FINAL REPORT
INDIAN OIL VALUATION
NEGOTIATED RULEMAKING COMMITTEE

DEPARTMENT OF INTERIOR
OFFICE OF NATURAL RESOURCES REVENUE

SEPTEMBER 30, 2013

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I. COMMITTEE BACKGROUND

Authority

The Indian Oil Valuation Negotiated Rulemaking Committee (hereafter, the Committee) was established under the authority of the Federal Advisory Committee Act (5 U.S.C., App. 2); Negotiated Rulemaking Act of 1996 (5 U.S.C. 561 *et seq*.); and Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1701 *et seq.*).

Scope and Objectives

The Secretary of the Interior chartered the Committee to advise the Office of Natural Resources Revenue (ONRR) on a rulemaking to address Indian oil valuation, as it relates to the major portion requirement in Indian oil leases. The scope of the Committee was limited to the major portion calculation for oil produced from Indian leases. The Committee acted solely in an advisory capacity to ONRR, and neither exercised program management responsibility nor made decisions directly affecting matters on which it provided advice.

Formation and Operation

The existing regulation for valuation of oil produced from Indian leases was codified in 30 CFR part 1206, Subpart B, which was published in the Federal Register on January 15, 1988 (53 FR 1184), and effective March 1, 1988. Since then, many changes have occurred in the oil market, and concerns have been raised about the need for revision of valuation methodologies to address paragraph 3(c) of standard Indian oil and gas leases, such as the major portion analysis requirement for valuation of oil production from leases on Indian land.

The Minerals Revenue Management (MRM) program of the Minerals Management Service (MMS), which is now ONRR, published proposed rules for Indian oil valuation in February 1998 and in January 2000. Each of these proposed rules was subsequently withdrawn because of market changes and the passage of time. In addition, eight public meetings were held during 2005 to consult with Indian Tribes and Indian mineral owners and to obtain information from interested parties. A third rule was published in February 2006. Tribal and industry commenters on the 2006 proposed rule did not agree on most issues regarding oil valuation, and none of the commenters supported the major portion provisions. In 2006, the Royalty Policy Committee's Indian Oil Valuation Subcommittee evaluated the proposed rule, but was unable to reach consensus about how the Department of the Interior should proceed. Thus, MRM decided to make only technical amendments to the existing Indian oil valuation regulations. A final rule addressing the technical amendments was published on December 17, 2007.

The preamble of the final rule stated ONRR's intent to convene the Committee to address the major portion provisions for the valuation of oil produced from Indian leases. Major portion means the highest price paid or offered at the time of production for the major portion of oil production from the same field or area. The Major Portion provision applies for any Indian leases that provide that the Secretary has the authority to establish value or that the Secretary may consider the highest price paid or offered for a major portion of production in determining value for royalty purposes.

On December 8, 2011, ONRR published in the Federal Register a Notice of Establishment that created the Committee, authorized and established under the Federal Advisory Committee Act, to make recommendations to replace existing regulations governing the valuation of oil on American Indian lands. The charter was signed by the Secretary of the Interior on December 23, 2011. The Committee met in May, June, August, September and October 2012 and April, June, August, and September 2013.

ONRR undertook this effort with the assistance of the U.S. Institute for Environmental Conflict Resolution (USIECR). The USIECR is an independent Federal entity that provides impartial collaboration, consensus building and mediation services. USIECR assisted ONRR in planning the process, and identifying and selecting a facilitation team from CDR Associates. CDR Associates, as an organization and its team, is independent and neutral regarding its relationships with any of the involved parties, and impartial regarding issues under discussion. CDR Associates reported directly to the USIECR.

Committee Membership

Members of the Committee included representatives from:

- ONRR - 4 members
- Bureau of Indian Affairs (BIA) - 1 member
- Indian Tribes and Indian mineral owners - 7 members from: the Shoshone and Arapaho Tribes, Land Owners Association (Fort Berthold), The Navajo Nation, Oklahoma Indian Land/Mineral Owners of Associated Nations, Ute Indian Tribe, Jicarilla Apache Nation, and Blackfeet Nation.
- The Oil and Gas Industry – 6 members from both trade associations and oil companies with leases on Indian land, including: American Petroleum Institute, Council of Petroleum Accountants Societies, Western Energy Alliance, Chesapeake Energy, Peak Energy Resources, and Resolute Energy Corporation.

