

IVAN RIVER UNIT

**APPROVAL OF THE APPLICATION FOR REVISION OF
IVAN RIVER GAS POOL #1 PARTICIPATING AREA AND
FORMATION OF THE STERLING-BELUGA GAS AND
TYONEK GAS PARTICIPATING AREAS
EFFECTIVE APRIL 1, 2010**

FINDINGS AND DECISION OF THE DIRECTOR,
DIVISION OF OIL AND GAS UNDER DELEGATION OF AUTHORITY
FROM THE COMMISSIONER,
DEPARTMENT OF NATURAL RESOURCES, STATE OF ALASKA

September 22, 2010

TABLE OF CONTENTS

I.	DECISION SUMMARY	3
II.	BACKGROUND	3
III.	APPLICATION	3
IV.	DISCUSSION OF DECISION CRITERIA.....	4
A.	Decision Criteria considered under 11 AAC 83.303(b).....	4
1.	The Environmental Costs and Benefits of Unitized Exploration or Development	4
2.	The Geological and Engineering Characteristics of the Reservoir and Prior Exploration Activities in the Unit Area	4
3.	Prior Exploration or Development	5
4.	The Economic Costs and Benefits to the State.....	6
B.	Decision Criteria considered under 11 AAC 83.303(a)	6
1.	Promote the Conservation of All Natural Resources.....	6
2.	The Prevention of Economic and Physical Waste.....	6
3.	The Protection of All Parties of Interest, Including the State.....	6
V.	FINDINGS AND DECISION.....	7
VI.	ATTACHMENTS.....	10
	Schedule 1 – Map of the Sterling-Beluga Gas Participating Area.....	11
	Schedule 2 - Description of Tracts and Ownership within the Sterling-Beluga Gas PA	13
	Schedule 1 - Map of the Tyonek Gas Participating Area	16
	Schedule 2 - Description of Tracts and Ownership within the Tyonek Gas PA.....	18

I. DECISION SUMMARY

On April 20, 2009, Union Oil Company of California (Union), as the designated Ivan River Unit Operator, submitted an Application for Revision of Ivan River Gas Pool #1 Participating Area, Establishment of Separate Participating Areas, Tyonek Gas Participating Area and Sterling-Beluga Gas Participating Area (Application) with the State of Alaska (State), Department of Natural Resources (DNR), Division of Oil and Gas (Division). Union proposes to replace the undefined Ivan River Gas Pool #1 Participating Area (PA) with two separate PAs for the Tyonek and Sterling-Beluga formations.

Based on all the data provided, I approve the formation of the Sterling-Beluga Gas PA containing 720.00 acres, and the Tyonek Gas PA containing 2,290.79 acres, and the termination of the Ivan River Gas Pool #1 PA in accordance with the criteria under 11 AAC 83.303. The Ivan River Unit (IRU) boundary remains unchanged.

This decision constitutes the written finding and decision required under 11 AAC 83.303 and is fully appealable. The Division finds that the approval of the Sterling-Beluga Gas PA and Tyonek Gas PA promotes conservation of all natural resources, promotes the prevention of economic and physical waste, and provides for the protection of all parties of interest, including the State.

II. BACKGROUND

On February 21, 1967, the DNR Commissioner (Commissioner) approved an application from Standard Oil Company of California (Standard Oil) for the IRU, encompassing 24,439 acres. The initial IRU Gas Pool #1 PA was approved effective February 21, 1967 based on the known aerial extent of the Tyonek formation. The IRU was voluntarily contracted to 1222.30 acres on November 1, 1969 to coincide with IRU Gas Pool #1 PA. After the IRU Well 14-31 was drilled in 1975, and based on seismic interpretation of the Tyonek formation, the IRU Gas Pool #1 PA and the IRU were expanded effective November 1, 1978 to its current configuration encompassing 2,295.34 acres. The IRU Gas Pool #1 PA contains Sterling, Beluga and Tyonek sands. However, because of infrastructure and marketing issues, the IRU 44-1 well did not commence production from the Tyonek formation until July 1990. Production from the Sterling-Beluga formation commenced in March 1993 from the IRU Well 44-36.

Over the years, the unit operator changed from Standard Oil of California, to Chevron USA, Inc. and finally to Union Oil of California in October 1988. When Chevron acquired Union in August 2005, Union became the beneficiary of expanded seismic data originally used by Chevron, but previously unavailable to Union. Based on an evaluation of all relevant data, Union submitted this Application to the Division.

