

ARROWHEAD EAGLE FORD PIPELINE, LLC
AND
ARROWHEAD GATHERING COMPANY, LLC
ARROWHEAD TEXAS JOINT TARIFF SYSTEM

**RULES AND REGULATIONS
AND LOCAL RATE TARIFF
GOVERNING THE INTRASTATE TRANSPORTATION OF
CRUDE PETROLEUM BY PIPELINE**

This joint tariff is governed by Arrowhead Eagle Ford Pipeline, LLC's Texas R.R.C. No. 1.1, the Rules and Regulations governing intrastate transportation of crude oil by pipeline on the Gardendale Pipeline Crude Oil System of Arrowhead Eagle Ford Pipeline, LLC, supplements and successive issues thereof ("Gardendale Rules and Regulations Tariff"), as amended herein. All tariffs subject to the Rules and Regulations in this tariff ("Subject Tariffs") are for the intrastate transportation of crude petroleum by pipeline. If any language herein modifies or conflicts with general language on the same subject matter in the Gardendale Rules and Regulations Tariff, the specific language in this tariff will control (collectively, the "Arrowhead Joint Tariff System Rules and Regulations").

The Arrowhead Joint Tariff System Rules and Regulations published herein apply only under Subject Tariffs making specific reference by number to this tariff; such reference shall include supplements hereto and successive issues hereof. The rates and terms in Subject Tariffs are applicable only on intrastate shipments that involve movements, named therein, on both the Gardendale Pipeline Crude Oil System of Arrowhead Eagle Ford Pipeline, LLC and the Three Rivers Crude Oil System of Arrowhead Gathering Company, LLC. If any language in a Subject Tariff modifies or conflicts with the general language on the same subject in the Arrowhead Joint Tariff System Rules and Regulations herein, the specific language in the Subject Tariff will control (unless exceptions are noted therein).

EFFECTIVE: December 28, 2012

Rules and Regulations: Arrowhead Joint Tariff System

**TEXAS R.R.C. No. 1.1
(Cancels Texas R.R.C. No. 1.0)**

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The following definitions are added:

“Gravity Bank Operators” means Pipeline Operator and Three Rivers System Operator, together, for purposes of the Shared Gravity Bank only.

“Joint Tariff System Common Stream” means all Crude Petroleum received into and moved through the Joint Tariff System, and shall include all Crude Petroleum delivered to and moved through the Joint Tariff System that is commingled or intermixed with other Crude Petroleum received into the Shared System. The characteristics and composition of Pipeline Operator’s Joint Tariff System Common Stream shall be determined by the Gravity Bank Operators on a monthly basis and in accordance with Rules 20 and 27.

“Joint Tariff System” means all facilities necessary for the movement of Crude Petroleum under the local tariff from the receipt points to the delivery points available thereunder.

“Shared Common Stream” means the sum of all Crude Petroleum received into either the Joint Tariff System Common Stream or the Three Rivers System Common Stream at receipt points on the Shared System upstream of the Three Rivers Measurement Station, and has no meaning other than for purposes of the Shared Gravity Bank in Rule 20.

“Shared Gravity Bank” means the gravity bank in Rule 20 of these Rules and Regulations that is operated by the Gravity Bank Operators for the benefit of the Shippers tendering into the Shared Common Stream.

“Shared System” means the Joint Tariff System upstream of the Three Rivers Measurement Station and the Three Rivers System, together, solely for purposes of the Shared Gravity Bank.

“Three Rivers Measurement Station” means the metering, gravity measurement and other equipment at a specified point on the Joint Tariff System that shall be no more than 5 miles from the last delivery point on the System.

“Three Rivers System Common Stream” means the common stream as defined in the Three Rivers Pipeline Crude Oil System Rules and Regulations, Texas R.R.C. No. 7.1, and supplements and successive issues thereof, and shall include all Crude Petroleum delivered to and moved through the Three Rivers System that is commingled or intermixed with other Crude Petroleum received into the Shared System.

“Three Rivers System Operator” means Arrowhead Gathering Company, LLC

“Three Rivers System” means the Three Rivers Pipeline Crude Oil System in Texas R.R.C. No. 7.1, and supplements and successive issues thereof.

