TECHNICAL IMPLEMENTATION OF BUSINESS PROCESS

The Producer Imbalance Statement is a report from the operator of a production facility to its working interest owners (producers) that indicates the difference between the current month **entitlement quantity** and the total **production deliveries**. The entitlement quantity, the production deliveries and the imbalance quantity are reported by **interest owner percentage**. The interest owner percentage can be any of the following:

- gross working interest;
- royalty interest;
- Proportionate Production Interest (PPI); or,
- net working interest.

The interest owner percentage can be any of the above for a given interest owner. When all interest owners' percentages are added together, the total must equal 100% of the total gross working interest for the **location**.

The entitlement quantity is calculated by multiplying total production delivery quantities times each producer's interest owner percentage for the subject well or lease facilities, which is the location. For purposes of this document, the location is synonymous with 'Facility Name' as it is used in COPAS Bulletin 24, 10/2000 (see the following COPAS / NAESB Cross Reference). The location should reflect the level of detail (well, lease, field, county, state, etc.) necessary to represent the level at which the data is being reported.

The **imbalance period** refers to a month and a year. **The beginning imbalance quantity** equals the previous month's **cumulative ending imbalance quantity**. The **imbalance quantity** is the imbalance for the current month for an **interest owner** for each **transportation service provider**. The **ending imbalance quantity** is calculated by adding the ~~prior month ending~~beginning imbalance quantity and the ~~**prior period adjustment** to the~~ current month imbalance quantity.

The **cumulative beginning imbalance quantity** is calculated by adding the beginning imbalance quantity for a specified interest owner for the current month. The **cumulative imbalance quantity** is calculated by adding the imbalance quantities for a specified interest owner for the current month. The **cumulative ending imbalance quantity** is calculated by adding the cumulative beginning imbalance quantity, the cumulative ~~ending~~ imbalance quantity~~ies~~ and the **cumulative prior period adjustment** for a specified interest owner.

The cumulative prior period adjustment is reported only on the current month report and should be supported by an accompanying revised statement that reflects the adjustment to~~for~~ the applicable prior imbalance period(s). (For example, if the current month being reported is April and prior period adjustments for January and February are included in April's cumulative prior period adjustment, April's report and revised January and February reports are required, but a revised March report is not required.) The default value for cumulative prior period adjustments is zero. ~~A prior period adjustment is reported only for the period(s) adjusted as reflected in the current period.~~

COPAS / NAESB Cross Reference

Sorted by COPAS Data Element Number (COPAS Bulletin 24 – October 2000)