Participation in the Indian Oil Valuation Negotiated Rulemaking Committee did not preclude or supersede Tribes' legal rights to engage in government-to-government meetings and consultations with ONRR or the U.S. Department of the Interior. Participation does not preclude Committee members from challenging the final rule.

A full list of Committee members and their alternates can be found in Appendix A: Committee Members and Alternates.

Consensus Decision Making

The Committee agreed to use consensus decision making for its operations and decision making. Consensus decision making was defined as a procedure by which a group makes a collective decision or agreement, without voting, that all members can accept. The process requires all group members to educate each other about their important needs, interests and concerns, and develop integrative solutions or agreements that try to the greatest extent possible to address and satisfy both individual and group interests. Reaching a consensus decision required that each group member accept a proposal, decision, or agreement as a whole. They did not have to equally support all of its component parts.

A consensus agreement was considered to have been reached when either the facilitator or a group member articulated a proposed agreement, all Committee members either verbally or non-verbally affirmed their support for it, or at a minimum, agreed not to actively oppose or subvert it. Additional options for situations where consensus could not be reached were outlined in the Committee's Operating Protocol.

Principles

ONRR is mandated to establish regulations concerning Indian oil valuation based on its Federal trust responsibility to Indians, including the duty to maximize revenue for Indian Tribes and Indian mineral owners. As such, any action by the United States in relation to Indian-owned trust property, including Indian minerals, must be that of a trustee who must act in a manner that is in the best interest of the Indian owner. Keeping in mind the responsibility to maximize revenue, when faced with more than one reasonable alternative the Secretary must choose that alternative that most benefits the Indian mineral owner.

Within the context of the Secretary's Federal trust responsibility, the purpose of this rulemaking process was to ensure that Indian lessors receive maximum revenues from their mineral resources, as required by statute and the trust responsibility of the United States, while also developing regulations that offer greater simplicity, certainty, clarity and consistency in production valuation for mineral revenue recipients and mineral lessees.

II. DISCUSSION OF RECOMMENDATIONS

As a result of Committee negotiations and the above noted objectives and principles, the Committee reached consensus on a "Higher of Gross Proceeds or Index-Based Formula Price" methodology to calculate a major portion, which is described below. All Committee members except one supported this recommendation. Two members were not in attendance at the final meeting, but indicated their support after the meeting.

The Committee recommends that the final rule be prospective only, and should not be applied retroactively in whole or in part.

Even though the Secretary is authorized to promulgate regulations to administer the statutes under which Indian oil and gas leases are authorized and supervised, the Secretary may not, either directly or indirectly, change any terms in existing leases in accordance with 30 CFR 1206.50(b)(2011).

In compliance with the DOI Tribal consultation policy, ONRR will conduct consultation meetings with Tribes and Indian mineral owners and based on comments received will consider modifications to the proposed rule or any of its provisions.

Implementation of Major Portion by the Higher of Gross Proceeds or Index-Based Formula Price

The value of oil produced on Indian lands each month will be the higher of the following, with companies only reporting the higher value.

1) **Index-Based Formula Price**

- ***NYMEX Calendar Month Average (CMA) (excluding weekends and holidays) applied to each designated area***
- ***Plus/minus the roll.*** The roll will be included if contracts in the area typically include the roll. For example, Oklahoma contracts generally include the roll and contracts in Ft. Berthold, Wind River and The Navajo Nation do not. The purpose of the roll is to provide a weighting of the current price by future prices (two months forward) to reflect market expectations.
- ***Adjusted by a designated area and oil type percentage differential for location and quality differences.*** This differential will be based on the average difference between the NYMEX CMA and major portion at the 25th percentile by volume plus one barrel of oil from highest price to lowest price, starting from the top.

$$\text{Index} - \text{Based Monthly Formula Price by Designated Area and Oil Type} =$$

$$\left(\begin{matrix} Current\ Month \\ CMA \end{matrix} \pm Roll\right) \times \left[1 - \left(\frac{NYMEX\ CMA\ - Prev\ 1yr\ Avg.25\%MP}{1yr\ Avg.\ NYMEX\ CMA}\right)\right]$$

2) **Gross Proceeds**

- Lessees will report crude oil type monthly on Form ONRR-2014 using the existing product code field per lease or lease agreement.
- There will be no reporting of API Gravity on Form ONRR-2014.