The following is an exception to, and replaces, Rule 20, in Texas R.R.C. No. 1.1,

supplements thereto and successive issues thereof. The additional paragraphs below will apply to this tariff:

20. COMMON STREAM CONTAMINATION RULE 1 ABOVE IS SUPPLEMENTED AS FOLLOWS:

Notwithstanding anything to the contrary in Items 1, 2 or 27, if Crude Petroleum is tendered that is materially different in character or quality from that usually produced in the field(s) served by a pipeline under a given Local Tariff, Pipeline Operator, in its sole discretion, may reject such tender to prevent contamination and to protect the integrity of the Shared Common Stream.

To address certain anticipated Gravity differences within the Shared Common Stream, Gravity Bank Operators have jointly established, and shall maintain, the Shared Gravity Bank to calculate, collect, and remit monetary adjustments among all Shippers tendering within the Shared Common Stream. Each Shipper will be required, as a condition to shipping Crude Petroleum on the Shared System, to deliver all Crude Petroleum into the Shared Common Stream and participate in the Shared Gravity Bank, which will be administered by Gravity Bank Operators on a monthly basis in accordance with the following provisions:

- A. Shared Gravity Bank. The purpose of the Shared Gravity Bank is to mitigate, to the fullest extent possible, damage or improvement to Shippers whose Crude Petroleum is commingled in the Shared Common Stream. Differences in Gravity of all of the Shippers' Crude Petroleum streams that are mixed within the Shared Common Stream either increase or decrease the quality of the Shared Common Stream, and deliveries of Crude Petroleum may have gravities that differ from the Gravity of the Shared Common Stream. Pursuant to the Shared Gravity Bank, Gravity Bank Operators will either charge a Shipper or pay a Shipper depending upon the relationship between the Gravity of the Shared Common Stream and the weighted average Gravity of a Shipper's deliveries of Crude Petroleum into the Shared Common Stream and the weighted average Gravity of such Shipper's receipts of Crude Petroleum from the Shared Common Stream. The amounts payable by all Shippers to Gravity Bank Operators pursuant to the Shared Gravity Bank will equal the amounts owed by Gravity Bank Operators to all Shippers pursuant to the Shared Gravity Bank. The operation of the Shared Gravity Bank requires Gravity Bank Operators to share information in order to calculate the weighted average Gravity value for each month as required by the Receipt Bank (below), and to calculate the weighted average Gravity value of Crude Petroleum for each month as required by the Delivery Bank (below); therefore, as a condition of shipment of Crude Petroleum in the Shared Common Stream, each Shipper agrees to waive any rights to confidentiality related to the information that must be shared between the Gravity Bank Operators to calculate the weighted average Gravity values for the Receipt Bank and the Delivery Bank for each month, solely for this purpose. All Shippers tendering into the Shared

Common Stream will be bound by the Shared Gravity Bank under these Rules and Regulations, and Rule 20 of the Three Rivers Pipeline Crude Oil System Rules and

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Regulations, Texas R.R.C. No. 7.1, and supplements and successive issues thereof, to ensure the proper operation of this Shared Gravity Bank. Each Shipper, by its tender of Crude Petroleum into the Shared Common Stream, accepts and agrees to all of the terms, conditions and consequences contained in this Rule 20. Pipeline Operator shall ensure that this Shared Gravity Bank is applied to the Joint Tariff System upstream of the Three Rivers Measurement Station. For the purposes of the Shared Gravity Bank measurements made for the delivery bank for the Joint Tariff System shall be made at the Three Rivers Measurement Station.

B. Receipt Bank.

- i. If the weighted average Gravity value of Crude Petroleum delivered by any Shipper into the Shared Common Stream differs from the weighted average Gravity value of the Shared Common Stream for such month, then such Shipper will be debited or credited by an amount determined from the following formula:

$$SA_R = SQ_R * (GV_{CSR} - SGV_R)$$

where:

SA_R = Shipper adjustment (expressed in dollars) with respect to Crude Petroleum received from the Shipper; positive amounts will be debited and negative amounts will be credited.

