



**Alaska Department of Natural Resources  
Division of Oil and Gas  
Public Notice of Application to Expand the Pikka Unit**

The Department of Natural Resources, Division of Oil and Gas (Division), gives notice under 11 AAC 83.311 of an application for the expansion of the Pikka Unit (PKU) under 11 AAC 83.356. The PKU is located on the North Slope of Alaska, lying east of the Colville River Unit and west of the Kuparuk River Unit, and the expansion area is on the southern and western boundaries of the PKU. Armstrong Energy LLC (Armstrong), the PKU operator, filed an application with the Division to expand the PKU on September 19, 2016. The application was deemed complete on September 26, 2016. Armstrong's address is 1421 Blake Street, Denver, Colorado 80202.

The proposed expansion area covers approximately 14,440 acres in twenty-four (24) State oil and gas leases including all or portions of the following lands:

**Umiat Meridian, Alaska**

**T. 12 N., R. 5 E.,**

Secs. 24 and 25, all;  
Sec. 26, NE1/4, NE1/4NW1/4, and E1/2SE1/4;  
Sec. 36, N1/2, N1/2SW1/4, SE1/4SW1/4, and SE1/4.

**T. 11 N., R. 5 E.,**

Sec. 1, E1/2 and E1/2W1/2;  
Secs. 12 and 13, all;  
Sec. 14, E1/2, E1/2NW1/4, SW1/4NW1/4, and SW1/4;  
Sec. 15, SE1/4SE1/4;  
Sec. 22, E1/2, E1/2SW1/4, and SW1/4SW1/4;  
Secs. 23, 24, 27, and 34, protracted, all.

**T. 10 N., R. 5 E.,**

Secs. 3 and 4, all.  
Sec. 5: E1/2, SE1/4NW1/4, E1/2SW1/4, and SW1/4SW1/4.

**T. 11 N., R. 6 E.,**

Secs. 1 thru 4, 9 thru 12, all.

In accordance with 11 AAC 83.356, geological, geophysical, and engineering information were submitted in support of the application to expand the PKU. The application will be approved if consistent with 11 AAC 83.303 and other applicable statutes and regulations.

You may review the non-confidential portions of the application on the Division's website <http://dog.dnr.alaska.gov/Units/Units.htm>, in-person at the Division's office, or by writing to Division of Oil & Gas, Units Section, 550 West 7th Avenue, Suite 1100, Anchorage, Alaska 99501-3560. The Division charges a photocopy fee of \$.25 per sheet, per 11 AAC 05.010(a)(16)(C).

Any person may file written comments on the application. Comments must be received by 4:30 p.m., Alaska Time, Monday, October 31, 2016 and should be mailed to the Division of Oil and Gas, attention Kevin Pike, Unit Manager, at the above address. You may also submit comments via email to [DOG.Units@alaska.gov](mailto:DOG.Units@alaska.gov). The Division will consider all timely written comments and will evaluate the

application based on the criteria in 11 AAC 83.303 and 83.356. Within 60 days after the close of the comment period, the Division will issue a written decision to approve or deny the application. Individuals or groups of people with disabilities, who require special accommodations, auxiliary aids or services, or alternative communication formats, please contact Sean Clifton at (907) 296-8507, or TDD (907) 269-8411 (5 days before end of comment period).

This notice also appears on the State of Alaska website at <http://dnr.alaska.gov/commis/pic/pubnotfm>.



Corri A. Feige, Director  
Division of Oil and Gas

Date first published in newspaper: September 29, 2016  
16G-XX-XXX



**RECEIVED**

**SEP 19 2016**

**DIVISION OF  
OIL AND GAS**

September 19, 2016

Via Certified Mail and/or Hand Delivery

Andrew T. Mack, Commissioner  
Alaska Department of Natural Resources  
550 West 7<sup>th</sup> Avenue, Suite 1400  
Anchorage, AK 99501-3554

Rex Rock, Sr., President  
Arctic Slope Regional Corporation  
1230 Agvik Street  
Barrow, AK 99723-0129

**Subject: Application for the First Expansion of the Pikka Unit  
North Slope, Alaska**

Ladies and Gentlemen:

In accordance with 11 A.AC 83.306 and Section 12.1 of the Pikka Unit Agreement ("PUA"), Armstrong Energy, LLC ("Armstrong"), as Unit Operator and on behalf of the Pikka Unit ("PU") Working Interest Owners ("WIOs") hereby applies to the State of Alaska, Commissioner of the Department of Natural Resources ("State"), and the President of the Arctic Slope Regional Corporation ("ASRC") to approve the first expansion of the PU as described herein. The proposed expansion will add approximately 14,440 acres to the PU ("Expansion Area").

The Expansion Area includes those oil and gas leases listed as tracts 66-89 in Exhibit A attached hereto and shown on the map of the Expansion Area attached hereto as Exhibit B. Armstrong, Repsol E&P USA, Inc., and GMT Exploration Company LLC are the only PU WIOs and the only WIO's in the Expansion Area.

### **Exhibits**

The following exhibits are attached to this application for the first expansion of the PU:

Exhibit A	Revised Exhibit A to the PUA
Exhibit B	Revised Exhibit B to the PUA
Exhibit C	Geological, geophysical, engineering and well information (Armstrong requests CONFIDENTIALITY for the materials in Exhibit C pursuant to AS 38.05.035(a)(8), 11 AAC 82.810 and Section 3.8.6 of the PUA). Agreement
Exhibit D	approving the first expansion of the PU

## **State Criteria for Unit Expansion**

11 AAC 83.303 prescribes the criteria that the State shall utilize in its evaluation of a proposed Unit expansion. A Unit expansion shall be approved if it; 1) promotes the conservation of natural resources, 2) promotes the prevention of both environmental and economic waste, and 3) provides for the protection of all parties, including the State and ASRC. Armstrong respectfully submits that the proposed PU expansion satisfies these criteria while providing for the most comprehensive evaluation and development of the resources while preventing economic waste. Additionally, the Expansion Area is consistent with and falls entirely within the proposed development area under the Armstrong's ongoing Nanushuk Project Environmental Impact Statement.