If a lessee’s gross proceeds value is higher than the Index-Based Formula Price, lessees must report their gross proceeds on Form ONRR-2014 using Sales Type Code (STC) ARMS. If the Index-Based Formula Price is higher than gross proceeds, then the lessee must report the index-based price using STC-OINX. If there is no sale of the crude oil and the value is based on a weighted average of the affiliates’ arm’s length purchases and/or sales, then the lessee must report using STC-NARM.

The lessee’s gross proceeds is subject to audit by ONRR or its Tribal auditing partners and is also subject to all of the provisions of the existing rule regarding gross proceeds.

Establishing Differentials for the Index-Based Formula

The Index-Based Formula Price is based on the calendar month average of daily settlement prices of the Light Sweet Crude Oil (WTI) Futures contract for delivery at Cushing, Oklahoma. It is necessary to include a differential in the formula to capture the difference in value due to quality differences between Light Sweet Crude (WTI) and other oil types, and location between each designated area and Cushing. These values may vary significantly due to the distance from reservations to Cushing.

The designated area specific percentage differential would initially be based on the previous year's average annual difference between the NYMEX CMA and the major portion at the 25th percentile by volume plus one barrel of oil from highest price to lowest price, starting from the top.

To compare values and establish an appropriate Index-Based Formula differential, ONRR will conduct a monthly major portion analysis for the previous year for each oil type within each designated area using all imputed values (arm's-length and non-arm's-length) reported by payors on Form ONRR-2014. Sales volumes reported as STC-NARM will be included in the array to establish the differential.

For leases for which royalty is taken in kind, payors will continue to report the entire sales volume reported (8/8ths) on the Form ONRR-2014 and base the sales value on the price the lessee receives for volumes sold (excluding the royalty share of production taken in kind). The array to establish the differential will include sales reported, less the royalty in kind volumes, as reported on Form ONRR-2014 as Payment Method Code 06.

ONRR will deduct transportation allowances reported by payors from the imputed values companies report on the Form ONRR-2014. The purpose of the transportation allowance is to establish value at the lease when production is sold away from the lease.

Appendix B provides an example of the calculation to establish a differential.

Consideration of Oil Type

The value of oil may also vary significantly between different oil types. ONRR will calculate a major price for each type of crude oil within a designated area.

Oil type is not currently reported by payors on Form ONRR-2014. The Committee recommends that lessees report the following crude oil types in the existing Product Code field on the Form ONRR-2014:

- sweet
- sour
- asphaltic
- black wax
- yellow wax
- condensate reported as Product Code 02

New oil types may be added and reported by companies in the future if there is production of a different type of oil.

Before the rule is promulgated, ONRR will not have crude oil type from the ONRR Form-2014. ONRR will require reporting of crude oil type on Form ONRR-2014, 3 months prior to the effective date of the rule. ONRR will correlate the crude oil type for these 3 months to the previous 9 months and will use all 12 months to calculate the initial differential.

The Secretary's discretion will be used to determine an appropriate Index-Based Formula Price in cases where there are insufficient royalty lines to determine a differential for a specific crude oil type.

Determination of Designated Areas

The Committee recommends, at least initially, the following designated areas for the Indian Oil Valuation Rule:

- Fort Berthold – 2 Areas: North and South of the Little Missouri River
- Uintah & Ouray – 2 Areas: Uintah and Grand Counties; Duchesne County
- Oklahoma – 1 statewide area encompassing all Indian land and minerals
- The designated area for all other Reservations will be the Reservation boundary. They include:
    - Blackfeet
    - Crow
    - Fort Peck
    - Jicarilla Apache
    - Saginaw Chippewa
    - The Navajo Nation
    - Turtle Mountain
    - Ute Mountain Ute
    - Wind River

If there is a significant change that affects the differential for a designated area, affected Tribes, Indian mineral owners, or lessees/operators may petition ONRR to consider convening a technical committee to review, modify, or add designated areas. Criteria to determine any future changes include:

- Markets served (where)
- Access to Market (how)
    - Access to similar infrastructure (e.g., refineries, pipelines, rail lines)
    - Similar geography (e.g., no challenging geographical divides such as large rivers)

Monitoring Differentials

ONRR will monitor the differentials on a monthly basis to ensure Tribes and Indian mineral owners are receiving the equivalent of a 25th percentile by volume plus one barrel of oil from highest price to lowest price, starting from the top for their oil. Monitoring will be important because if a differential is set too high, Tribes/ and Indian mineral owners will not be assured a 25% major portion from the top price. If it is set too low, companies will be paying more than a 25% major portion from the top price.