SQ_R = Quantity of Crude Petroleum delivered by the Shipper into the Shared Common Stream during that month (expressed in barrels).

GV_{CSR} = The Gravity Value per barrel of all Crude Petroleum delivered into the Shared Common Stream (expressed in dollars per barrel), which is equal to the weighted average of the Gravity Values of all Shippers in the Shared Common Stream.

SGV_R = The Gravity Value per barrel of the Crude Petroleum delivered by the Shipper into the Shared Common Stream (expressed in dollars per barrel), as determined from Schedule 1.

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- ii. The sum of debits and credits to all Shippers under this Paragraph B for all Crude Petroleum received by Gravity Bank Operators into the Shared Common Stream is zero.

C. Delivery Bank.

- i. If the weighted average Gravity value of Crude Petroleum measured at the Three Rivers Measurement Station for the account of any Shipper from the Shared Common Stream differs from the weighted average Gravity value of the Shared Common Stream for such month, then such Shipper will be debited or credited by an amount determined from the following formula:

$$SA_D = SQ_D * (GV_{CSD} - SGV_D)$$

where:

SA_D = Shipper adjustment (expressed in dollars) with respect to Crude Petroleum measured at the Three Rivers Measurement Station for the account of Shipper; positive amounts will be credited and negative amounts will be debited.

SQ_D = Quantity of Crude Petroleum measured at the Three Rivers Measurement Station for the account of Shipper from the Shared Common Stream during that month (expressed in barrels).

GV_{CSD} = The Gravity Value per barrel of Crude Petroleum in the Shared Common Stream delivered from the Shared Common Stream (expressed in dollars per barrel), which is equal to the weighted average of the Gravity Values of Crude Petroleum delivered, or as applicable measured, for the account of all Shippers on the Shared System out of the Shared Common Stream.

SGV_D = The Gravity Value per barrel of the Crude Petroleum in the Shared Common Stream for the Shipper's account measured at the Three Rivers Measurement Station (expressed in dollars per barrel), as determined from Schedule 2.

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- ii. The sum of debits and credits to all Shippers under this Paragraph C for all Crude Petroleum delivered out of the Shared Common Stream by Gravity Bank Operators is zero.

- D. Sample calculations. Sample calculations are attached hereto as Schedule 3.

- E. Determination by Gravity Bank Operators. At the end of each month, the quantity of Crude Petroleum in the Shared Common Stream received from and delivered to each Shipper and the related Gravities will be determined and recorded by Gravity Bank Operators at points where Gravity Bank Operators customarily records Gravities and quantities received into and delivered from the Shared System. Gravity Bank Operators also will determine each month the weighted average Gravity value of all Crude Petroleum received (Receipt Bank) into the Shared Common Stream and the weighted average Gravity value of all Crude Petroleum delivered (Delivery Bank) out of the Shared Common Stream. If either, (i) more than once during any twelve month period, Gravity Bank Operators determine that a Shipper's monthly deliveries into the Shared Common Stream exceed a weighted average API Gravity of 49.5 degrees and the Gravity of the Shared Common Stream exceeds a weighted average API Gravity of 49.5 degrees or (ii) at the end of any month, Gravity Bank Operators determine that a Shipper's deliveries into the Shared Common Stream during such month exceed a weighted average API Gravity of 50.0 degrees and the Gravity of the Shared Common Stream exceeds a weighted average API Gravity of 50.0 degrees, then such Shipper shall be precluded from shipping Crude Petroleum in the Shared Common Stream during the calendar month following such determination; provided, however that such Shipper shall be allowed to resume shipping Crude Petroleum in accordance with these Rules and Regulations on the first day of the next calendar month.

- F. Statement. Within 30 days following the end of each month, Pipeline Operator shall send to each Shipper a statement setting forth the debits and/or credits allocated to such Shipper for such month.