### **Specific 11 AAC 83.303(b) Criteria**

Armstrong submits the following information regarding each of the following criteria:

1. **Environmental Costs and Benefits of Unitized Exploration and Development** [11 AAC 83.303(b)(1)]  
Adding the Expansion Area to the PU minimizes the environmental costs of developing the leases for oil and gas production. As part of the PU, production would be processed through the same facilities as the other PU lands proposed for development under the Nanushuk Project. The alignment of working interest ownership between the Expansion Area and PU will facilitate the use of the same infrastructure and facilities. Avoiding duplicative infrastructure and facilities will decrease environmental impacts.
2. **Geological and Engineering Characteristics** [11 AAC 83.303(b)(2)]  
See Exhibit C- Geological, geophysical, engineering and well information (Armstrong requests CONFIDENTIALITY for the materials in Exhibit C pursuant to AS 38.05.035(a)(8), 11 AAC 82.810 and Section 3.8.6 of the PUA).
3. **Prior Exploration Activities** [11 AAC 83.303(b)(2)]  
A joint venture between PU WIOs commenced the most recent exploration activity surrounding the PU Expansion Area in 2012. Since then the PU WIOs have drilled 14 wells and side-tracks that have resulted in numerous hydrocarbon discoveries within the PU and the proposed Expansion Area. Between 2012 and 2013 the PU WIOs drilled seven wells and side-tracks surrounding the Expansion Area in order to further delineate and test Jurassic and Cretaceous discoveries within the PU and Expansion Area, including the; Qugruk#2, Qugruk#1, Qugruk#1ST1, Qugruk#6, Qugruk#6ST1, Qugruk#3, and the Qugruk#3A wells. Between 2014 and 2015 the PU WIOs drilled an additional seven wells and side-tracks surrounding the Expansion Area in order to further delineate and test Jurassic and Cretaceous discoveries within the PU and Expansion Area, including the; Qugruk#5, Qugruk#5A, Qugruk#7, Qugruk#301, Qugruk#8, Qugruk#9, and Qugruk#9A wells. The PU WIOs have also acquired several hundred square miles of 3D seismic data over the PU and the proposed Expansion Area. In addition to shooting modern high effort 3D seismic and licensing legacy 3D seismic data over the PU and the proposed Expansion Area, PU WIOs have completed several seismic processing projects

on said 3D seismic surveys. The seismic surveys have been used to map both structural and stratigraphic components of reservoirs discovered and delineated since the PU WIOs commenced drilling in and around the PU and Expansion Area in 2012.

**4. Plans for Exploration and Development of the Expansion Area [11 AAC 83.3031(b)(4)]**

The Expansion Area is needed to accommodate the entirety of the proposed Nanushuk Project development drilling plan submitted in June 2015 in the U.S. Army Corps of Engineers Application for Department of the Army Permit. The western portion of the Expansion Area could account for up to 62 wellbores or partial wellbores targeting the Nanushuk, Alpine, and Kupuruk formations and the eastern portion of the Expansion Area could account for up to 16 wellbores or partial wellbores targeting the Alpine formation. Additionally, Armstrong has surveyed, staked, and applied for permits to drill the Pikka #1 and Pikka #1A delineation wells within the Expansion Area.

**5. Economic Costs and Benefits to the State [11 AAC 83.303(b)(5)]**

One of the primary goals of unitization is to protect all parties with an economic interest in one or more common hydrocarbon accumulations. The inclusion of the Expansion Area within the PU accomplishes this goal. By maximizing the physical recovery of hydrocarbons from the Expansion Area the interests of the State and ASRC are protected. Maximizing hydrocarbon recovery through efficient development and coordinated operations through unitization assures the State and ASRC production-based revenue in the form of royalties and taxes is also maximized. Expanding the PU to include the Expansion Area would expedite the development of the proposed Nanushuk Project and the receipt of revenues by the State and ASRC therefrom. The impacts to the area's cultural, biological, and environmental resources will also be minimized.

**Additional Unit Expansion Information**

Section 12.1 of the PUA provides that the Unit Area can be expanded to include any additional lands determined to overlie any Reservoir or potential hydrocarbon accumulation, any part of which is within the Unit Area, or to include any additional lands regarded as reasonably necessary to facilitate production.

Attached hereto as Exhibit D is an executed copy of an agreement, whereby all PU WIOs have approved this requested expansion.

**Proposed Effective Date**

Armstrong requests that the effective date of this expansion be granted effective as of September 1, 2016.

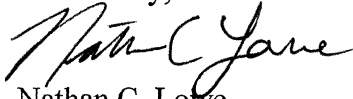
**Unit Application Copies and Fee**

The State and ASRC are both receiving three (3) copies of this application which include non-confidential associated documents and two (2) additional copies of Exhibit C which includes

CONFIDENTIAL material that directly supports this application. Check number 1994 in the amount of \$500.00 payable to the Department of Natural Resources, State of Alaska is attached as payment of the application fee prescribed by 11 AAC 05.010(10)(E) for expansions of unit areas.

If you or your staff have any questions or should you require additional information, please do not hesitate to call me at (303) 623-1821 or email me at [Nate@armstrongoilandgas.com](mailto:Nate@armstrongoilandgas.com).

Yours truly,

A handwritten signature in black ink, appearing to read "Nate Lowe", written in a cursive style.

Nathan C. Lowe  
Land Manager

Cc: Corri Feige, Director, Division of Oil and Gas  
Land Department, ASRC

STATE OF ALASKA  
DEPARTMENT OF NATURAL RESOURCES  
SUPPORT SERVICES DIVISION  
FINANCIAL SERVICES SECTION  
550 W 7TH AVE SUITE 1410  
ANCHORAGE AK 99501-3561  
(907) 269-8500

REC DATE	- AGREEMENT NUMBER	--	CUST NO	RECEIPT DESCRIPTION
09/19/2016	ADL	392968	49929	4140266 OIL AND GAS FILING FEE

ARMSTRONG ENERGY, LLC  
1421 BLAKE STREET  
DENVER CO 80202

CHECK NUMBER	1994	CASH AMOUNT	\$0.00
		RECEIPTED AMOUNT	\$500.00

REMITTER: ARMSTRONG ENERGY, LLC  
1421 BLAKE STREET  
DENVER CO 80202

COMMENTS: JF-UNIT EXPANSION FEE FOR PIKKA UNIT

RECEIPT - DO NOT PAY

Exhibit A  
To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
1	State of AK ADL 391391	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract: 417  T. 014N., R. 006E., Umiat Meridian, Alaska.  Section 19, Protracted, All tide and submerged lands lying shoreward of line fixed by coordinates found in Exhibit A of the Final Decree in U.S. v. Alaska, No. 84 Original, 119.16 acres; Section 30, Protracted, All, 620.00 acres; Section 31, Protracted, All, 623.00 acres;  The Final Decree in U.S. v. Alaska, No. 84 Original, fixed the offshore boundary between the United States and the State of Alaska in the Chukchi and Beaufort Seas. The acreage was taken from the Alaska's Seaward Boundary diagram depicting the offshore federal/state boundary approved by the State of Alaska on April 15, 1996.	1362.16	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
2	State of AK ADL 391395	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract 426  T. 014N., R. 005E., Umiat Meridian, Alaska.  Section 24, Protracted, All tide and submerged lands lying shoreward of line fixed by coordinates found in Exhibit A of the Final Decree in U.S. v. Alaska, No. 84 Original, 13.71 acres; Section 25, Protracted, All tide and submerged lands lying shoreward of line fixed by coordinates found in Exhibit A of the Final Decree in U.S. v. Alaska, No. 84 Original, 635.35 acres; Section 26, Protracted, All tide and submerged lands lying shoreward of line fixed by coordinates found in Exhibit A of the Final Decree in U.S. v. Alaska, No. 84 Original, 594.15 acres; Section 35, Protracted, All, 640.00 acres; Section 36, Protracted, All, 640.00 acres;  The Final Decree in U.S. v. Alaska, No. 84 Original, fixed the offshore boundary between the United States and the State of Alaska in the Chukchi and Beaufort Seas. The acreage was taken from the Alaska's Seaward Boundary diagram depicting the offshore federal/state boundary approved by the State of Alaska on April 15, 1996.	2523.21	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
3	State of AK ADL 391396	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract: 427  T. 014N., R. 005E., Umiat Meridian, Alaska.  Section 27, Protracted, All tide and submerged lands lying shoreward of line fixed by coordinates found in Exhibit A of the Final Decree in U.S. v. Alaska, No. 84 Original, 454.10 acres; Section 34, Protracted, All, 640.00 acres;  The Final Decree in U.S. v. Alaska, No. 84 Original, fixed the offshore boundary between the United States and the State of Alaska in the Chukchi and Beaufort Seas. The acreage was taken from the Alaska's Seaward Boundary diagram depicting the offshore federal/state boundary approved by the State of Alaska on April 15, 1996.	1094.10	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%