III. APPLICATION

Union requests two separate participating areas be established for the Tyonek and Sterling-Beluga reservoirs under 11 AAC 83.351(b), which requires separate participating areas for each reservoir unless otherwise agreed to by all the working interest owners. Union no longer

consents to one participating area combining these two reservoirs. On May 1, 2009, the Division notified Union that it needed additional technical information to evaluate the geologic and engineering interpretation of the proposed revised participating area boundaries. Union provided additional information on May 5, 2009, and January 13, March 11, 25 and April 5, 15, 27, 2010.

11 AAC 83.351 (Participating area) does not require a public notice or notification to any other parties. 11 AAC 83.371 (Allocation of production and costs) only requires notification be given to the working interest owners and royalty owners before any disapproval of the proposed or revised allocation formula. Since the Commissioner is not disapproving Union's request, no notice is required. 11 AAC 83.356 (Unit area; contraction and expansion) only applies to a change in the unit boundary. There is no change to the IRU boundary as a result of this decision.

IV. DISCUSSION OF DECISION CRITERIA

The Commissioner reviews applications related to participating area formation and contraction under AS 38.05.180(p) and 11 AAC 83.303 – 11 AAC 83.395. By memorandum dated July 21, 1993, the Commissioner delegated this authority to the Director of the Division of Oil and Gas (Director). The Division's review of the Application is based on the criteria set out in 11 AAC 83.303 (a) and (b). A discussion of the subsection (b) criteria, as they apply to the Application, is set out directly below, followed by a discussion of the subsection (a) criteria.

A. Decision Criteria considered under 11 AAC 83.303(b)

1. The Environmental Costs and Benefits of Unitized Exploration or Development

Approval of a participating area has no direct environmental impact. This Decision is an administrative action and does not authorize any on-the-ground activity. Potential effects on the environment are analyzed when permits to conduct exploration or development in the unit area are reviewed. Approval of this participating area modification does not convey any authority to conduct any operations on the surface within the unit area. The Unit Operator must still obtain approval of a Plan of Operations from the State, and other permits from various agencies before drilling a well or wells or initiating additional development activities.

2. The Geological and Engineering Characteristics of the Reservoir and Prior Exploration Activities in the Unit Area

The existing IRU Gas Pool #1 PA is located 25-miles west of Anchorage, Alaska and is bordered to the west by the Lewis River Unit and to the east by the Stump Lake Unit. The IRU is operated by Union and produces from the Sterling, Beluga and Tyonek formations. The IRU has produced gas from five wells, IRU 44-01, IRU 41-01, IRU 13-31, IRU 44-36, and IRU 11-06. All but IRU 13-31 are still producing. Four of the wells produced from the Tyonek Formation: IRU 44-01, IRU 41-01, IRU 13-31, and IRU 11-06. Two of the wells have produced from the Sterling and Beluga Formations: IRU 13-31 and IRU 44-36.

In support of the application for the separation of the original IRU Gas Pool #1 PA into two separate participating areas, Union submitted data that included 2D seismic data of various vintages (and data quality) from 1970-1990 that are sufficient to map the structure; structure maps of key stratigraphic horizons within the Sterling, Beluga, and Tyonek Formations; a map

showing extents of the expected hydrocarbon bearing sands that are likely to be economic with estimates of hydrocarbon contacts in relation to proposed participating areas and unit boundaries; structural cross section through the Sterling and Beluga sands; and reserves estimates for each mapped sand. The geological, geophysical, and engineering data submitted justifies the separation of the IRU Gas Pool #1 PA for the Sterling - Beluga and Tyonek Formations.

Geologic Setting

The Tertiary Cook Inlet basin is an elongated, northeast trending, fault bounded forearc basin that extends from the Matanuska Valley southward along the Alaska Peninsula. Extensive right lateral and dip slip motion has occurred along the northern and northwestern bounding faults resulting in multiple structural traps for hydrocarbon accumulation within the basin. Two major non-marine depositional systems comprise the Tertiary basin fill in the Cook Inlet basin, alluvial fan systems at the base overlain by axial fluvial systems. The alluvial fan systems developed along the arc and accretionary margins of the basin and carried sediment out into the actively subsiding basin. The axial fluvial systems flowed perpendicular to the alluvial fan systems and migrated across the basin floor in relation to sediment input and topography. The primary reservoirs at Ivan River (Tyonek, Beluga, and Sterling Formations) were deposited as axial fluvial systems.