- G. Payments.
 - i. With respect to each Shipper in the Shared Common Stream, if the sum of the credits allocated to such Shipper exceeds the sum of the debits allocated to such Shipper, such Shipper shall pay to Gravity Bank Operators an amount equal to such excess no later than the 15th day after its receipt of a Gravity Bank Operator's statement. If the sum of the debits allocated to such Shipper exceeds the sum of the credits allocated to such Shipper, Gravity Bank Operators shall pay to such Shipper an amount equal to such excess no later than 30 days following the delivery of a Gravity Bank Operator's statement.

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- ii. Notwithstanding paragraph G(i), if any Shipper in the Shared Common Stream fails to make a payment required to be made by it hereunder, any amounts payable to Shippers under this paragraph G will be reduced by such Shipper's proportionate share of such underpayments in that month based upon the ratio that the amount owed to such Shipper under this paragraph G in that month bears to the amounts owed to all Shippers under this paragraph G in that month, provided however, that if the underpayment is eventually cured by the non-paying Shipper, than each other Shipper shall receive the full payment it was entitled to prior to the underpayment.
 - iii. Shippers shall have the right to enforce this Rule 20 against, and seek payment under this Rule 20 from, any non-paying Shipper in the Shared Common Stream either at the Commission or in any other appropriate venue. Additionally, Pipeline Operator or Three Rivers System Operator, respectively, shall refuse to transport Crude Petroleum for such non-paying Shipper on the Joint Tariff System or the Three Rivers System, respectively, until full payment is made, and Shipper's inability to ship under hereunder shall not relieve such Shipper of, or modify or affect, any volume commitment or deficiency payment obligation such Shipper has under a TSA to either Pipeline Operator or the Three Rivers System Operator. As soon as the non-paying Shipper is delinquent in making payments to a Pipeline Operator under this Rule 20, to the extent permitted under applicable law, Gravity Bank Operators shall cooperate with any other Shippers in the Shared Common Stream in recovering amounts owed by such non-paying Shipper.
- H. Liability. Gravity Bank Operators will take commercially reasonable actions to collect any amounts owed to Gravity Bank Operators by any Shipper in the Shared Common Stream under this Rule 20, but Gravity Bank Operators will have no liability to any Shipper for any amounts owed to such Shipper by a non-paying Shipper under this Rule 20. Any non-paying Shipper in the Shared Common Stream shall be liable to all other Shippers in the Shared Common Stream under this Rule 20 for such Shipper's non-payment.
- I. Administration. Gravity Bank Operators shall work together as necessary to, and shall, administer the Shared Gravity Bank, and shall perform the clearinghouse business of calculating and effecting adjustments among all Shippers in the Shared Common Stream delivering Crude Petroleum into the Shared Common Stream for differences in API Gravity of Crude Petroleum received from all Shippers in the Shared Common Stream. Gravity Bank Operators shall receive and track all monies received from Shippers in the Shared Common Stream pursuant to the Shared Gravity Bank for the benefit of all Shippers in the Shared Common Stream.
- J. Adjustments. During November of each calendar year (and more often if the Gravity Bank Operators deem appropriate), Gravity Bank Operators shall review the formulae set

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forth in Rules 20B and 20C and the Gravity adjustments in Schedules 1 and 2 in light of current market conditions and may amend such formulae and Gravity adjustments by notifying all Shippers in the Shared Common Stream of such amendment. The amended formulae will become effective beginning the following January 1 and will remain effective until again modified in accordance with this Rule 20J. If any Shipper does not agree with any the amendments of such formulae and Gravity adjustments, such Shipper may protest or challenge such amendment either at the Commission or in any other appropriate venue.

- K. Gravity. Gravity Bank Operators will be responsible, at their sole cost and expense, for determining and/or securing data on all Gravities and Volumes of Crude Petroleum delivered into and out of the Shared Common Stream. The Gravity will be determined by [ASTM 6822-02 (Standard Test Method for Density, Relative Density, API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermo-hydrometer Method)].
- L. Audit. Any individual Shipper on the Shared Common Stream will at any time during normal business hours and upon reasonable notice have access to the books, accounts and records of Gravity Bank Operators for the purpose of verifying that Gravity Bank Operators are administering the Shared Gravity Bank in accordance with the terms of this Rule 20. Each Shipper will bear the cost of any audit requested by it.