Exhibit A  
To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
4	State of AK ADL 391393	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract: 419  T. 013N., R. 005E., Umiat Meridian, Alaska.  Section 3, Protracted, All, 640.00 acres;	640.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
5	State of AK ADL 391392	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract 418  T. 013N., R. 005E., Tract A, Umiat Meridian, Alaska.  Section 11, Unsurveyed, All uplands, including the bed of the Elaktoveach Channel, 205.54 acres; Section 12, Unsurveyed, All uplands, including the bed of the Elaktoveach Channel, 426.42 acres;  T. 013N., R. 005E., Umiat Meridian, Alaska.  Section 1, Protracted, All, 640.00 acres; Section 2, Protracted, All, 640.00 acres; Section 11, Unsurveyed, All tide and submerged lands, 434.46 acres; Section 12, Unsurveyed, All tide and submerged lands, 213.58 acres;	2560.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
6	State of AK ADL 391387	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract: 413  T. 013N., R. 006E., Umiat Meridian, Alaska.  Section 6, Protracted, All, 625.00 acres; Section 7, Unsurveyed, All tide and submerged lands, 151.64 acres; Section 8, Unsurveyed, All tide and submerged lands, 284.19 acres;  T. 013N., R. 006E., Tract A, Umiat Meridian, Alaska.  Section 7, Unsurveyed, All uplands, 476.36 acres; Section 8, Unsurveyed, All uplands, 355.81 acres;	1893.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

Exhibit A  
To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
7	State of AK ADL 391303	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 412  T. 13N., R. 6E., Umiat Meridian, Alaska.  Section 9, Unsurveyed, All tide and submerged lands, 156.70 acres; Section 10, Unsurveyed, All tide and submerged lands, 168.45 acres;  T. 13N., R. 6E., Tract A, Umiat Meridian, Alaska.  Section 9, Unsurveyed, All uplands, 483.30 acres; Section 10, Unsurveyed, All uplands, 471.55 acres;	1280.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 0.76808% Edgar Kerr 0.03990% Jesse V. Sommer 0.03990% Jeffery A. Lyslo 0.03990% Edward S. Smida 0.02494% Edward Y. Teng 0.02494% Colby VanDenburg 0.00998% Patricia M. Reed 0.00998% Mathew X. Furin 0.03990% GMT Exploration Company LLC 0.33250% Andrew J Bachner 1.80000% Keith C Forsgren 0.20000%
8	State of AK ADL 391566	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	10/1/2010	Tract 411  T. 013 N., R. 006 E., Umiat Meridian, Alaska.  Section 1, Unsurveyed, All tide and submerged lands, 617.37 acres; Section 2, Unsurveyed, All tide and submerged lands, 635.75 acres; Section 11, Unsurveyed, All tide and submerged lands, 150.22 acres; Section 12, Unsurveyed, All tide and submerged lands, 179.17 acres;  T. 013 N., R. 006 E., Tract A, Umiat Meridian, Alaska.  Section 1, Unsurveyed, All uplands, 22.63 acres; Section 2, Unsurveyed, All uplands, 4.25 acres; Section 11, Unsurveyed, All uplands, 489.78 acres; Section 12, Unsurveyed, All uplands, 460.83 acres;	2560.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
9	State of AK ADL 391388	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract: 414  T. 013N., R. 006E., Umiat Meridian, Alaska.  Section 13, Surveyed by Protraction, All including the beds of the Colville River and the Kupigruak Channel, 640.00 acres; Section 14, Surveyed by Protraction, All including the bed of the Colville River, 640.00 acres; Section 23, Surveyed by Protraction, All including the bed of the Colville River, 640.00 acres; Section 24, Surveyed by Protraction, All including the beds of the Colville River and the Kupigruak Channel, 640.00 acres;	2560.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

Exhibit A  
To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
10	State of AK ADL 391457	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1209  T. 013N., R. 006E., Tract A, Umiat Meridian, Alaska.  Section 15, Surveyed by protraction, All, including the bed of the Colville River, 640.00 acres; Section 16, Surveyed by protraction, All, including the bed of the Colville River, 640.00 acres; Section 21, Surveyed by protraction, All, including the bed of the Colville River, 640.00 acres; Section 22, Surveyed by protraction, All, including the bed of the Colville River, 640.00 acres;	2560.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
11	State of AK ADL 391458	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1210  T. 013N., R. 006E., Tract A, Umiat Meridian, Alaska.  Section 17, Surveyed by protraction, All, 640.00 acres; Section 18, Surveyed by protraction, All, including the bed of the Elaktoveach Channel, 631.00 acres; Section 19, Surveyed by protraction, All, including the bed of the Elaktoveach Channel, 633.00 acres; Section 20, Surveyed by protraction, All, including the beds of the Elaktoveach Channel and the Colville River, 640.00 acres;	2544.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
12	State of AK ADL 391394	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2009	Tract: 421  T. 013N., R. 005E., Umiat Meridian, Alaska.  Section 14, Unsurveyed, All tide and submerged lands, 163.42 acres;  T. 013N., R. 005E., Tract A, Umiat Meridian, Alaska.  Section 13, Unsurveyed, All uplands, including the bed of the Elaktoveach Channel, 640.00 acres; Section 14, Unsurveyed, All uplands, 476.58 acres; Section 23, Unsurveyed, All, 640.00 acres; Section 24, Unsurveyed, All, 640.00 acres;	2560.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
13	State of AK ADL 391456	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1208  T. 013N., R. 005E., Tract A, Umiat Meridian, Alaska.  Section 25, Unsurveyed, All, including the beds of all meanderable waterbodies, 640.00 acres;	640.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