ONRR will use the oil sales volume reported by lessees on Form ONRR-2014 to monitor and, if necessary, trigger a modification of the designated area-specific differential used in the Index-Based Formula. ONRR will monitor oil sales volumes not reported as STC-OINX on the Form ONRR-2014 on a monthly basis by designated area and crude oil type.

For leases which royalty is taken in kind now or in the future, lessees will report the full sales volume and base the sales value reported on Form ONRR-2014 on the higher of: 1) the Index-Based Formula Price (reported as STC-OINX) or 2) the price the lessee receives for volumes sold (reported as STC-ARMS), excluding the royalty share of production taken in kind. The royalty in kind share of production will not be considered in determining whether a modification of the designated area-specific differential is needed.

If the monthly oil sales volumes not reported as STC-OINX varies +/- 3% from 25% of the total reported oil sales volume for the month, then ONRR will revise the differential prospectively starting with the following month. Specifically:

- If monthly oil sales volumes not reported as STC-OINX by the designated area and oil type fall below 22%, ONRR will increase the differential by 10% every month until the monthly oil sales volumes not reported as STC-OINX fall within the +/- 3% range.
- If monthly oil sales volumes not reported as STC-OINX by designated area and oil type exceed 28%, then ONRR will decrease the differential by 10% every month until the monthly oil sales volumes not reported as STC-OINX fall within the +/- 3% range.

Appendix C provides an example of how monitoring of the differentials will work.

Publishing Index-Based Formula Prices

ONRR will update the Index-Based Price for each designated area oil type monthly on its website.

Additional Provisions

The Secretary's discretion will be used to address any other significant issues that may arise in the future. If there is a significant concern, affected Tribes, Indian mineral owners or lessees/operators may petition ONRR to consider convening a technical committee to serve in an advisory capacity to ONRR.

<u>Considerations and Concerns</u>

Reporting and Calculation of the Differential

Pursuant to its trust duties, it is imperative that ONRR calculate the differential using the most accurate data available. This may include coordinating and working with Tribes and Indian mineral owners (where practicable) to promote the accuracy of data that is utilized.

Oil Value, Transportation Deduction and Differential Issues and Objections

Roger Birdbear, the Committee's representative of the Land Owners Association (on Ft. Berthold), does not support any of the Committee's recommendations. The basis for Mr. Birdbear and the Association's objections are based on: 1) transportation allowances are not in lease terms; 2) including a differential does not adequately recognize oil quality, and results in a taking of value of the Indian beneficiary's trust asset; and 3) DOI and ONRR do not have statutory authority to promulgate a rule that allows either a transportation allowance or a transportation-location differential related to the higher of gross proceeds or the Index-Based Formula Price.

Marcella Giles, the Committee’s representative of Indian mineral owners from Oklahoma, recognizes Roger Birdbear’s concern about the transportation allowance for gross proceeds and a differential in either the higher of gross proceeds or the Index-Based Formula Price to address major portion requirements. However, she and the Oklahoma Indian mineral owners that she represents do not object to the differential being included in the Committee’s recommendation.

APPENDIX A – COMMITTEE MEMBERSHIP AND ALTERNATES

Designated Federal Officer:
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TRIBES/INDIVIDUAL INDIAN MINERAL OWNERS	
Shoshone and Arapaho Tribes	Claire Ware Shoshone and Arapaho Tribes P. O. Box 506 Fort Washakie, WY 82514 (307) 332-7835 x10 claire.ware007@yahoo.com