The Tyonek Formation is composed of abundant coal, siltstone, and massively bedded fine to conglomerate sandstone. In the northern portion of the basin, porous sandstone called the Bell Island Sandstone is found at the base of the Tyonek Formation. Overlying the Tyonek Formation is the Beluga Formation, a thick silt rich unit with inter-beds of channelized muddy sandstone, coal, and tuff. Sandstones within the Beluga Formation are often discontinuous due to their thin and lenticular nature. The Sterling Formation is the youngest non-glacial unit in the Cook Inlet basin and consists largely of laterally continuous stacked porous sandstones with inter-bedded mudstones and thin coals. Coals are thinner and less abundant than in the underlying Beluga Formation.

3. Prior Exploration or Development

In 1966, Standard Oil drilled the IRU 44-01 well, discovered gas, and then shut-in the well. Standard Oil drilled two more wells, IRU 23-12 and IRU 14-31 in 1967 and 1975 respectively. IRU 23-13 was plugged and abandoned and IRU 14-31 was shut-in. In 1988, Union became the successor unit operator of the IRU. Union initiated production in the IRU 44-01 well from the Tyonek Formation. Union drilled three more wells in the early 1990s and successfully produced gas from either the Tyonek Formation or the Sterling and Beluga Formation.

In 2005, Union was acquired Chevron. Union analyzed legacy seismic information and well data to better interpret the reservoirs within the IRU. This led to the drilling of grassroots IRU 11-06 well, which provided more well data. Union's evaluation of the well data, along with the seismic information support forming two separate participating areas for the Sterling-Beluga and Tyonek formations.

4. The Economic Costs and Benefits to the State

It is in the State's interest to fairly allocate production within a unit to the producing reservoirs based on the geologic, geophysical and engineering information. Although creating two participating areas will result in a reduced net royalty rate for the Sterling-Beluga Gas PA, the geologic, engineering and production data submitted to the Division demonstrates that the Sterling-Beluga formation was not produced from state leases ADLs 17600, 33727, 302284, 302282, 326058, and Tract 8. Even though prior IRU production was allocated to these leases, Section 11 of the IRU Agreement provides that there is no "retroactive adjustment for production obtained prior to the effective date of the revision of the participating area".

Union's proposed tract participation schedules are acceptable for allocating production and costs among the leases in the approved IRU Sterling-Beluga Gas PA, and the Tyonek Gas PA.

B. Decision Criteria considered under 11 AAC 83.303(a)

1. Promote the Conservation of All Natural Resources

Separating the participating area into two participating areas does not alter the benefits of unitized management and continues to promote hydrocarbon conservation. The unitization of oil and gas reservoirs and the management of participating area size to efficiently develop hydrocarbon-bearing reservoirs are well accepted means of hydrocarbon conservation. It is important to allocate production according to geological, engineering and production data even though the contraction of the Gas Pool #1 PA to create the Sterling-Beluga Gas PA and the Tyonek Gas PA results in a smaller Sterling-Beluga Gas PA.

2. The Prevention of Economic and Physical Waste

Formation of the proposed IRU Sterling-Beluga Gas PA and Tyonek Gas PA promotes the prevention of economic and physical waste. Union is the 100 percent working interest owner in the IRU Sterling-Beluga Gas PA and Tyonek Gas PA. Unitization prevents economic and physical waste by eliminating redundant expenditures for a given level of production and by avoiding loss of ultimate recovery by adopting a unified reservoir management plan. Union completed an evaluation of the Union and Chevron seismic data and integrated the reinterpretations with the production data and well logs. As a result, Union drilled the successful IRU Well 11-06 to maximize the physical and economic recovery of hydrocarbons from each productive reservoir.

3. The Protection of All Parties of Interest, Including the State

The proposed replacement of the IRU Gas Pool #1 PA to create the Sterling-Beluga Gas PA and the Tyonek Gas PA protects the working interest owner and the royalty owners. It is in the State's interest to fairly allocate production based on the geologic, geophysical and engineering information. By doing so, the State encourages maximizing hydrocarbon recovery which will enhance the state's long-term royalty and tax revenue stream.