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
HEADER INFORMATION								
1.	For the Month of	The production month that this report represents	R	Imbalance Period (Imb Per)	The period during which the imbalance occurred or the cumulative imbalance is reported.			
2.	Operator (preparer) Name	The name of the statement preparer and Operator of the facility covered by this report	R	Preparer Data Preparer ID * Preparer Name	The name of the business party preparing the report	M	M	
				Location Operator Data Location Operator* Location Operator Name	The party recognized as the operator of record for the location.	M	M	
3.	Facility Name	The name of the facility to which this report applies (When the facility is a well, the API well number should be used in this data element.)	R	Location Data Location Code * Location Name Location Proprietary Code	Unique identification of a point.	M	M	
4.	Facility Indicator	Whether the facility is a well, lease, gathering system, or gas plant	R	NONE	Data extractable from Location Data	N/A	N/A	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
5.	Reservoir Name	The name of the reservoir for which this statement applies (Required if the facility is a well)	C	NONE	Data extractable from Location Data	N/A	N/A	
6.	Location	The location of the facility (field, county and state)	R	NONE	Data extractable from Location Data	N/A	N/A	
7.	Date Prepared	The date this report was prepared	R	Statement Date/Time (Stmt D/T)	Date and time the statement was produced.	M	M	
8.	Name of Preparer	The name of the person preparing the report	R	Preparer Contact Name (Prep Contact)	The name of the contact person for questions regarding the statement information.	M	M	
9.	Phone Number	The phone number of the person preparing the report	R	Preparer Contact Phone Number (Prep Phone)	The phone number of the contact person for questions regarding the statement information.			
	NONE			Preparer Contact E-mail Address (Prep E-mail)	The e-mail address of the contact person for questions regarding the statement information.	SO	SO	
	NONE			Preparer Contact Fax Number (Prep Fax)	The fax number of the contact person for questions regarding the statement information.	SO	SO	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
10.	Balancing Units (MCF / MMBTU)	The measurement of the quantities reported on this statement	R	Unit of Measure (U/Meas)	Specifies the unit or basis for measurement for the corresponding measurement value.	M	M	[Code values = Gigacaloires, Gigaljoules, Kilopascal, MMBTU and Thousand Cubic Feet]
11.	Pressure Base	The pressure base of volumes reported on this report (Required if balancing units are MCF)	C	Reporting Pressure Base (Rpt Press Base)	Pressure base used in reporting volume in MCFs.	C	C	Mandatory when Unit of Measure for associated quantity is 'Thousand Cubic Feet'.
12.	Wet/Dry Basis	The BTU test basis used to determine the MMBTUs recorded on this report (Wet refers to tests taken and results stated on a fully saturated with water basis. Required if the balancing units are MMBTU)	C	NONE ~~Wet/Dry Basis (Wet/Dry)~~	~~BTU test basis used to determine MMBTUs reported~~ NAESB WGQ Standard 2.4.3 requires all NAESB reports to be reported on a dry basis..	~~C~~N/A	~~C~~N/A	~~Mandatory when Unit of Measure for associated quantity is 'Million BTUs'.~~ ~~{Code values = Wet, Dry}~~
	NONE			Statement Recipient Data Statement Recipient ID * Statement Recipient Name	The intended user of the statement.	M	M	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
SUMMARY VOLUME IMBALANCE INFORMATION								
13.	Transporter	The name of the transporter that is transporting or purchasing the gas	R	Transportation Service Provider Data Transportation Service Provider * Transportation Service Provider Proprietary Name	A code which uniquely identifies the transportation service provider.	M	M	
14.	Operator/Owner	The name of the taking owner for well and lease reports (The name of either the lease Operator or the taking owner for gathering system or gas plant reports. Owner would also include royalty taking in-kind.)	R	Interest Owner Data Interest Owner * Interest Owner Name Interest Owner Proprietary Code	The entity with ownership interest in the gas.	M	M	At least one of Interest Owner or Interest Owner Proprietary Code is mandatory.
15.	W. I. %	The working, royalty, or PPI of the taking owner or Operator previously listed in #14 (This percentage would be net of royalty taken in-kind.)	R	Interest Owner Percentage (Int Own Pct)	Percentage of the gas owned by the Interest Owner dedicated to a specified Transportation Service Provider.	M	M	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
16.	Current Month Entitlement	The quantity of gas each Operator/taking owner is entitled to take and its working, royalty, or PPI share of actual gas available for delivery. (This quantity is calculated by multiplying total production delivery quantities (#22) times each taking owner's working, royalty, or PPI (#15) for well or lease facilities. If the Operator/Owner (#14) is delivering to more than one transporter (#13), the total entitlement described herein must be split between the applicable transporters based on contract dedication percentages or some other method in order that the total entitlement listed for the taking owner equals its working, royalty, or PPI percent (#15) times the total delivery quantities (#22) for well or lease facilities.	R	Entitlement Quantity (Ent Qty)	Quantity of gas each interest owner is entitled to take of the Grand Total – All Transportation Service Providers for a given Transportation Service Provider.	M	M	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
17.	Production Delivery	The quantity of gas delivered to the transporter or used off-lease for the account of each Operator or taking owner based on the facility Operator's or transporter's allocation statement	R	Production Delivery (Prod Del)	Quantity of gas delivered to a location for the account of each Interest Owner based on the Location Operator's allocation statement.	M	M	
18.	Est./Act.	An indication of whether the production deliveries reported in item #17 are estimates or actual quantities	R	Statement Basis Data Statement Basis Statement Basis Code Name	Code used to identify statement quantities as estimate, actual or revision. Default value is actual.	C	M	For EBB, at least one of Statement Basis or Statement Basis Code Name is required. [Code Values = Estimated, Actual, Revision]
19.	Current Month Imbalance	The current month imbalance, which is the difference between current month entitlement (#16) and production delivery (#17)	R	Imbalance Quantity (Imb Qty)	Imbalance quantity for the current period.	M	M	
20.	Cumulative Imbalance	The cumulative imbalance calculated by adding the prior month cumulative imbalance to the current month imbalance (#19)	R	Ending Imbalance Quantity (End Imb Qty)	The imbalance quantity at the end of the period for an interest owner delivered to a Transportation Service Provider.	M	M	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
21.	Total All Deliveries	The total of all quantities delivered to the transporter or used off-lease from the facility (Required if a manual report)	C	Total Production Deliveries (Tot Prod Del)	The total of all production deliveries made to a specified Transportation Service Provider from a given location.	M	M	
22.	Grand Total All Transporters	The total of all quantities delivered to all transporters or used off-lease from the facility (Required if a manual report)	C	Grand Total Production Deliveries (Grnd Tot Prod Del)	The total of all production deliveries made to all Transportation Service Providers from a given location.	M	M	
OWNER IMBALANCE SUMMARY:		This information is needed to aggregate imbalance status by Operator/taking owner when he utilizes more than one transporter.						
	NONE			Beginning Imbalance Quantity (Beg Imb Qty)	The imbalance quantity at the beginning of the period for an interest owner delivered to a Transportation Service Provider.	M	M	