Land Owners Association	Roger Birdbear Land Owners Association 3304 Highway 22 North New Town, ND 58763 (701) 627-2698 rbirdbear05@law.du.edu
The Navajo Nation	Perry Shirley The Navajo Nation Minerals Department P.O. Box 9000 Window Rock, AZ 86515 (928) 688-2209 pshirley@frontiernet.net Alternate: Akhtar Zaman The Navajo Nation Minerals Department P.O. Box 3750 Window Rock, AZ 86515 (928) 871-6339 zamanakh@yahoo.com
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Jicarilla Apache Nation	Alan Taradash The Nordhaus Law Firm LLP 405 Dr Martin Luther King Jr Ave Albuquerque, New Mexico 87102 (505) 767-1523 artaradash@gmail.com Alternate: Darrel Paiz Jicarilla Apache Nation Revenue & Taxation Department P.O. Box 950 Dulce, New Mexico 87528 (575) 759-4262 dpaiz@jicarillarevtax.com
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Council of Petroleum Accountants Societies	J. Kevin Barnes SM Energy Columbine Place, Ste. 1100 1775 Sherman St. Denver, CO 80203 (303) 863-4384 kbarnes@sm-energy.com
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Peak Energy Resources	Jack Vaughn Peak Energy Resources 1910 Main Ave. Durango, CO 81301 (970) 375-3136 jvaughn@colopeaks.com
Resolute Energy Corporation	Patrick Flynn Resolute Energy Corporation 1675 Broadway, Suite 1950 Denver CO 80202 (303)573-4886 x1145 pflynn@resoluteenergy.com

APPENDIX B– EXAMPLE CALCULATION TO ESTABLISH A DIFFERENTIAL

Example: Major Portion Array for Reservation X, July, 2012

The monthly major portion price is determined by arranging the prices from highest to lowest and identifying the price at the 25th percentile by volume plus one barrel, starting from the top going down. In this example, $83.34 is the major portion price at 28.64% volume.

Lease Number	Payor/Leasee	Sales Volume	Sales Value	Unit Price	Royalty Rate	Cumulative Volume	Percent of Volume
LEASE A	Company 1	2,600.00	$224,275.15	$86.26	18.75%	2,600.00	4.95%
LEASE B	Company 2	3,610.00	$304,494.67	$84.35	18.75%	6,210.00	11.83%
LEASE C	Company 3	2,877.00	$242,558.29	$84.31	18.75%	9,087.00	17.31%
LEASE D	Company 4	4,000.00	$337,178.10	$84.29	18.75%	13,087.00	24.93%
LEASE E	Company 5	1,949.20	$162,446.51	$83.34	18.75%	15,036.20	28.64%
LEASE F	Company 6	4,070.00	$338,577.44	$83.19	18.75%	19,106.20	36.39%
LEASE G	Company 7	2,470.00	$205,125.22	$83.05	18.75%	21,576.20	41.09%
LEASE H	Company 8	2,120.00	$175,861.38	$82.95	18.75%	23,696.20	45.13%
LEASE I	Company 9	3,420.00	$283,184.53	$82.80	18.75%	27,116.20	51.65%
LEASE J	Company 10	2,740.00	$226,610.55	$82.70	18.75%	29,856.20	56.86%
LEASE K	Company 11	1,450.00	$119,570.30	$82.46	18.75%	31,306.20	59.63%
LEASE L	Company 12	2,710.00	$223,269.17	$82.39	18.75%	34,016.20	64.79%
LEASE M	Company 13	3,300.00	$271,364.06	$82.23	18.75%	37,316.20	71.07%
LEASE N	Company 14	850.00	$69,854.13	$82.18	18.75%	38,166.20	72.69%
LEASE O	Company 15	2,090.00	$171,581.43	$82.10	18.75%	40,256.20	76.67%
LEASE P	Company 16	4,210.00	$345,522.45	$82.07	18.75%	44,466.20	84.69%
LEASE Q	Company 17	3,460.00	$283,234.50	$81.86	18.75%	47,926.20	91.28%
LEASE R	Company 18	1,250.00	$101,633.03	$81.31	18.75%	49,176.20	93.66%
LEASE S	Company 19	2,710.00	$219,626.65	$81.04	18.75%	51,886.20	98.82%
LEASE T	Company 20	618.00	$49,847.93	$80.66	18.75%	52,504.20	100.00%
		52,504.20					

The sales volume for Lease D is not consistent in all examples. It was necessary to change it for example purposes.

