount of such Party's Entitlement of total available Natural Gas production which it wishes to accept during a defined future period, along with Operator's regular periodic advice to the Parties of estimates of total Natural Gas production (as reasonably in advance as practicable in order to assist the Parties to plan Natural Gas disposition arrangements); provided, however, that the Parties recognise that Operator's estimates may vary from the actual Natural Gas volumes produced and that the Parties may rely upon any such information at their own risk; and

(8) the allocation of Cost Hydrocarbons and Profit Hydrocarbons in relation to such individual Natural Gas disposition.

If such balancing agreement has not been entered into by the date of first delivery of Natural Gas, the Parties shall nonetheless be bound by the principles set forth in this Article 9.3(A) until a Natural Gas balancing agreement has been entered into between the Parties in accordance with this Agreement.

(B) Unless prohibited by the Laws/Regulations, the Parties may, by unanimous execution of a multiparty Natural Gas disposition agreement, agree to dispose of Natural Gas produced under the Contract on a multiparty basis to a common purchaser or purchasers. The multiparty Natural Gas disposition agreement shall, subject to the Contract, make provision for:

(1) the terms of sale or disposition of Natural Gas on a multiparty basis;

(2) the Parties' rights and obligations with respect to the disposition of Natural Gas on a multiparty basis, including the extent to which Operator is designated as the Parties' authorised representative fort the purpose of conducting marketing studies, designing and constructing necessary facilities, investigating financing opportunities, and negotiating sales agreements;

(3) the managerial structure for making decisions governing the multiparty disposal venture;

(4) the scope and duration of the multiparty disposal venture;

(5) the extent, if any, to which the costs of the multiparty disposal venture are chargeable to the Joint Account;

(6) the obligation of the Parties to participate in all Natural Gas infrastructure necessary for such multiparty Natural Gas disposal, and the multiparty disposition venture governing only such Natural Gas infrastructure as is necessary to deliver Natural Gas to the point where fiscal calculations are made for the purposes of the Contract;

(7) the extent to which a Party shall have, or shall be permitted to hold itself out as having, the authority to create any obligation on behalf of the multiparty disposal venture;

(8) confirmation that the relationship among the Parties shall be contractual only and shall not be construed as creating a partnership or other recognised association;

(9) confirmation that formation of the multiparty disposal venture shall not create any rights in any persons not a party thereto; and

(10) the allocation of Cost Hydrocarbons and Profit Hydrocarbons in relation to the multiparty Natural Gas disposal.

[ ] *Alternative No 2*

The Parties recognise that if Natural Gas is discovered it may be necessary for the Parties to enter into special arrangements for the disposal of the Natural Gas, which are consistent with the Development Plan and subject to the terms of the Contract.

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