The following is an exception to, and replaces, Rule 27, in Texas R.R.C. No. 1.1, supplements thereto and successive issues thereof. The additional paragraphs below will apply to this tariff:

- 27. SPECIFICATIONS AND RESTRICTIONS, THE FOLLOWING MODIFIES AND SUPERCEDES RULE 1 AND RULE 2 ABOVE:**
 - A. Crude Petroleum will not be accepted for transportation except when such Crude Petroleum is merchantable, properly settled and contains not more than one percent (1 %) of basic sediment, water, and other impurities, and has a temperature not in excess of one hundred and twenty degrees (120°) Fahrenheit and its Gravity, viscosity, pour point, and other characteristics are such that it will be readily susceptible to transportation through the Pipeline Operator's existing facilities, and will not materially affect the quality of other shipments or cause disadvantage to other shippers or the Pipeline Operator. In addition, Pipeline Operator reserves the right to reject (any and all of, but not limited to) shipments of Crude Petroleum where the Shipper or Consignee has failed to comply with applicable laws, rules, and regulations made by government authorities regulating shipment of Crude Petroleum. If Crude Petroleum is accepted from tankage, settled bottoms in such tanks must not be above a point six inches (6") below the bottom of the pipeline connection with the tank from which it enters Pipeline Operator's facilities.

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- B. Subject to Rule 20 and if accepted into the Joint Tariff System by Pipeline Operator, any shipments of Crude Petroleum and condensate having an API Gravity of 60.0 degrees or above, as determined by either the composite average of the sample pot or on an individual truckload basis as determined by its truck ticket (as determined in Pipeline Operator's sole discretion), shall be subject to a deduction to cover the shrinkage resulting from the mixture thereof, in the Pipeline Operator's facilities. Such deduction shall be determined in accordance with the following table:

<u>API GRAVITY, Degrees</u>	<u>% DEDUCTION</u>
60.0 through 74.9	1%
75.0 through 84.9	5%

On certain movements as specified in the individual tariffs referencing this tariff, Crude Petroleum and condensate injected into the Pipeline Operator's system with an API Gravity in excess of 84.9 degrees shall be subject to a deduction of 20%.

- C. Pipeline Operator reserves the right, at its sole discretion, to discontinue receiving and/or cease transporting other or additional grades of Crude Petroleum, including Crude Petroleum that does not comply with the specifications in this Rule 27.
- D. If, upon investigation, Pipeline Operator determines that a Shipper has delivered to Pipeline Operator's facilities Crude Petroleum that has been contaminated by the existence of or excess amounts of impure substances, including but not limited to, chlorinated or oxygenated hydrocarbons, arsenic, lead, or other metals, such Shipper will be excluded from further entry into applicable segments of the system until such time as quality specifications are met to the satisfaction of Pipeline Operator. Further, Pipeline Operator reserves the right to dispose of any contaminated Crude Petroleum blocking its system. Disposal thereof, if necessary, may be made in any reasonable commercial manner, and any liability associated with the contamination or disposal of any Crude Petroleum shall be borne by the Shipper introducing the contaminated Crude Petroleum into Pipeline Operator's system.
- E. Pipeline Operator reserves the right to reject any and all of the following shipments:
- i. Crude Petroleum having a Reid vapor pressure in excess of 10 psia at a temperature of 100 degrees Fahrenheit/or an API Gravity in excess of 55.0 degrees.
 - ii. Crude Petroleum where the Shipper or Consignee has failed to comply with all applicable laws, rules and regulations made by any governmental authorities regulating shipments of Crude Petroleum.