Example: Establishing an Initial Differential for Reservation X, 2012

Month	25% MP (From Top)	NYMEX CMA
January	$75.75	$89.5785
February	$76.22	$89.7432
March	$89.04	$102.9813
April	$96.33	$110.0385
May	$87.40	$101.3567
June	$82.43	$96.2886
July	$83.34	$97.3405
August	$72.22	$86.3409
September	$71.65	$85.6100
October	$72.52	$86.4281
November	$85.04	$97.1629
December	$86.58	$98.5757
Average	$81.54	$95.1204

% of NYMEX CMA for Res. X = $\left(\frac{\$81.54}{\$95.1204}\right)$ = **85.72%**

Average Annual 2013 Differential for Res. X = (100%-85.72%) = 14.28%

	2013 NYMEX CMA	% of NYMEX CMA	Formula Adjusted Index Price = (2013 NYMEX CMA)*(% of NYMEX CMA)
January	$100.3185	85.72%	$85.99
February	$102.2625	85.72%	$87.66
March	$106.2050	85.72%	$91.04
April	$103.3460	85.72%	$88.59
May	$94.7159	85.72%	$81.19
June	$82.4052	85.72%	$70.64
July	$97.1185	85.72%	$83.25
August	$94.1609	85.72%	$80.71
September	$94.5584	85.72%	$81.06
October	$89.5709	85.72%	$76.78
November	$86.7324	85.72%	$74.35
December	$88.2455	85.72%	$75.64

APPENDIX C– EXAMPLE OF PROCESS TO MONITOR DIFFERENTIALS

Example of Differential Adjustment when the Gross Proceeds Volume Fall Below 22% of the Total Sales Volume for the Month

Reservation X, July 2013							
Lease Number	Payor/ Leasee	Sales Volume	Sale Value	Unit Price	Sales Type Code	Cumulative Volume	Percent of Volume
Lease A	Company 1	2,600.00	$224,275.15	86.26	ARMS	2,600.00	4.87%
Lease B	Company 2	3,610.00	$304,494.67	84.35	ARMS	6,210.00	11.63%
Lease C	Company 3	2,877.00	$242,558.29	84.31	ARMS	9,087.00	17.02%
Lease D	Company 4	4,882.00	$406,426.50	83.25	OINX	13,969.00	26.17%
Lease E	Company 5	1,949.20	$162,270.90	83.25	OINX	15,918.20	29.82%
Lease F	Company 6	4,070.00	$338,827.50	83.25	OINX	19,988.20	37.44%
Lease G	Company 7	2,470.00	$205,627.50	83.25	OINX	22,458.20	42.07%
Lease H	Company 8	2,120.00	$176,490.00	83.25	OINX	24,578.20	46.04%
Lease I	Company 9	3,420.00	$284,715.00	83.25	OINX	27,998.20	52.44%
Lease J	Company 10	2,740.00	$228,105.00	83.25	OINX	30,738.20	57.58%
Lease K	Company 11	1,450.00	$120,712.50	83.25	OINX	32,188.20	60.29%
Lease L	Company 12	2,710.00	$225,607.50	83.25	OINX	34,898.20	65.37%
Lease M	Company 13	3,300.00	$274,725.00	83.25	OINX	38,198.20	71.55%
Lease N	Company 14	850.00	$70,762.50	83.25	OINX	39,048.20	73.14%
Lease O	Company 15	2,090.00	$173,992.50	83.25	OINX	41,138.20	77.06%
Lease P	Company 16	4,210.00	$350,482.50	83.25	OINX	45,348.20	84.94%
Lease Q	Company 17	3,460.00	$288,045.00	83.25	OINX	48,808.20	91.42%
Lease R	Company 18	1,250.00	$104,062.50	83.25	OINX	50,058.20	93.77%
Lease S	Company 19	2,710.00	$225,607.50	83.25	OINX	52,768.20	98.84%
Lease T	Company 20	618.00	$51,448.50	83.25	OINX	53,386.20	100.00%
		53,386.20					