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
23.	Prior Cumulative	The quantity of cumulative imbalance from the previous month's report (Required if a manual report)	C	Cumulative Beginning Imbalance Quantity (Cum Beg Imb Qty)	The sum of the Beginning Imbalance Quantity for an interest owner delivered to all Transportation Service Providers.	M	M	
24.	Current Month	The total of all current month imbalance quantities for each owner/Operator (Not required if there is only one transporter.)	C	Cumulative Imbalance Quantity (Cum Imb Qty)	The sum of the Imbalance Quantity for the current period for an interest owner delivered to all Transportation Service Providers..	M	M	
25.	Prior Period Adjustments	Adjustments included in the cumulative imbalance quantities in this report (Required when cumulative imbalance from previous report plus current month imbalance does not equal cumulative imbalance on this report. Each prior period adjustment should be supported by an accompanying **revised** statement for the applicable period.)	C	Cumulative Prior Period Adjustment (Cum Prior Per Adj)	Adjustment(s) included in the Cumulative Ending Imbalance Quantity in this report.	M	M	Default value is zero.

COPAS Data Elements				NAESB Data Elements				
Data Elem. No.	**Business Name**	**Definition**	**Usage**	**Business Name**	**Definition**	**EBB Usage**	**EDI Usage**	**Condition**
26.	Cumulative	The sum of all cumulative imbalance quantities for each owner/Operator (Not required if there is only one transporter.)	C	Cumulative Ending Imbalance Quantity (Cum End Imb Qty)	The sum of the ~~Ending~~ Cumulative Beginning Imbalance Quantity, the Cumulative Imbalance Quantity and the Cumulative Prior Period Adjustment Quantity for an interest owner delivered to all Transportation Service Providers.	M	M	
NOTES:		Negative indicates that the imbalance is due (owed) to the Operator/producer.						

* Indicates Common Code

COPAS Usages:

C = Conditional

R = Required

NAESB Usages:

BC = Business conditional - the data element is based on current variations in business practice. The business practice will be described herein, with an example. Over time, GISB expects that as business practices are standardized, elements will move out of this category. Business Conditional elements which are not supported/required by the receiver will be acknowledged in the response document with a warning message code indicating that the data elements was ignored by the receiver.