V. FINDINGS AND DECISION

Considering the facts discussed in this document and the administrative record, I hereby make the findings and impose conditions as follows.

1. The IRU Gas Pool #1 PA included the Sterling, Beluga and Tyonek formations as had been previously agreed to by the working interest owners.
2. The geological and engineering data provided with the Application reasonably justify the separation of the IRU Gas Pool #1 PA into two separate participating areas, the Sterling-Beluga Gas PA and the Tyonek Gas PA under the terms of the unit agreement and the applicable regulations (11 AAC 83.303 – 11 AAC 83.395).
3. The following lands are included in the IRU Sterling-Beluga Gas PA:

Tract 2, Parcel 1, ADL 32930

T.13N., R.8W., S.M., AK

Section 06: W1/2NW1/4

T.13N., R.9W., S.M., AK

Section 01: NE1/4, Including USS 3955, SE1/4NW1/4

T.14N., R.8W., S.M., AK

Section 31: SW1/4SW1/4

T.14N., R.9W., S.M., AK

Section 36: S1/2SE1/4

Containing 400 acres, more or less.

Tract 2, Parcel 2, ADL 32930

T.13N., R.9W., S.M., AK

Section 01: S1/2SE1/4

Containing 80 acres, more or less.

Tract 2, Parcel 3, ADL 32930

T.13N., R.9W., S.M., AK

Section 01: N1/2SE1/4, NE1/4SW1/4

Containing 120 acres, more or less.

Tract 3, ADL 33637

T.14N., R.8W., SM, AK

Section 31: NW1/4SW1/4

T.14N., R.9W., SM, AK

Section 36: SE1/4NE1/4, NE1/4SE1/4

Containing 120 acres, more or less.

4. The following lands are included in the IRU Tyonek Gas PA:

Tract 1, Parcel 1, ADL 17600

T.13N., R.8W., S.M., AK

Section 07: NW1/4NW1/4, excluding uplands.

Containing 15 acres, more or less.

Tract 1, Parcel 2, ADL 17600

T.13N., R.9W., S.M., AK

Section 12: NE1/4, NE1/4SW1/4, SE1/4NW1/4, NW1/4SE1/4, excluding uplands.

Containing 134.05 acres, more or less.

Tract 2, Parcel 1, ADL 32930

T.13N., R.8W., S.M., AK

Section 06: NW1/4

T.13N., R.9W., S.M., AK

Section 01: NE1/4, including US Survey 3955, E1/2NW1/4

T.14N., R.8W., S.M., AK

Section 31: S1/2SW1/4

T.14N., R.9W., S.M., AK

Section 36: S1/2SE1/4, SE1/4SW1/4

Containing 592 acres, more or less.

Tract 2, Parcel 2, ADL 32930

T.13N., R.9W., S.M., AK

Section 01: S1/2SE1/4

Section 12: NE1/4, excluding tide & submerged lands

Containing 181.77 acres, more or less.

Tract 2, Parcel 3, ADL 32930

T.13N., R.8W., S.M., AK

Section 06: SW1/4

Section 07: NW1/4NW1/4, excluding tide & submerged lands

T.13N., R.9W., S.M., AK

Section 01: N1/2SE1/4, NE1/4SW1/4

Containing 300.33 acres, more or less.

Tract 3, ADL 33637

T.14N., R.8W., S.M., AK

Section 31: SW1/4NW1/4, NW1/4SW1/4

T.14N., R.9W., S.M., AK

Section 36: N1/2SE1/4, SE1/4NE1/4

Containing 194 acres, more or less.

Tract 4, ADL 33727

T.13N., R.9W., S.M., AK

Section 01: SE1/4SW1/4

Section 12: E1/2NW1/4, NE1/4SW1/4, excluding tide & submerged lands

Containing 124.19 acres, more or less.

Tract 5, ADL 302284

T.14N., R.8W., S.M., AK

Section 30: S1/2SW1/4, SW1/4SE1/4;

Section 31: W1/2E1/2, excluding US Survey 4625,

NW1/4NW1/4, NE1/4SW1/4, E1/2NW1/4

Containing 429.45 acres, more or less.

Tract 6, ADL 302282

T.13N., R.8W., S.M., AK

Section 06: W1/2NE1/4

Containing 80 acres, more or less.