- The ARMS volume is highlighted in green above. The sales volume of the ARMS for the month is equal to 9,087 Bbls or **17.02%** of the total sales volume (53,386.2 Bbls) for the month.
- **This is less than the threshold of 22% of the total sales volume, therefore an adjustment must be made.**
- The % of NYMEX CMA from the initial calculation using the previous year was 85.72%. The differential from the initial calculation using the previous year was 14.28% (100%-85.72%).
- The new differential for August, 2013 will be **10% more than the initial differential** of 14.28%:
  - 14.28% + (14.28% X 0.10) = **15.71%**
- The updated % of NYMEX CMA will be 100% minus the updated differential:
  - (100%-15.71%) = **84.29%**
- The value for royalty purposes for August, 2013 will be August NYMEX CMA multiplied by the updated % of NYMEX CMA:
  - $94.1609 X 84.29% = **$79.37**
- The new 15.71% differential/ 84.29 % of NYMEX CMA will remain in effect from August 2013 forward until the next month in which the monthly oil sales volumes not reported as OINX varies +/- 3% from 25% of the total reported oil sales volume for the month.

Example of Differential Adjustment when the Gross Proceeds Volume <u>Exceeds 28%</u> of the Total Sales Volume for the Month

Reservation X, July 2013							
Lease Number	Payor/ Leasee	Sales Volume	Sale Value	Unit Price	Sales Type Code	Cumulative Volume	Percent of Volume
Lease A	Company 1	2,600.00	$224,275.15	86.26	ARMS	2,600.00	4.87%
Lease B	Company 2	3,610.00	$304,494.67	84.35	ARMS	6,210.00	11.63%
Lease C	Company 3	2,877.00	$242,558.29	84.31	ARMS	9,087.00	17.02%
Lease D	Company 4	4,882.00	$411,525.87	84.29	ARMS	13,969.00	26.17%
Lease E	Company 5	1,949.20	$162,446.51	83.34	ARMS	15,918.20	29.82%
Lease F	Company 6	4,070.00	$338,827.50	83.25	OINX	19,988.20	37.44%
Lease G	Company 7	2,470.00	$205,627.50	83.25	OINX	22,458.20	42.07%
Lease H	Company 8	2,120.00	$176,490.00	83.25	OINX	24,578.20	46.04%
Lease I	Company 9	3,420.00	$284,715.00	83.25	OINX	27,998.20	52.44%
Lease J	Company 10	2,740.00	$228,105.00	83.25	OINX	30,738.20	57.58%
Lease K	Company 11	1,450.00	$120,712.50	83.25	OINX	32,188.20	60.29%
Lease L	Company 12	2,710.00	$225,607.50	83.25	OINX	34,898.20	65.37%
Lease M	Company 13	3,300.00	$274,725.00	83.25	OINX	38,198.20	71.55%
Lease N	Company 14	850.00	$70,762.50	83.25	OINX	39,048.20	73.14%
Lease O	Company 15	2,090.00	$173,992.50	83.25	OINX	41,138.20	77.06%
Lease P	Company 16	4,210.00	$350,482.50	83.25	OINX	45,348.20	84.94%
Lease Q	Company 17	3,460.00	$288,045.00	83.25	OINX	48,808.20	91.42%
Lease R	Company 18	1,250.00	$104,062.50	83.25	OINX	50,058.20	93.77%
Lease S	Company 19	2,710.00	$225,607.50	83.25	OINX	52,768.20	98.84%
Lease T	Company 20	618.00	$51,448.50	83.25	OINX	53,386.20	100.00%
		53,386.20					

- The ARMS volume is highlighted in green above. The sales volume of the ARMS for the month is equal to 15,918.2 Bbls or **29.82%** of the total sales volume (53,386.2 Bbls) for the month.
- **This exceeds the threshold of 28% of the total sales volume, therefore an adjustment must be made.**
- The % of NYMEX CMA from the initial calculation using the previous year was 85.72%. The differential from the initial calculation using the previous year was 14.28% (100%-85.72%).
- The new differential for August, 2013 will be **10% less than the initial differential** of 14.28%:
  - 14.28% - (14.28% X 0.10) = **12.85%**
- The updated % of NYMEX CMA will be 100% minus the updated differential:
  - (100%-12.85%) = **87.15%**
- The value for royalty purposes for August, 2013 will be August NYMEX CMA multiplied by the updated % of NYMEX CMA:
  - $94.1609 X 87.15% = **$82.06**
- The new 12.85% differential/ 87.15 % of NYMEX CMA will remain in effect from August 2013 forward until the next month in for which the monthly oil sales volumes not reported as OINX varies +/- 3% from 25% of the total reported oil sales volume for the month.