C = Conditional - the presence of data in a field is determined by the presence or lack of data in another field within the transmittal or related data sets.

M = Mandatory - the data element (information) must be supplied in the transaction.

MA = Mutually agreeable - the data element is mutually agreed to between trading partners. It must be presented to GISB for technical implementation. It does not, by its definition, create a GISB standard business practice. Usage of this element in no way can be mandated for inclusion by either trading partner in order to achieve a level of service.

SO = Sender's option - this element is optional for the sender to send and, if sent, the receiver should receive and process.

SAMPLE PAPER TRANSACTION

See following:

PRODUCER/PRODUCER GAS IMBALANCE STATEMENT
FOR THE MONTH OF: April 2000
Statement Recipient: Producer B

Preparer Name:	Producer A	Preparer Contact Name:	Jane Doe
Location Code :	XYZ	Preparer Contact Phone Number:	(713) xxx-xxxx
Location Name:	Platform A	Unit of Measure	MMBTU
Location Operator	Operator A	Reporting Pressure Base:	14.73
Statement Date/Time:	June 15, 2000	Wet/Dry Basis:	Dry

(13) TSP	(14) Interest Owner	(15) Interest Owner %	Beg. Imbal Quantity	(16) Entitlement Quantity	(17) Production Delivery	(18) Statement Basis	(19) Imbalance Quantity	(20) Ending Imbalance Quantity
Pipeline A	Producer A	.4167	72,497	145,845	203,315	Act.	57,470	129,967
	Producer B	.3125	(109,371)	109,375	0	Act.	(109,375)	(218,746)
	Producer C	.1041	36,874	36,435	73,315	Act.	36,880	73,754
	MMS RIK	.1667	0	58,345	73,370	Act.	15,025	15,025
Total Pipeline A		1.0000	0	350,000	350,000 (21)		0	0
Pipeline Z	Producer A	.4167	0	42	80	Act.	38	38
	Producer B	.3125	0	31	0	Act.	(31)	(31)
	Producer C	.1041	(500)	10	20	Act.	10	(490)
	MMS RIK	.1667	500	17	0	Act.	(17)	483
Total Pipeline Z		1.0000	0	100	100 (21)		0	0
Grand Total All TSPs			0	350,100	350,100 (22)		0	0

Interest Owner Imbalance Summary

(14) Interest Owner	(23) Cum Beg. Imbal. Quantity	(24) Cum Imbalance Quantity	(25) Cum Prior Period Adjustment	(26) Cum Ending Imbal. Quantity
Producer A	72,497	57,508	10	130,015
Producer B	(109,371)	(109,406)	(5)	(218,782)
Producer C	36,374	36,890	(10)	73,754
MMS RIK	500	15,008	5	15,013
Grand Total	0	0	0	0

Note: Negative indicates that the imbalance is due (owed) to the Interest Owner.

DATA DICTIONARY

Standard 2.4.z

Level	Business Name (Abbreviation)	Definition	EBB Usage	EDI/FF Usage	Condition
Sdtl	Beginning Imbalance Quantity (Beg Imb Qty)	The imbalance quantity at the beginning of the period for an interest owner delivered to a Transportation Service Provider.	M	M	
Dtl	Cumulative Beginning Imbalance Quantity (Cum Beg Imb Qty)	The sum of the Beginning Imbalance Quantity for an interest owner delivered to all Transportation Service Providers.	M	M	
Dtl	Cumulative Ending Imbalance Quantity (Cum End Imb Qty)	The sum of the ~~Ending~~ Cumulative Beginning Imbalance ~~Quantity~~ Quantity, the Cumulative Imbalance Quantity and the Cumulative Prior Period Adjustment Quantity for an interest owner delivered to all Transportation Service Providers.	M	M	
Dtl	Cumulative Imbalance Quantity (Cum Imb Qty)	The sum of the Imbalance Quantity for the current period for an interest owner delivered to all Transportation Service Providers..	M	M	