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- iii. Crude Petroleum received from tanks containing basic sediment, water or other impurities in excess of one percent (1%) average in suspension above the pipeline connection. Where Crude Petroleum is delivered to pipeline through automatic custody transfer measurement facilities, Pipeline Operator may require use of a monitor which rejects Crude Petroleum containing in excess of one percent (1%) basic sediment and water. [This limitation by Pipeline Operator is supplementary to the one percent (1%) basic sediment and water limit above a point six (6) inches below pipeline connection provided for in Rule 1.]
 - iv. Crude Petroleum containing sulfur in excess of 0.4%.
 - v. Crude Petroleum that would cause the weighted average API Gravity of the Joint Tariff Common Stream on the Joint Tariff System to exceed 49.0 degrees in any given month.
- F. Pipeline Operator may refuse to accept for transportation or require batched movement outside the Common Stream of any material tendered for transportation which is not Crude Petroleum and which otherwise does not meet the quality requirements as set forth in this Rule 27 or which in Pipeline Operator's opinion differs materially in character from Crude Petroleum being transported by Pipeline Operator. Batched transportation shall be under such terms and conditions as Pipeline Operator and Shipper shall agree.

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Schedule 1

Table of Receipt Bank
Gravity Values

TABLES OF DIFFERENTIALS FOR USE IN DETERMING ADJUSTMENTS FOR
DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM DELIVERED FROM SHIPPERS INTO SYSTEM

API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL
49.0 or less	0.00	52.7	6.70	56.4	10.40
49.1	1.10	52.8	6.80	56.5	10.50
49.2	1.20	52.9	6.90	56.6	10.60
49.3	1.30	53.0	7.00	56.7	10.70
49.4	1.40	53.1	7.10	56.8	10.80
49.5	1.50	53.2	7.20	56.9	10.90
49.6	1.60	53.3	7.30	57.0	11.00
49.7	1.70	53.4	7.40	57.1	11.10
49.8	1.80	53.5	7.50	57.2	11.20
49.9	1.90	53.6	7.60	57.3	11.30
50.0	4.00	53.7	7.70	57.4	11.40
50.1	4.10	53.8	7.80	57.5	11.50
50.2	4.20	53.9	7.90	57.6	11.60
50.3	4.30	54.0	8.00	57.7	11.70
50.4	4.40	54.1	8.10	57.8	11.80
50.5	4.50	54.2	8.20	57.9	11.90
50.6	4.60	54.3	8.30	58.0	12.00
50.7	4.70	54.4	8.40	58.1	12.10
50.8	4.80	54.5	8.50	58.2	12.20
50.9	4.90	54.6	8.60	58.3	12.30
51.0	5.00	54.7	8.70	58.4	12.40
51.1	5.10	54.8	8.80	58.5	12.50
51.2	5.20	54.9	8.90	58.6	12.60
51.3	5.30	55.0	9.00	58.7	12.70
51.4	5.40	55.1	9.10	58.8	12.80
51.5	5.50	55.2	9.20	58.9	12.90
51.6	5.60	55.3	9.30	59.0	13.00
51.7	5.70	55.4	9.40	59.1	13.10
51.8	5.80	55.5	9.50	59.2	13.20
51.9	5.90	55.6	9.60	59.3	13.30
52.0	6.00	55.7	9.70	59.4	13.40

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52.1	6.10	55.8	9.80	59.5	13.50
52.2	6.20	55.9	9.90	59.6	13.60
52.3	6.30	56.0	10.00	59.7	13.70
52.4	6.40	56.1	10.10	59.8	13.80
52.5	6.50	56.2	10.20	59.9	13.90
52.6	6.60	56.3	10.30	60.0	14.00

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Schedule 2						
Table of Delivery Bank Gravity Values						
TABLES OF DIFFERENTIALS FOR USE IN DETERMINING ADJUSTMENTS FOR DIFFERENCE IN GRAVITY OF CRUDE PETROLEUM DELIVERED FROM SYSTEM TO SHIPPERS						
API Gravity	Diff \$ per BBL	API Gravity	Diff \$ per BBL		API Gravity	Diff \$ per BBL
Less than 40.0	0.00	43.6	1.08		47.3	2.19
40.0	0.00	43.7	1.11		47.4	2.22
40.1	0.03	43.8	1.14		47.5	2.25
40.2	0.06	43.9	1.17		47.6	2.28
40.3	0.09	44.0	1.20		47.7	2.31
40.4	0.12	44.1	1.23		47.8	2.34
40.5	0.15	44.2	1.26		47.9	2.37
40.6	0.18	44.3	1.29		48.0	2.40
40.7	0.21	44.4	1.32		48.1	2.43
40.8	0.24	44.5	1.35		48.2	2.46
40.9	0.27	44.6	1.38		48.3	2.49
41.0	0.30	44.7	1.41		48.4	2.52
41.1	0.33	44.8	1.44		48.5	2.55
41.2	0.36	44.9	1.47		48.6	2.58
41.3	0.39	45.0	1.50		48.7	2.61
41.4	0.42	45.1	1.53		48.8	2.64
41.5	0.45	45.2	1.56		48.9	2.67
41.6	0.48	45.3	1.59		49.0	2.70
41.7	0.51	45.4	1.62		49.1	2.73
41.8	0.54	45.5	1.65		49.2	2.76
41.9	0.57	45.6	1.68		49.3	2.79
42.0	0.60	45.7	1.71		49.4	2.82
42.1	0.63	45.8	1.74		49.5	2.85