Exhibit A  
To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
14	State of AK ADL 391461	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1213  T. 013N., R. 006E., Tract A, Umiat Meridian, Alaska.  Section 29, Surveyed by protraction, All, including the beds of the Colville River and the Elaktoveach Channel, 640.00 acres; Section 30, Surveyed by protraction, All, including the bed of the Elaktoveach Channel, 636.00 acres; Section 31, Surveyed by protraction, All, including the beds of the Elaktoveach Channel and the unnamed lake, 639.00 acres; Section 32, Surveyed by protraction, All, including the beds of the Colville River and the Elaktoveach Channel, 640.00 acres;	2555.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
15	State of AK ADL 391460	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1212  T. 013N., R. 006E., Tract A, Umiat Meridian, Alaska.  Section 27, Surveyed by protraction, All, including the beds of the Colville River and the unnamed lake, 640.00 acres; Section 28, Surveyed by protraction, All, including the bed of the Colville River, 640.00 acres; Section 33, Surveyed by protraction, All, including the beds of the Colville River and the unnamed lake, 640.00 acres; Section 34, Surveyed by protraction, All, including the bed of the Colville River, 640.00 acres;	2560.00	State of AK 100%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
16	State of AK ADL 391459	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1211  T. 013N., R. 006E., Tract B, Umiat Meridian, Alaska.  Section 25, Unsurveyed, All, including that portion of ASLS 88-37 Lot 1 within Section 25 and the beds of the Colville River and Kupiguak Channel, 640.00 acres; Section 26, Unsurveyed, All, including the bed of the Colville River, 640.00 acres; Section 35, Unsurveyed, All, including the bed of the Colville River, 640.00 acres; Section 36, Unsurveyed, All, including that portion of ASLS 88-37 Lot 1 within Section 36 and the bed of the Kupiguak Channel, 640.00 acres;	2560.00	State of AK 100%	State of AK 16.66667%	
17	State of AK ADL 392111	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	12/1/2012	Tract 1145  T. 012 N., R 006E., Umiat Meridian, Alaska Section 1, Surveyed, Lots 1-3, Lots 3-5 of U.S. Survey 9999 and the bed of the Colville Reiver, 640.00 acres	640.00	State of AK 84.52% ASRC 15.48%	State of AK 14.08667% ASRC 2.58000%	
18	State of AK ADL 392257	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	12/1/2012	Tract 1145  T. 012 N., R 006E., Umiat Meridian, Alaska Section 2, Surveyed, Lots 1 and 2, Lots 2-5 of U.S. Survey 9999 and the bed of the Colville Reiver, 640.00 acres	640.00	State of AK 78.23% ASRC 21.77%	State of AK 13.03834% ASRC 3.62833%	

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
19	State of AK ADL 391450	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1146  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 3, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 62.58% ASRC 37.42%	State of AK 10.43000% ASRC 6.23667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
20	State of AK ADL 392998	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1146  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 4, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 69.56% ASRC 30.44%	State of AK 11.59334% ASRC 5.07333%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
21	State of AK ADL 391451	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1147  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 5, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 60.43% ASRC 39.57%	State of AK 10.07167% ASRC 6.59500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
22	State of AK ADL 393000	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1147  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 6, Surveyed by protraction, All, 577.00 acres;	577.00	State of AK 100.00%	State of AK 16.66667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
23	State of AK ADL 393001	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1147  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 7, Surveyed by protraction, All, 580.00 acres;	580.00	State of AK 60.88% ASRC 39.12%	State of AK 10.14667% ASRC 6.52000%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
24	State of AK ADL 393002	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1147  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 8, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 62.13% ASRC 37.87%	State of AK 10.35500% ASRC 6.31167%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
25	State of AK ADL 392999	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1146  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 9, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 63.98% ASRC 36.02%	State of AK 10.66334% ASRC 6.22333%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
26	State of AK ADL 392112	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	12/1/2012	Tract 1146  T. 012 N., R 006E., Umiat Meridian, Alaska Section 10, Surveyed, Lots 1-4, Lot 1 of U.S. Survey 9999 and the bed of the Colville Reiver, 640.00 acres	640.00	State of AK 71.73% ASRC 28.27%	State of AK 11.95500% ASRC 4.71167%	
27	State of AK ADL 392258	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	12/1/2012	Tract 1145  T. 012 N., R 006E., Umiat Meridian, Alaska Section 11, Surveyed, Lots 1-4, Lots 1-3 of U.S. Survey 9999 and the bed of the Colville Reiver, 640.00 acres	640.00	State of AK 90.99% ASRC 9.01%	State of AK 15.16500% ASRC 1.50167%	
28	State of AK ADL 391449	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1145  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 12, Surveyed by protraction, All, including the beds of the Colville River and Kupigruak Channel and excluding U.S. Survey 9124, 638.13 acres;  U.S. Survey. That portion of U.S. Survey 9124 located in Section 12, 1.87 acres;	640.00	State of AK 76.26% ASRC 23.74%	State of AK 12.71000% ASRC 3.95667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
29	State of AK ADL 391452	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1148  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 13, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 76.78% ASRC 23.22%	State of AK 12.79667% ASRC 3.87000%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
30	State of AK ADL 393003	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1148  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 14, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 67.26% ASRC 32.74%	State of AK 11.21000% ASRC 5.45667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
31	State of AK ADL 391453	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1149  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 15, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 77.57% ASRC 22.43%	State of AK 12.92834% ASRC 3.73833%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
32	State of AK ADL 393006	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1149  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 16, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 71.89% ASRC 28.11%	State of AK 11.98167% ASRC 4.68500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
33	State of AK ADL 391454	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1150  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 17, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 63.39% ASRC 36.61%	State of AK 10.56500% ASRC 6.10167%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
34	State of AK ADL 393009	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1150  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 18, Surveyed by protraction, All, 583.00 acres;	583.00	State of AK 59.41% ASRC 40.59%	State of AK 9.90167% ASRC 6.73500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
35	State of AK ADL 393010	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1150  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 19, Surveyed by protraction, All, 585.00 acres;	585.00	State of AK 61.46% ASRC 38.54%	State of AK 10.24334% ASRC 6.42333%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
36	State of AK ADL 393011	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1150  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 20, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 74.29% ASRC 25.71%	State of AK 12.38167% ASRC 4.28500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
37	State of AK ADL 393007	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1149  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 21, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 65.65% ASRC 34.35%	State of AK 10.94167% ASRC 5.72500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
38	State of AK ADL 393008	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1149  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 22, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 71.71% ASRC 28.29%	State of AK 11.95167% ASRC 4.71500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%



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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
39	State of AK ADL 393004	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1148  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 23, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 77.39% ASRC 22.61%	State of AK 12.89834% ASRC 3.76833%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
40	State of AK ADL 393005	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1148  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 24, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 59.42% ASRC 40.58%	State of AK 9.90334% ASRC 6.76333%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
41	State of AK ADL 391553	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	7/1/2010	Tract 1151  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 25, Surveyed by Protraction, All, including the bed of the Miluveach River, 640.00 acres;	640.00	State of AK 55.42% ASRC 44.58%	State of AK 9.23667% ASRC 7.43000%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
42	State of AK ADL 393012	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	7/1/2010	Tract 1151  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 26, Surveyed by Protraction, All, including the bed of the Colville River, 640.00 acres;	640.00	State of AK 50.74% ASRC 49.26%	State of AK 8.45667% ASRC 8.21000%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
43	State of AK ADL 391322	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1152  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 27, Surveyed by Protraction, All including the bed of the Colville River, 640.00 acres;	640.00	State of AK 71.75% ASRC 28.25%	State of AK 11.95834% ASRC 4.70833%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%