Level	Business Name (Abbreviation)	Definition	EBB Usage	EDI/FF Usage	Condition
Dtl	Cumulative Prior Period Adjustment (Cum Prior Per Adj)	Adjustment(s) included in the Cumulative Ending Imbalance Quantity in this report.	M	M	Default value is zero.
Sdtl	Ending Imbalance Quantity (End Imb Qty)	The imbalance quantity at the end of the period for an interest owner delivered to a Transportation Service Provider.	M	M	
Sdtl	Entitlement Quantity (Ent Qty)	Quantity of gas each interest owner is entitled to take of the Grand Total – All Transportation Service Providers for a given Transportation Service Provider.	M	M	
Hdr	Grand Total Production Delivieries (Grnd Tot Prod Del)	The total of all production deliveries made to all Transportation Service Providers from a given location.	M	M	
Hdr	Imbalance Period (Imb Per)	The period during which the imbalance occurred or the cumulative imbalance is reported.	M	M	
Sdtl	Imbalance Quantity (Imb Qty)	Imbalance quantity for the current period.	M	M	
Sdtl	Interest Owner Data	The entity with ownership interest in the gas.			
Sdtl	Interest Owner * [4] (Int Own)		C	C	At least one of Interest Owner or Interest Owner Proprietary Code is mandatory.

Level	Business Name (Abbreviation)	Definition	EBB Usage	EDI/FF Usage	Condition
Sdtl	Interest Owner Name (Int Own Name)		M	nu	
Sdtl	Interest Owner Proprietary Code (Int Own Prop)		C	C	At least one of Interest Owner or Interest Owner Proprietary Code is mandatory.
Sdtl	Interest Owner Percentage (Int Own Pct)	Percentage of the gas owned by the Interest Owner dedicated to a specified Transportation Service Provider.	M	M	
Hdr	Location Data	Unique identification of a point.			
Hdr	Location Code * (Loc)		M	M	
Hdr	Location Name (Loc Name)		M	nu	
Hdr	Location Proprietary Code (Loc Prop)		C	C	Mandatory when Location Code is not present. .
Hdr	Location Operator Data	The party recognized as the operator of record for the location.			
Hdr	Location Operator * [4] (Loc Oper)		M	M	
Hdr	Location Operator Name (Loc Oper Name)		M	nu	
Hdr	Preparer Contact E-mail Address (Prep E-mail)	The e-mail address of the contact person for questions regarding the statement information.	SO	SO	
Hdr	Preparer Contact Fax Number (Prep Fax)	The fax number of the contact person for questions regarding the statement information.	SO	SO	

Level	Business Name (Abbreviation)	Definition	EBB Usage	EDI/FF Usage	Condition
Hdr	Preparer Contact Name (Prep Contact)	The name of the contact person for questions regarding the statement information.	M	M	
Hdr	Preparer Contact Phone Number (Prep Phone)	The phone number of the contact person for questions regarding the statement information.	M	M	
Hdr	Preparer Data	The name of the business party preparing the report			
Hdr	Preparer ID * [4]		M	M	
Hdr	Preparer Name		M	nu	
~~Sdtl~~	~~Prior Period Adjustment (Prior Per Adj)~~	~~Adjustment included in Ending Imbalance Quantity in this report.~~	~~M~~	~~M~~	~~Default value is zero.~~
Sdtl	Production Delivery (Prod Del)	Quantity of gas delivered to a location for the account of each Interest Owner based on the Location Operator's allocation statement.	M	M	
Hdr	Reporting Pressure Base (Rpt Press Base)	Pressure base used in reporting volume in MCFs.	C	C	Mandatory when Unit of Measure for associated quantity is 'Thousand Cubic Feet'.
Dtl	Statement Basis Data	Code used to identify statement quantities as estimate, actual or revision. Default value is actual.			
Dtl	Statement Basis (Stmt Basis)		C	M	For EBB, at least one of Statement Basis or Statement Basis Code Name is required.
Dtl	Statement Basis Code Name (Stmt Basis Name)		C	nu	For EBB, at least one of Statement Basis or Statement Basis Code Name is required.