Tract 7, ADL 326058

T.14N., R. 9W., S.M., AK

Section 25: SE1/4SE1/4;

Section 36: N1/2NE1/4, SW1/4NE1/4, SE1/4NW1/4, NE1/4SW1/4

Containing 240 acres, more or less.

Tract 8, Unleased

T.14N., R.8W., S.M., AK

US Survey 4625

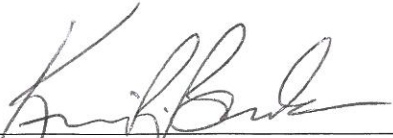
Containing 0 acres committed to the IRU.

5. The Sterling-Beluga Gas PA is stratigraphically limited to the producing and productive intervals of the Sterling and Beluga Formation occurring between 6,525 feet measure depth and 11,125 feet measure depth in the IRU 13-31 well.
6. The Tyonek Gas PA is stratigraphically limited to the producing and productive intervals of the Tyonek Formation occurring between 7,875 feet measure depth and 8,800 feet measure depth in the IRU 44-01 well.
7. The creation of the Sterling-Beluga Gas PA and Tyonek Gas PA provides for the equitable division of costs and an equitable allocation of produced hydrocarbons under a Plan of Development designed to maximize physical and economic recovery from the reservoirs within the approved PAs.
8. The allocations of production and costs for the tracts within the Sterling-Beluga Gas PA and Tyonek Gas PA, dated April 1, 2010, are approved.

9. The IRU Gas Pool #1 PA is terminated effective March 31, 2010, and is replaced in its entirety by the Sterling-Beluga Gas PA and Tyonek Gas PA.
10. Production from the Sterling-Beluga Gas PA must be reported to the "IRSB" royalty accounting code effective April 1, 2010.
11. Production from the Tyonek Gas PA must be reported to the "IRTG" royalty accounting code effective April 1, 2010.
12. Royalty accounting code IVAN is terminated effective March 31, 2010. Production under royalty accounting code IVAN must be zeroed out and the production reported to royalty accounting codes IRSB for the Sterling-Beluga Gas PA and IRTG for the Tyonek Gas PA under the approved tract allocation schedules. Revised operator reports and royalty reports must be submitted to the Division within 60 days for production from April 1, 2010 through August 31, 2010.

For the reason discussed in this Findings and Decision, I hereby approve the Sterling-Beluga Gas PA and Tyonek Gas PA within the Ivan River Unit subject to the conditions set out in this decision, effective April 1, 2010.

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to Thomas E. Irwin, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department on the 31st day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.



Kevin R. Banks
Director

9/22/2010

Date Approved

VI. ATTACHMENTS

1. Schedule 1 – Ownership Map depicting the Sterling-Beluga Gas PA
2. Schedule 2 – Description of Tracts and Ownership within the Sterling-Beluga Gas PA
3. Schedule 1 – Ownership Map depicting the Tyonek Gas PA
4. Schedule 2 – Description of Tracts and Ownership within the Tyonek Gas PA

Attachment 1

Schedule 1 – Map of the Sterling-Beluga Gas Participating Area

The map displays the Sterling-Beluga Production Area (PA) with the following features:

- Unit Tracts:** Seven green-shaded areas labeled 1 through 7.
- Uncommitted Acreage:** A red-hatched area labeled 3, located within the green-shaded tracts.
- State Leases:** Indicated by orange lines and labels such as ADL326058, ADL302284, ADL058791, ADL058792, ADL058795, ADL033727, ADL0390571, ADL017600, ADL032282, and ADL032283.
- Geographic Markers:** Township and Range labels (14N9W, 14N8W, 13N9W, 13N8W) and section numbers (23, 24, 19, 20, 26, 25, 30, 29, 35, 32, 2, 5, 11, 7, 8, 14, 13, 18) are present.
- Legend:**
 - Red hatched box: Sterling-Beluga PA
 - Green box: Unit Tracts
 - White box: Uncommitted Acreage
 - Orange box: State Leases

April 15, 2010
Scale: 1:35,000

Attachment 2

Schedule 2 - Description of Tracts and Ownership within the Sterling-Beluga Gas PA