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44	State of AK ADL 393015	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1152  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 28, Surveyed by Protraction, All including the bed of the Colville River, 640.00 acres;	640.00	State of AK 68.31% ASRC 31.69%	State of AK 11.38500% ASRC 5.28167%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
45	State of AK ADL 391455	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1153  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 29, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 53.60% ASRC 46.40%	State of AK 8.93334% ASRC 7.73333%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
46	State of AK ADL 393018	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1153  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 30, Surveyed by protraction, All, 588.00 acres;	588.00	State of AK 70.33% ASRC 29.67%	State of AK 11.72167% ASRC 4.94500%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
47	State of AK ADL 393019	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1153  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 31, Surveyed by protraction, All, 591.00 acres;	591.00	State of AK 66.90% ASRC 33.10%	State of AK 11.15000% ASRC 5.51667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
48	State of AK ADL 393020	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1153  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 32, Surveyed by protraction, All, 640.00 acres;	640.00	State of AK 73.41% ASRC 26.59%	State of AK 12.23500% ASRC 4.43167%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
49	State of AK ADL 393016	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1152  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 33, Surveyed by Protraction, All including the bed of the Colville River, 640.00 acres;	640.00	State of AK 66.83% ASRC 33.17%	State of AK 11.13834% ASRC 5.52833%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
50	State of AK ADL 393017	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1152  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 34, Surveyed by Protraction, All, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33334% ASRC 8.33333%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
51	State of AK ADL 393013	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	7/1/2010	Tract 1151  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 35, Surveyed by Protraction, All, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.0%	State of AK 8.33334% ASRC 8.33333%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%
52	State of AK ADL 393014	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	7/1/2010	Tract 1151  T. 012N., R. 006E., Umiat Meridian, Alaska.  Section 36, Surveyed by Protraction, All, including the bed of the Miluveach River, 640.00 acres;	640.00	State of AK 52.20% ASRC 47.80%	State of AK 8.70000% ASRC 7.96667%	William D. Armstrong 1.92500% Edgar Kerr 0.10000% Jesse V. Sommer 0.10000% Jeffery A. Lyslo 0.10000% Edward S. Smida 0.06250% Edward Y. Teng 0.06250% Colby VanDenburg 0.02500% Patricia M. Reed 0.02500% Mathew X. Furin 0.10000% GMT Exploration Company LLC 0.83333%

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
53	State of AK ADL 391445	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1048  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 5, Surveyed by protraction, All, including the beds of all meanderable waterbodies, 640.00 acres;	640.00	State of AK 58.02% ASRC 41.98%	State of AK 9.67000% ASRC 6.99667%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
54	State of AK ADL 393021	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1048  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 6, Surveyed by protraction, All, including the bed of the Colville River and all meanderable waterbodies, 593.00 acres;	593.00	State of AK 80.78% ASRC 19.22%	State of AK 13.46334% ASRC 3.20333%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
55	State of AK ADL 393022	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1048  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 7, Surveyed by protraction, All, including the bed of the Colville River and all meanderable waterbodies, 596.00 acres;	596.00	State of AK 60.52% ASRC 39.48%	State of AK 10.08667% ASRC 6.58000%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
56	State of AK ADL 393023	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	6/1/2009	Tract 1048  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 8, Surveyed by protraction, All, including the beds of all meanderable waterbodies, 640.00 acres;	640.00	State of AK 55.92% ASRC 44.08%	State of AK 9.32000% ASRC 7.34667%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%

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To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
57	State of AK ADL 391320	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1051  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 17, Surveyed by Protraction, All including the bed of the Kachemach River, 640.00 acres;	640.00	State of AK 55.07% ASRC 44.93%	State of AK 9.17834% ASRC 7.48833%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
58	State of AK ADL 393024	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1051  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 18, Surveyed by Protraction, All including the bed of the Kachemach River, 599.00 acres;	599.00	State of AK 54.23% ASRC 45.77%	State of AK 9.04334% ASRC 7.62833%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
59	State of AK ADL 393025	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1051  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 19, Surveyed by Protraction, All including the bed of the Kachemach River, 601.00 acres;	601.00	State of AK 50.50% ASRC 49.50%	State of AK 8.41667% ASRC 8.25000%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
60	State of AK ADL 393026	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	8/1/2008	Tract 1051  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 20, Surveyed by Protraction, All including the bed of the Kachemach River, 640.00 acres;	640.00	State of AK 54.83% ASRC 45.17%	State of AK 9.13834% ASRC 7.52833%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%

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To the Pikka Unit Agreement dated effective June 1, 2015

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
61	State of AK ADL 391022	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2006	Tract 1043  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 25, Surveyed by Protraction, All, including the beds of the unnamed lake and the Colville River, 640.00 acres;	640.00	State of AK 50.65% ASRC 49.35%	State of AK 8.44167% ASRC 8.22500%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
62	State of AK ADL 393027	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2006	Tract 1043  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 26, Surveyed by Protraction, All, including the bed of the Colville River, 640.00 acres;	640.00	State of AK 79.61% ASRC 20.39%	State of AK 13.26834% ASRC 3.39833%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
63	State of AK ADL 393028	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2006	Tract 1043  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 35, Surveyed by Protraction, All, including the beds of the unnamed lake and the Colville River, 640.00 acres;	640.00	State of AK 69.63% ASRC 30.37%	State of AK 11.60500% ASRC 5.06167%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
64	State of AK ADL 393029	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2006	Tract 1043  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 36, Surveyed, By Protraction, All, including the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 53.40% ASRC 46.60%	State of AK 8.90000% ASRC 7.76667%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
65	State of AK ADL 391013	Repsol E&P USA Inc. Armstrong Energy, LLC GMT Exploration Company, LLC	49.00% 38.25% 12.75%	9/1/2006	Tract 919  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 2, Surveyed by Protraction, All, including the beds of the unnamed lakes, 640.00 Acres;	640.00	State of AK 63.30% ASRC 36.70%	State of AK 10.55000% ASRC 6.11667%	William D. Armstrong 0.96443% Edgar Kerr 0.05010% Jesse V. Sommer 0.05010% Jeffery A. Lyslo 0.05010% Edward S. Smida 0.03131% Edward Y. Teng 0.03131% Colby VanDenburg 0.01253% Patricia M. Reed 0.01253% Mathew X. Furin 0.05010% GMT Exploration Company LLC 0.41750% AVCG, LLC 1.66333%
66	State of AK ADL 392968	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1139  T. 012N., R. 005E., Umiat Meridian, Alaska.  Section 24, Surveyed by Protraction, Lots 1 and 2, portion of Tract 41, and the beds of the unnamed lakes and the unnamed creek, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33333% ASRC 8.33334%	
67	State of AK ADL 392970	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1142  T. 012N., R. 005E., Umiat Meridian, Alaska.  Section 25, Surveyed by Protraction, All, portion of Tract 41, and the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 59.71% ASRC 40.29%	State of AK 9.95167% ASRC 6.71500%	
68	State of AK ADL 392992	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1142  T. 012N, R. 005E, Umiat Meridian, Alaska.  Section 26, Surveyed by Protraction, Portion of Lots 1 and 2, and the bed of the unnamed lake in the NE1/4, NE1/4NW1/4, and E1/2SE1/4, 280.00 acres;	280.00	State of AK 100%	State of AK 16.66667%	
69	State of AK ADL 392991	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1142  T. 012N, R. 005E, Umiat Meridian, Alaska.  Section 36, Surveyed by Protraction, Portion of Lots 1 through 4, Tract 41, and the beds of the unnamed lakes in the N1/2, N1/2SW1/4, SE1/4SW1/4, and SE1/4, 600.00 acres;	600.00	State of AK 58.42% ASRC 41.58%	State of AK 9.73667% ASRC 6.93000%	
70	State of AK ADL 392958	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1037  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 1, Surveyed by Protraction, Portions of Lots 1 and 3, Tract 39, and the beds of the unnamed lakes in the E1/2 and E1/2W1/2, 480.00 acres;	480.00	State of AK 63.69% ASRC 36.31%	State of AK 10.61500% ASRC 6.05167%	
71	State of AK ADL 392977	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1037  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 12: Surveyed by Protraction, Lots 1 through 6, portion of Tract 39, and the beds of the unnamed lakes and unnamed creeks, 640.00 acres;	640.00	State of AK 82.78% ASRC 17.22%	State of AK 13.79667% ASRC 2.87000%	