Level	Business Name (Abbreviation)	Definition	EBB Usage	EDI/FF Usage	Condition
Hdr	Statement Date/Time (Stmt D/T)	Date and time the statement was produced.	M	M	
Hdr	Statement Recipient Data	The intended user of the statement.			
Hdr	Statement Recipient ID * [4] (Recipient)		M	M	
Hdr	Statement Recipient Name (Recipient Name)		M	nu	
Dtl	Total Production Deliveries (Tot Prod Del)	The total of all production deliveries made to a specified Transportation Service Provider from a given location.	M	M	
Dtl	Transportation Service Provider Data	A code which uniquely identifies the transportation service provider.			
Dtl	Transportation Service Provider * [4] (TSP)		M	M	
Dtl	Transportation Service Provider Name (TSP Name)		M	nu	
Hdr	Unit of Measure (U/Meas)	Specifies the unit or basis for measurement for the corresponding measurement value.	M	M	
~~Hdr~~	~~Wet/Dry Basis (Wet/Dry)~~	~~BTU test basis used to determine MMBTUs reported.~~	~~C~~	~~C~~	~~Mandatory when Unit of Measure for associated quantity is 'Million BTUs'.~~

RELEVANT FOOTNOTES
* Indicates Common Code

[4] Refer to NAESB Standard No. [S4 – from R97058B]

CODE VALUES DICTIONARY

Statement Basis

Code Value Description	Code Value Definition	Code Value
Actual	Quantity based upon the best available data.	A
Estimate	Quantity based upon the best available data, which is recognized as preliminary.	E
Revision	Change to a quantity based upon a prior period adjustment.	R

Unit of Measure

Code Value Description	Code Value Definition	Code Value
Gigacalories	[no definition necessary]	
Gigajoules	[no definition necessary]	
Kilopascal	[no definition necessary]	
MMBTU	[no definition necessary]	
Thousand Cubic Feet	[no definition necessary]	

~~Wet/Dry Basis~~

~~Code Value Description~~	~~Code Value Definition~~	~~Code Value~~
~~Dry~~	~~[no definition necessary]~~	
~~Wet~~	~~[no definition necessary]~~	

BUSINESS PROCESS AND PRACTICES

A. Overview

Pre-Determined Allocation (PDA)

Actual flow of natural gas is allocated to the parties involved in the transaction. These parties can include producers, operators, transporters and shippers using various methodologies to allocate actual quantities. In order to manage the impact of actual quantities varying from scheduled quantities, the specification of the method to be used in allocating actual quantities prior to gas flow is imperative. PDA's accomplish this goal by securing the agreement of the allocating--and allocated--parties on the method to be used for computing the allocation, i.e. relating scheduled quantities to actual physical flow. The implementation of a PDA clarifies all parties' expectations and responsibilities prior to gas flow.

Allocation

The allocation data set will communicate the result of the allocation process at a point. Actual measured quantities are distributed to scheduled transactions at a location. The allocation process takes into account the actual measured quantities, the scheduled quantities and the predetermined allocation method in effect for the allocation period. Quantities are allocated on either a daily or monthly basis.