Schedule 2
Sterling-Beluga Participating Area
Ivan River Unit
April 1, 2010

Tract	Tract Legal Description	Tract Acreage	Lease #	Tract Percentage	Mineral Owner	Mineral Interest	Royalty Percent	ORRI Owner	ORRI Percent	Working Interest Ownership	Working Interest Owner %
2	Parcel 1 T.13N., R.8W., S.M., AK SECTION 6: W1/2NW1/4 T.13N., R.9W., S.M., AK SECTION 1: NE1/4, INCLUDING USS 3955, E1/2NW1/4 T.14N., R.8W., S.M., AK SECTION 31: SW1/4SW1/4 T.14N., R.9W., S.M., AK SECTION 36: S1/2SE1/4	440.00	UOC # 605518 ADL # 32930	57.894700%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Cook Inlet Region Inc. Eldon Ford, Jr. Trust Arthur Robinson Douglas D. Ford David E. Ford Robert A. Ford	1.304574% 0.39750% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%
2	Parcel 2 T.13N., R.9W., S.M., AK SECTION 1: S1/2SE1/4 SECTION 12: NW1/4NE1/4, EXCLUDING TIDE & SUBMERGED LANDS	120.00	UOC # 605518 ADL # 32930	15.789500%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Eldon Ford, Jr. Trust M. T. Halbouty F. R. Halbouty Arthur Robinson Robert A. Ford Douglas D. Ford David E. Ford	0.39750% 0.373125% 0.373125% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%
2	Parcel 3 T.13N., R.9W., S.M., AK SECTION 1: N1/2SE1/4, NE1/4SW1/4	120.00	UOC # 605518 ADL # 32930	15.789500%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Eldon Ford, Jr. Trust Arthur Robinson Douglas D. Ford Robert A. Ford David E. Ford	0.39750% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%

Sterling-Beluga Participation Area - Schedule 2
Last Update: 4/1/2010

Page 1 of 2

Tract	Tract Legal Description	Tract Acreage	Lease #	Tract Percentage	Mineral Owner	Mineral Interest	Royalty Percent	ORRI Owner	ORRI Percent	Working Interest Ownership	Working Interest Owner %
3	T.14N., R.8W., SM, AK SECTION 31: NW1/4SW1/4 T.14N., R.9W., SM, AK SECTION 36: NE1/4SE1/4	80.00	UOC # 605519 ADL # 33637	10.526300%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Cook Inlet Region Inc. Eldon Ford, Jr. Trust Arthur Robinson David E. Ford Douglas D. Ford Robert A. Ford	1.304574% 0.39750% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%
		Total PA Acreage			Total Tract Percentage					Working Interest Owners	PA %
		760.00			100.000000%					Uncommitted	0.0000%
										Union Oil Company of California	100.0000%