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Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
72	State of AK ADL 392959	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 13, Surveyed by Protraction, Lots 1 and 2, portion of Tract 39, and the bed of the unnamed creek, 640.00 acres;	640.00	State of AK 77.48% ASRC 22.52%	State of AK 12.91334% ASRC 3.75333%	
73	State of AK ADL 392978	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 14, Surveyed by Protraction, Portions of Lots 1 through 4, and the beds of the unnamed lakes and unnamed creeks in the E1/2, E1/2NW1/4, SW1/4NW1/4, and SW1/4, 600.00 acres;	600.00	State of AK 62.79% ASRC 37.21%	State of AK 10.46500% ASRC 6.20167%	
74	State of AK ADL 392960	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1041  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 15, Surveyed by Protraction, Portion of Lot 1, and the beds of the unnamed lakes in the SE1/4SE1/4, 40.00 acres;	40.00	State of AK 50.01% ASRC 49.99%	State of AK 8.33500% ASRC 8.33167%	
75	State of AK ADL 392981	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1041  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 22, Surveyed by Protraction, Portions of Lots 1 and 2, and the beds of the unnamed lakes in the E1/2, E1/2SW1/4, and SW1/4SW1/4, 440.00 acres;	440.00	State of AK 73.39% ASRC 26.61%	State of AK 12.23167% ASRC 4.43500%	
76	State of AK ADL 392979	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 23, Surveyed by Protraction, Lots 1 and 2, portion of Tract 39, and the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 68.35% ASRC 31.65%	State of AK 11.39167% ASRC 5.27500%	
77	State of AK ADL 392980	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 24, Surveyed by Protraction, Lots 1 through 3, portion of Tract 39, and the bed of the Kachemach River, 640.00 acres;	640.00	State of AK 66.11% ASRC 33.89%	State of AK 11.01834% ASRC 5.64833%	
78	State of AK ADL 392961	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1044  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 27, Surveyed by Protraction, Lots 1 and 2, portion of Tract 39, and the bed of the unnamed lake, 640.00 acres;	640.00	State of AK 67.61% ASRC 32.39%	State of AK 11.26834% ASRC 5.39833%	



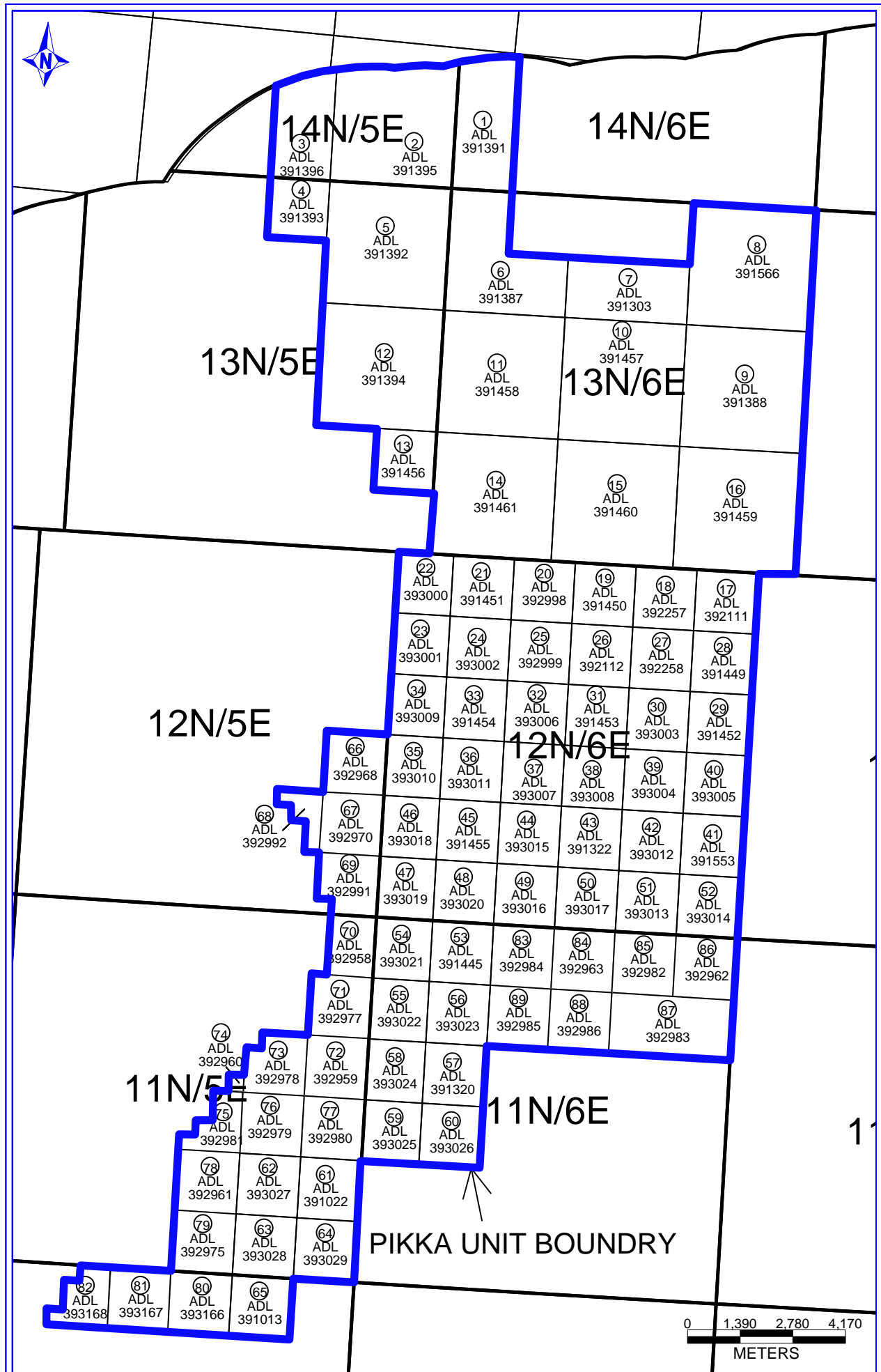
Exhibit A  
To the Pikka Unit Agreement dated effective June 1, 2015