There are two basic types of allocation -- Single Level or Multiple Level. The Single Level allocation type indicates the location operator will allocate to the service requester level in one step. The Multiple Level allocation type indicates that allocations are performed at multiple levels in a hierarchical manner with parties specifying the allocation method for their purchasers or contracts. There is currently no established GISB standard concerning whether allocations are performed at a single level or multiple levels. Therefore, the allocation data set has been defined in such a way to accommodate either type of allocation. Accommodating both types requires varied usage of data elements dependent on the information being communicated. Information is always shared with the interconnecting operator of a location and limited information may be shared with other business parties (or their designated agents) who at some level may have ownership of gas quantities at the location. The interconnecting operator receives allocated information for the total quantity at the location. Other parties receive information that directly applies to their business transactions. The level of allocation is specified in the data set.

The Multiple Level allocation type is further complicated by the title tracking issue. There is currently no established GISB standard concerning title tracking. This data set should accommodate allocating parties that perform title tracking. The usage of the data elements does not fundamentally change in title tracking. However in title tracking, the terms upstream and downstream refer to the immediate supplier or receiving party relative to the service requester as opposed to the party taking or relinquishing custody at a physical location. Example: In title tracking at a receipt point, the service requester would only know the identity of their direct suppliers and markets and would provide this

information on the nomination. The upstream party may not have ownership of gas upstream of the meter. If this is the case, the upstream party would also be providing a nomination to the allocating party identifying their direct supplier. All parties involved in a marketing chain would nominate and the service provider would ultimately be able to identify the true upstream party that has ownership on the upstream facility. An “Operator” allocation statement would identify the upstream party with ownership on the upstream facility. A “Marketer” allocation statement would identify the direct supplier to the recipient of the allocation statement.

The Allocation data set uses information from the nomination, confirmation, pre-determined allocation method and measurement processes. Information contained in the allocation data set will impact the imbalance and invoice processes.

Shipper Imbalance

Natural gas flows from source points to disposition points in accordance with the scheduled nominations made by various parties. The actual flow of gas is then allocated among the various parties to transactions, in accordance with pre-determined allocation methodologies. A shipper nominates a quantity of gas at a receipt point and contracts with a pipeline to transport this quantity of gas to a delivery point. However, allocated quantities at the receipt point and delivery point may not be the same. For example, with reductions for fuel quantities, over-delivery by the transportation service provider at the delivery point, or under delivery by the transportation requester at the receipt point, the quantities at the receipt point and delivery point may not be the same. The resulting difference is referred to as an imbalance.

Imbalances are reported by the allocating party to the affected parties involved in the transportation transaction. Imbalances may be reported on a daily or monthly basis. Imbalances may be resolved in a number of different ways.

The nomination starts the procedure, after which the allocation takes place. Gas is allocated at a location level and a contract level. The imbalance data set provides contract allocation information. The imbalance can be calculated using this information. This information can be a daily or a multi-day function, or it can be final closing data for an accounting period. The monthly imbalance should be monitored throughout the month, so the imbalance may be minimized.

Imbalance Netting and Trading

Shippers must authorize the transportation service provider to post their imbalances via the Authorization to Post Imbalances before such time as they may be included on the Posted Imbalances Download. Shippers and other interested parties request the Posted Imbalances Download using the Upload of Request for Download of Posted Datasets (GISB Standard 5.4.14).

Once trading parties have arranged a potential trade, the initiating trader provides the specifics of the trade via the Request for Imbalance Trade for both the initiating trader and the party with whom they are proposing to trade, the confirming trader. This Request for Imbalance Trade is sent by the initiating trader to the transportation service provider for this purpose. The transportation

service provider will inform the initiating trader of the receipt of their request and of any errors using the Request for Imbalance Trade Quick Response.

The transportation service provider may choose to request a confirmation from the confirming trader through the use of the Request for Confirmation of Imbalance Trade.

The Imbalance Trade Confirmation is sent by the confirming trader to the transportation service provider to indicate whether the imbalance trade has been accepted or rejected. Without a successful confirmation prior to the close of the transportation service provider's imbalance trading period, the trade will not take place.