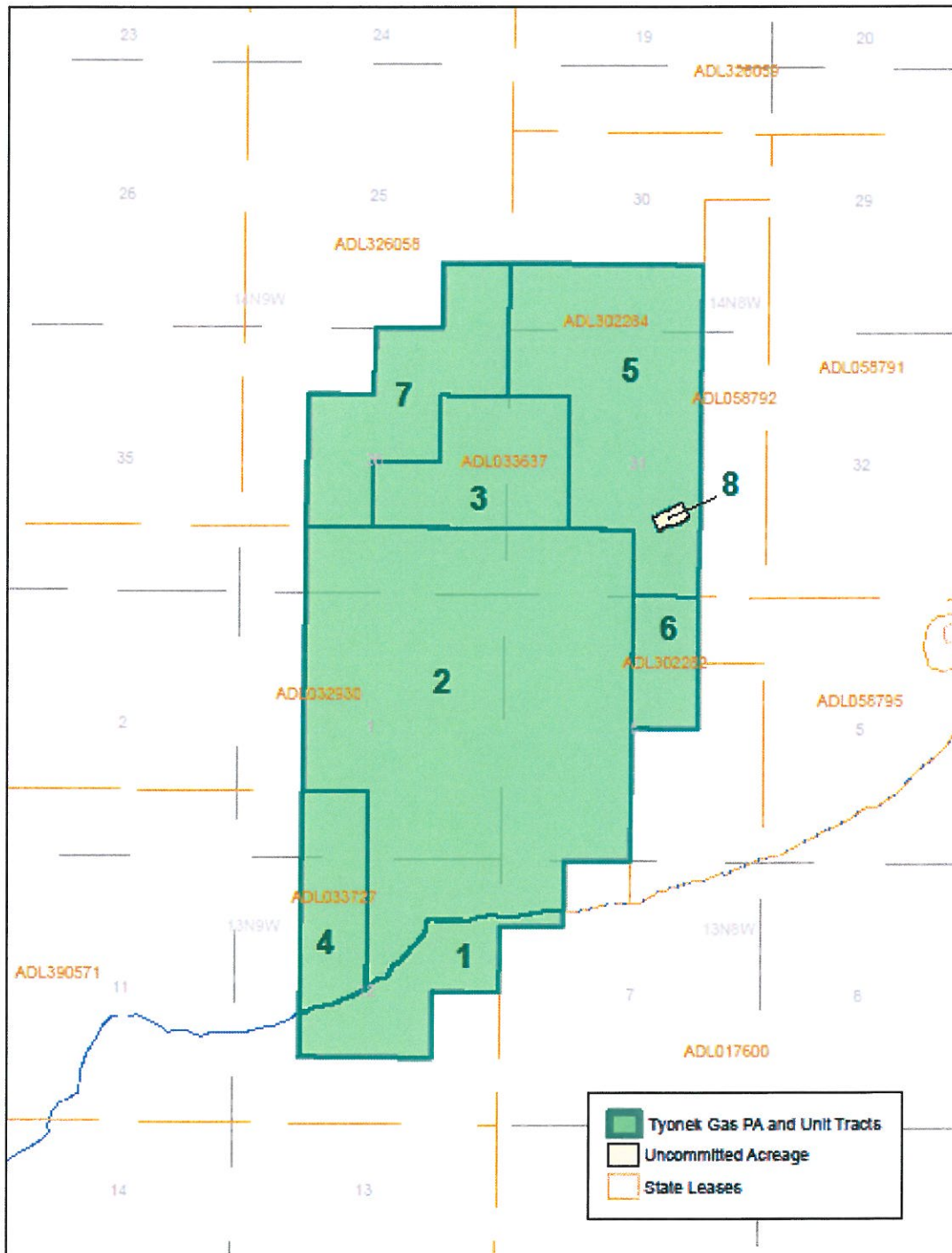
Sterling-Beluga Participation Area - Schedule 2
Last Update: 4/1/2010

Page 2 of 2

Attachment 3

Schedule 1 - Map of the Tyonek Gas Participating Area

Schedule 1 **Tyonek Gas Participating Area** **Ivan River Unit**



April 15, 2010
Scale: 1:35,000

Attachment 4

Schedule 2 - Description of Tracts and Ownership within the Tyonek Gas PA

Schedule 2
Tyonek Gas Participating Area
Ivan River Unit
April 1, 2010

Tract	Tract Legal Description	Tract Acreage	Lease #	Tract Percentage	Mineral Owner	Mineral Interest	Royalty Percent	ORRI Owner	ORRI Percent	Working Interest Ownership	Working Interest Owner %
1	Parcel 1 T.13N., R.8W., S.M., AK SECTION 07: NW1/4NW1/4, EXCLUDING UPLANDS	15.00	UOC # 605823 ADL # 17600	0.654800%	State of Alaska, Department of Natural Resources	100.00%	12.50%	M. T. Halbouty F. R. Halbouty	0.74625% 0.74625%	Union Oil Company of California	100.00%
	Parcel 2 T.13N., R.9W., S.M., AK SECTION 12: NE1/4, NE1/4SW1/4, SE1/4NW1/4, NW1/4SE1/4, EXCLUDING UPLANDS	134.05	UOC # 605823 ADL # 17600	5.851690%	State of Alaska, Department of Natural Resources	100.00%	12.50%	F. R. Halbouty M. T. Halbouty	0.373125% 0.373125%	Union Oil Company of California	100.00%
2	Parcel 1 T.13N., R.8W., S.M., AK SECTION 06: NW1/4 T.13N., R.9W., S.M., AK SECTION 01: NE1/4, INCLUDING US SURVEY 3955, E1/2NW1/4 T.14N., R.8W., S.M., AK SECTION 31: S1/2SW1/4 T.14N., R.9W., S.M., AK SECTION 36: S1/2SE1/4, SE1/4SW1/4	592.00	UOC # 605518 ADL # 32930	25.842610%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Cook Inlet Region Inc. Eldon Ford, Jr. Trust Arthur Robinson Douglas D. Ford David E. Ford Robert A. Ford	1.304574% 0.39750% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%