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79	State of AK ADL 392975	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1044  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 34, Surveyed by Protraction, Lots 1 through 10, portions of Tracts 39 and 41, 640.00 acres;	640.00	State of AK 85.66% ASRC 14.34%	State of AK 14.27667% ASRC 2.39000%	
80	State of AK ADL 393166	Armstrong Energy, LLC	100.00%	7/1/2016	Tract: NS1306J  T. 010N, R. 005E, Umiat Meridian, Alaska.  Section 3: Surveyed by Protraction, Lots 1 through 3, and portion of Tracts 37 and 38, 640.00 acres;	640.00	State of AK 80.75% ASRC 19.25%	State of AK 13.45834% ASRC 3.20833%	
81	State of AK ADL 393167	Armstrong Energy, LLC	100.00%	7/1/2016	Tract: NS1307J  T. 010N, R. 005E, Umiat Meridian, Alaska.  Section 4: Surveyed by Protraction, All, including the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.333335% ASRC 8.333335%	
82	State of AK ADL 393168	Armstrong Energy, LLC	100.00%	7/1/2016	Tract: NS1308J  T. 010N, R. 005E, Umiat Meridian, Alaska.  Section 5: Surveyed by Protraction, Those portions of Lots 1 and 2, and the beds of the unnamed lakes in the E1/2, SE1/4NW1/4, E1/2SW1/4, and SW1/4SW1/4, 480.00 acres;	480.00	State of AK 50.00% ASRC 50.00%	State of AK 8.333335% ASRC 8.333335%	
83	State of AK ADL 392984	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 4, Surveyed by Protraction, Lots 1 through 4, and the bed of the unnamed lake, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33333% ASRC 8.33334%	
84	State of AK ADL 392963	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 3, Surveyed by Protraction, All, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33333% ASRC 8.33334%	
85	State of AK ADL 392982	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1046  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 2, Surveyed by Protraction, All, 640.00 acres;	640.00	State of AK 57.26% ASRC 42.74%	State of AK 9.54334% ASRC 7.12333%	
86	State of AK ADL 392962	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1046  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 1, Surveyed by Protraction, All, and the bed of Miluveach River, 640.00 acres;	640.00	State of AK 50.98% ASRC 49.02%	State of AK 8.49667% ASRC 8.17000%	

Exhibit A  
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87	State of AK ADL 392983	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1046  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 11, Surveyed by Protraction, Lots 1 through 3, and the bed of the unnamed lake, 640.00 acres; Section 12, Surveyed by Protraction, Lots 1 through 4, and the bed of the unnamed lake, 640.00 acres;	1280.00	State of AK 100%	State of AK 16.66667%	
88	State of AK ADL 392986	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047 T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 10, Surveyed by Protraction, All, and the bed of the unnamed lake, 640.00 acres;	640.00	State of AK 100%	State of AK 16.66667%	
89	State of AK ADL 392985	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 9, Surveyed by Protraction, Lots 1 and 2, and the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 50.16% ASRC 49.84%	State of AK 8.36000% ASRC 8.30667%	
						77744.47			

Exhibit B  
To the Pikka Unit Agreement dated effective June 1, 2015



**Exhibit C**  
***Proposed Pikka Unit Expansion***  
***Armstrong Energy, LLC***  
***September, 2016***



Materials in Exhibit C are submitted CONFIDENTIALLY  
pursuant to AS 38.05.035(a)(8), 11 AAC 82.810 and  
Section 3.8.6 of the Pikka Unit Agreement

Exhibit D

**AGREEMENT  
APPROVING THE FIRST EXPANSION OF  
THE PIKKA UNIT**

**A. RECITALS**

- a. The Pikka Unit ("PU") was approved effective June 1, 2015
- b. The first Expansion of the PU will be filed on or before September 19, 2016.
- c. The only PU Working Interest Owners ("WIOs") are Armstrong Energy, LLC ("Armstrong"), Repsol E&P USA Inc. ("Repsol"), and GMT Exploration Company, LLC ("GMT")
- c. In order to promote conservation, prevent waste and protect all parties in interest, the WIOs desire to expand the area covered by the PU to allow for further exploration and development of potential productive reservoirs. The WIOs desire to expand the PU to include the leases listed on Exhibit A and shown on Exhibit B ("Expansion Area").

**B. AGREEMENT**

- a. The WIOs have received notice of the proposed PU expansion.
- b. The WIOs hereby approve the expansion of the PU to include the Expansion Area as described in Exhibits A and B.
- c. In accordance with Section 12.1 of the PU Agreement, Armstrong, as Unit Operator, is authorized to file with the President and the Commissioner for the expansion of the PU.
- d. Armstrong, Repsol, and GMT are the only Working Interest Owners in the Expansion Area. Armstrong, Repsol and GMT signify their approval of the expansion of the PU include the Expansion Area by executing this agreement.
- e. This Agreement Approving the First Expansion of the Pikka Unit ("this Agreement") may be executed in one or more counterparts having the same effect as is all parties had executed the same.

Exhibit D

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates beside their respective signatures.

**PIKKA UNIT AND EXPANSION AREA WORKING INTEREST OWNERS:**

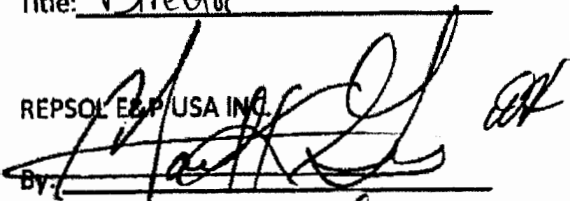
ARMSTRONG ENERGY, LLC

By: 

Date: \_\_\_\_\_

Title: Director

REPSOL E&P USA INC.

By: 

Date: \_\_\_\_\_

Title: VP - Land

GMT EXPLORATION, LLC

By: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Exhibit D

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates beside their respective signatures.

**PIKKA UNIT AND EXPANSION AREA WORKING INTEREST OWNERS:**

ARMSTRONG ENERGY, LLC

By: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

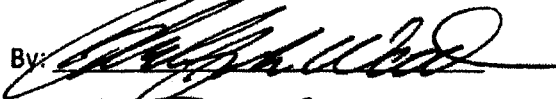
REPSOL E&P USA INC.