Upon successful confirmation of a requested trade, the transportation service provider will notify the initiating trader and the confirming trader of the status of the trade using the Imbalance Trade Notification. The parties cannot consider their trade confirmed and/or approved until such time as they receive the Imbalance Trade Notification. The Imbalance Trade Notification will inform the parties of any reductions through the use of the reduction reason codes.

Measurement

The Measurement Information data set and the Measured Volume Audit Statement data set are both used to report gas measurement information in support of the allocation, imbalance and invoice processes. The Measured Volume Audit Statement also contains gas component data which is used for calculation and audit purposes.

Producer Imbalance

The Producer Imbalance Statement data set is used to report the entitlement, the production deliveries and the current month / ending imbalance quantities for interest owners at a location. Interest owner(s)'s entitlement percentage is used to determine its proportionate share, known as the entitlement quantity, of the total production deliveries. This entitlement quantity is compared to the actual production deliveries allocated to each interest owner. The difference is the current month imbalance. This information is used by the interest owners and the operator of the location for balancing / settlement purposes.

EXECUTIVE SUMMARY

~~Six~~ Seven areas of the natural gas business processes are classified within the Flowing Gas area. The ~~six~~ seven areas include:

1. **Pre-determined Allocation**
   The communications concerning an agreement on the factors that should be used to drive the determination of entitlement rights of flowing gas at a location,
2. **Allocation**
   The communications of the entitlement rights of flowing gas at a location,
3. **Shipper Imbalance**
   The communications of entitlement rights of flowing gas on a contract level,
4. **Imbalance Netting & Trading**
   The communications and management of Imbalance Trading,
5. **Measurement Information**
   The communications of the estimated or actual physical flow of gas at a location, ~~and~~
6. **Measured Volume Audit Statement**
   The communication of the estimated or actual physical flow of gas at a location along with gas quality information~~.~~, and
7. **Producer Imbalance Statement**
   The communication of the actual production deliveries versus the entitlement rights of interest owners at a production location.

To clarify the expectations and responsibilities of all parties prior to gas flow, pre-determined allocation data is exchanged via the Pre-determined Allocation (PDA) data set. The PDA allows parties to manage the impact of variances between the actual quantities flowing and scheduled quantities. Before the flow of gas across a location, the PDA secures the agreement between the allocating party and the allocated parties as to the method to be used for computing the allocations of relating scheduling quantities to actual physical flow.

Many different parties can be involved with the movement of natural gas across a particular location. The determination of the entitlement rights for each particular party of the actual flowing gas moving across the location is accomplished by allocating the actual flow among the parties. Allocations are performed by the operator of the affected location, using the pre-determined allocation methodology agreed to by the parties involved. The Allocation is used to communicate the allocation information to the parties involved.

Allocation information at a contract level is presented in the Shipper Imbalance. This information can be used by the shippers to manage their transactions and determine if the actual or estimated gas flows are in balance.

The Posted Imbalances Download allows shippers and other interested parties to obtain a listing from the transportation service provider of all the imbalances for parties who have authorized their posting via the Authorization to Post Imbalances. With this information, shippers and other interested parties may trade imbalances with each other. Parties trading imbalances communicate their transactions to the transportation service provider utilizing the Request for Imbalance Trade, Imbalance Trade Confirmation, and Withdrawal of Request for Imbalance Trade. The transportation service provider communicates with the trading parties using the Request for Imbalance Trade Quick Response, Request for Confirmation of Imbalance Trade, and Imbalance Trade Notification.

The Measurement Information data set contains a subset of the information that has traditionally been considered a measurement statement. The data set is designed to provide information on

the actual or estimated physical flow moving across a location. It can be used to support other flowing gas or invoicing data sets. It does not include data utilized to verify the calculation of the measured flow.

Like the Measurement Information data set, the Measured Volume Audit Statement also contains the actual or estimated physical flow. In addition, it is used to convey information on the various components of the gas which can be utilized for audit purposes.

The Producer Imbalance Statement data set contains information at a location informing the interest owners of their entitlement, deliveries and the resulting imbalance.