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42.2	0.66	45.9	1.77	49.6	2.88
42.3	0.69	46.0	1.80	49.7	2.91
42.4	0.72	46.1	1.83	49.8	2.94
42.5	0.75	46.2	1.86	49.9	2.97
42.6	0.78	46.3	1.89		
42.7	0.81	46.4	1.92		
42.8	0.84	46.5	1.95		
42.9	0.87	46.6	1.98		
43.0	0.90	46.7	2.01		
43.1	0.93	46.8	2.04		
43.2	0.96	46.9	2.07		
43.3	0.99	47.0	2.10		
43.4	1.02	47.1	2.13		
43.5	1.05	47.2	2.16		

Schedule 3

SAMPLE CALCULATION OF RECEIPT GRAVITY BANK

Shipper	Volume of Crude Petroleum received by Shipper	API Gravity	Weighted Average API Gravity	Gravity Value Per Barrel (\$/BBL)
Shipper A (Receipt Point a)	10000	48		
Shipper A (Receipt Point b)	20000	42		
Shipper A (Receipt Point c)	<u>30000</u>	44		
Total Shipper A	<u>60000</u>		44	0
Shipper B (Receipt Point x)	35000	48		
Shipper B (Receipt Point y)	5000	57		
Shipper B (Receipt Point z)	0	0		
Total Shipper B	<u>40000</u>		49.125	1.1
Shared Common Stream	<u>100000</u>			
Shared Common Stream Gravity Value (GV _{CSR})				0.44
Shipper A Calculation				
	$SA_R = SQ_R \times (GV_{CSR} - SGV_R)$			
	$SA_R = 60,000 \text{ bbls.} \times (0.44 - 0)$			

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	$SA_R = \$26,400$	(Shipper A receives \$26,400)		
Shipper B Calculation				
	$SA_R = SQ_R \times (GV_{CSR} - SGV_R)$			
	$SA_R = 40,000$ bbls. \times (0.44-1.1)			
	$SA_R = (\$26,400)$	(Shipper B pays \$26,400)		

Schedule 3

SAMPLE CALCULATION OF DELIVERY GRAVITY BANK

Shipper	Volume of Crude Petroleum delivered to Shipper	API Gravity	Weighted Average API Gravity	Gravity Value Per Barrel (\$/BBL)
Shipper A (Three Rivers Refinery)	60000	48		
Shipper A (Joint tariff into Gardendale)	0			
Total Shipper A	60000		46.2	1.86
Shipper B (Three Rivers Refinery)	0			
Shipper B (Joint tariff into Gardendale)	40000	57		
Total Shipper B	40000		46.3	1.89
Shared Common Stream	100000			
Shared Common Stream Gravity Value (GV _{CSD})				1.872
Shipper A Calculation				
	$SA_D = SQ_D \times (GV_{CSD} - SGV_D)$			
	$SA_D = 60,000 \text{ bbls.} \times (1.872 - 1.86)$			
	$SA_D = \$720$	(Shipper A pays \$720)		
Shipper B Calculation				
	$SA_D = SQ_D \times (GV_{CSD} - SGV_D)$			
	$SA_D = 40,000 \text{ bbls.} \times (1.872 - 1.89)$			
	$SA_D = (\$720)$	(Shipper B receives \$720)		