Tyonek Gas Participation Area - Schedule 2
Last Update: 4/1/2010

Page 1 of 3

Tract	Tract Legal Description	Tract Acreage	Lease #	Tract Percentage	Mineral Owner	Mineral Interest	Royalty Percent	ORRI Owner	ORRI Percent	Working Interest Ownership	Working Interest Owner %
	Parcel 2 T.13N., R.9W., S.M., AK SECTION 01: S1/2SE1/4 SECTION 12: NE1/4, EXCLUDING TIDE & SUBMERGED LANDS	181.77	UOC # 605518 ADL # 32930	7.934820%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Eldon Ford, Jr. Trust M. T. Halbouty F. R. Halbouty Arthur Robinson Robert A. Ford Douglas D. Ford David E. Ford	0.39750% 0.373125% 0.373125% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%
	Parcel 3 T.13N., R.8W., S.M., AK SECTION 06: SW1/4 SECTION 07: NW1/4NW1/4, EXCLUDING TIDE & SUBMERGED LANDS T.13N., R.9W., S.M., AK SECTION 01: N1/2SE1/4, NE1/4SW1/4	300.33	UOC # 605518 ADL # 32930	13.110320%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Eldon Ford, Jr. Trust Arthur Robinson Douglas D. Ford Robert A. Ford David E. Ford	0.39750% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%
3	T.14N., R.8W., S.M., AK SECTION 31: SW1/4NW1/4, NW1/4SW1/4 T.14N, R.9W, SM, AK SECTION 36: N1/2SE1/4, SE1/4NE1/4.	194.00	UOC # 605519 ADL # 33637	8.468690%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Cook Inlet Region Inc. Eldon Ford, Jr. Trust Arthur Robinson David E. Ford Douglas D. Ford Robert A. Ford	1.304574% 0.39750% 0.25000% 0.11750% 0.11750% 0.11750%	Union Oil Company of California	100.00%
4	T.13N., R.9W., S.M., AK SECTION 01: SE1/4SW1/4 SECTION 12: E1/2NW1/4, NE1/4SW1/4, EXCLUDING TIDE & SUBMERGED LANDS	124.19	UOC # 605818 ADL # 33727	5.421270%	State of Alaska, Department of Natural Resources	100.00%	12.50%	Meridith Webster Alison W. Sansone John Webster	0.37500% 0.37500% 0.25000%	Union Oil Company of California	100.00%
5	T.14N., R.8W., S.M., AK SECTION 30: S1/2SW1/4, SW1/4SE1/4; SECTION 31: W1/2E1/2, EXCL. US SURVEY 4625, NW1/4NW1/4, NE1/4SW1/4, E1/2NW1/4	429.45	UOC # 605817 ADL # 302284	18.746810%	State of Alaska, Department of Natural Resources	100.00%	12.50%			Union Oil Company of California	100.00%

Tyonek Gas Participation Area - Schedule 2
Last Update: 4/1/2010

Page 2 of 3

Tract	Tract Legal Description	Tract Acreage	Lease #	Tract Percentage	Mineral Owner	Mineral Interest	Royalty Percent	ORRI Owner	ORRI Percent	Working Interest Ownership	Working Interest Owner %
6	T.13N., R.3W., S.M., AK SECTION 06: W1/2NE1/4	80.00	UOC #1016744 ADL # 302282	3.492250%	State of Alaska Department of Natural Resources	100.00%	12.50%			Union Oil Company of California	100.00%
7	T.14N., R.9W., S.M., AK SECTION 25: SE1/4SE1/4; SECTION 36: NW1/2NE1/4, SW1/4NE1/4, SE1/4NW1/4, NE1/4SW1/4	240.00	UOC # 605510 ADL # 325058	10.476740%	State of Alaska Department of Natural Resources	100.00%	62.20099%	Cook Inlet Region Inc.	0.50%	Union Oil Company of California	100.00%
8	T.14N., R.3W., S.M., AK US SURVEY 4625	0.00	unleased	0.000000%	State of Alaska Department of Natural Resources	100.00%					
		Total PA Acreage		Total Tract Percentage						Working Interest Owners	PA %
		2290.79		100.000000%						Uncommitted	000%
										Union Oil Company of California	100.00%