By: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

GMT EXPLORATION, LLC

By: 

Date: 9/15/2016

Title: Vice President Land

## Exhibit A

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
66	State of AK ADL 392968	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1139  T. 012N., R. 005E., Umiat Meridian, Alaska.  Section 24, Surveyed by Protraction, Lots 1 and 2, portion of Tract 41, and the beds of the unnamed lakes and the unnamed creek, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33333% ASRC 8.33334%	
67	State of AK ADL 392970	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1142  T. 012N., R. 005E., Umiat Meridian, Alaska.  Section 25, Surveyed by Protraction, All, portion of Tract 41, and the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 59.71% ASRC 40.29%	State of AK 9.95167% ASRC 6.71500%	
68	State of AK ADL 392992	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1142  T. 012N, R. 005E, Umiat Meridian, Alaska.  Section 26, Surveyed by Protraction, Portion of Lots 1 and 2, and the bed of the unnamed lake in the NE1/4, NE1/4NW1/4, and E1/2SE1/4, 280.00 acres;	280.00	State of AK 100%	State of AK 16.66667%	
69	State of AK ADL 392991	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1142  T. 012N, R. 005E, Umiat Meridian, Alaska.  Section 36, Surveyed by Protraction, Portion of Lots 1 through 4, Tract 41, and the beds of the unnamed lakes in the N1/2, N1/2SW1/4, SE1/4SW1/4, and SE1/4, 600.00 acres;	600.00	State of AK 58.42% ASRC 41.58%	State of AK 9.73667% ASRC 6.93000%	
70	State of AK ADL 392958	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1037  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 1, Surveyed by Protraction, Portions of Lots 1 and 3, Tract 39, and the beds of the unnamed lakes in the E1/2 and E1/2W1/2, 480.00 acres;	480.00	State of AK 63.69% ASRC 36.31%	State of AK 10.61500% ASRC 6.05167%	
71	State of AK ADL 392977	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1037  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 12: Surveyed by Protraction, Lots 1 through 6, portion of Tract 39, and the beds of the unnamed lakes and unnamed creeks, 640.00 acres;	640.00	State of AK 82.78% ASRC 17.22%	State of AK 13.79667% ASRC 2.87000%	



## Exhibit A

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
72	State of AK ADL 392959	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 13, Surveyed by Protraction, Lots 1 and 2, portion of Tract 39, and the bed of the unnamed creek, 640.00 acres;	640.00	State of AK 77.48% ASRC 22.52%	State of AK 12.91334% ASRC 3.75333%	
73	State of AK ADL 392978	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 14, Surveyed by Protraction, Portions of Lots 1 through 4, and the beds of the unnamed lakes and unnamed creeks in the E1/2, E1/2NW1/4, SW1/4NW1/4, and SW1/4, 600.00 acres;	600.00	State of AK 62.79% ASRC 37.21%	State of AK 10.46500% ASRC 6.20167%	
74	State of AK ADL 392960	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1041  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 15, Surveyed by Protraction, Portion of Lot 1, and the beds of the unnamed lakes in the SE1/4SE1/4, 40.00 acres;	40.00	State of AK 50.01% ASRC 49.99%	State of AK 8.33500% ASRC 8.33167%	
75	State of AK ADL 392981	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1041  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 22, Surveyed by Protraction, Portions of Lots 1 and 2, and the beds of the unnamed lakes in the E1/2, E1/2SW1/4, and SW1/4SW1/4, 440.00 acres;	440.00	State of AK 73.39% ASRC 26.61%	State of AK 12.23167% ASRC 4.43500%	
76	State of AK ADL 392979	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 23, Surveyed by Protraction, Lots 1 and 2, portion of Tract 39, and the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 68.35% ASRC 31.65%	State of AK 11.39167% ASRC 5.27500%	
77	State of AK ADL 392980	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1040  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 24, Surveyed by Protraction, Lots 1 through 3, portion of Tract 39, and the bed of the Kachemach River, 640.00 acres;	640.00	State of AK 66.11% ASRC 33.89%	State of AK 11.01834% ASRC 5.64833%	

## Exhibit A

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
78	State of AK ADL 392961	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1044  T. 011N., R. 005E., Umiat Meridian, Alaska.  Section 27, Surveyed by Protraction, Lots 1 and 2, portion of Tract 39, and the bed of the unnamed lake, 640.00 acres;	640.00	State of AK 67.61% ASRC 32.39%	State of AK 11.26834% ASRC 5.39833%	
79	State of AK ADL 392975	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1044  T. 011N, R. 005E, Umiat Meridian, Alaska.  Section 34, Surveyed by Protraction, Lots 1 through 10, portions of Tracts 39 and 41, 640.00 acres;	640.00	State of AK 85.66% ASRC 14.34%	State of AK 14.27667% ASRC 2.39000%	
80	State of AK ADL 393166	Armstrong Energy, LLC	100.00%	7/1/2016	Tract: NS1306J  T. 010N, R. 005E, Umiat Meridian, Alaska.  Section 3: Surveyed by Protraction, Lots 1 through 3, and portion of Tracts 37 and 38, 640.00 acres;	640.00	State of AK 80.75% ASRC 19.25%	State of AK 13.45834% ASRC 3.20833%	
81	State of AK ADL 393167	Armstrong Energy, LLC	100.00%	7/1/2016	Tract: NS1307J  T. 010N, R. 005E, Umiat Meridian, Alaska.  Section 4: Surveyed by Protraction, All, including the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.333335% ASRC 8.333335%	
82	State of AK ADL 393168	Armstrong Energy, LLC	100.00%	7/1/2016	Tract: NS1308J  T. 010N, R. 005E, Umiat Meridian, Alaska.  Section 5: Surveyed by Protraction, Those portions of Lots 1 and 2, and the beds of the unnamed lakes in the E1/2, SE1/4NW1/4, E1/2SW1/4, and SW1/4SW1/4, 480.00 acres;	480.00	State of AK 50.00% ASRC 50.00%	State of AK 8.333335% ASRC 8.333335%	
83	State of AK ADL 392984	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 4, Surveyed by Protraction, Lots 1 through 4, and the bed of the unnamed lake, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33333% ASRC 8.33334%	

Exhibit A

Unit Tract #	Lessor & Lease No.	Working Interest Owner	Working Interest	Effective Date	Description	Acreage	Mineral Interest	Royalty	ORR Burden
84	State of AK ADL 392963	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 3, Surveyed by Protraction, All, 640.00 acres;	640.00	State of AK 50.00% ASRC 50.00%	State of AK 8.33333% ASRC 8.33334%	
85	State of AK ADL 392982	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1046  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 2, Surveyed by Protraction, All, 640.00 acres;	640.00	State of AK 57.26% ASRC 42.74%	State of AK 9.54334% ASRC 7.12333%	
86	State of AK ADL 392962	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1046  T. 011N., R. 006E., Umiat Meridian, Alaska.  Section 1, Surveyed by Protraction, All, and the bed of Miluveach River, 640.00 acres;	640.00	State of AK 50.98% ASRC 49.02%	State of AK 8.49667% ASRC 8.17000%	
87	State of AK ADL 392983	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1046  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 11, Surveyed by Protraction, Lots 1 through 3, and the bed of the unnamed lake, 640.00 acres; Section 12, Surveyed by Protraction, Lots 1 through 4, and the bed of the unnamed lake, 640.00 acres;	1280.00	State of AK 100%	State of AK 16.66667%	
88	State of AK ADL 392986	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047 T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 10, Surveyed by Protraction, All, and the bed of the unnamed lake, 640.00 acres;	640.00	State of AK 100%	State of AK 16.66667%	
89	State of AK ADL 392985	Armstrong Energy, LLC	100.00%	5/1/2015	Tract: 1047  T. 011N, R. 006E, Umiat Meridian, Alaska.  Section 9, Surveyed by Protraction, Lots 1 and 2, and the beds of the unnamed lakes, 640.00 acres;	640.00	State of AK 50.16% ASRC 49.84%	State of AK 8.36000% ASRC 8.30667%	
						14440.00			

Exhibit B

