MILNE POINT UNIT

Findings and Decision of the Director of the Division of Oil and Gas

APPROVAL OF THE SECOND EXPANSION OF THE SCHRADER BLUFF PARTICIPATING AREA AND THE FIFTH EXPANSION OF THE MILNE POINT UNIT

Under a Delegation of Authority from the Commissioner of the State Of Alaska Department of Natural Resources

July 17, 2003

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I. INTRODUCTION AND DECISION SUMMARY

BP Exploration (Alaska), Inc. (BP), as Milne Point Unit Operator, applied to expand the Milne Point Unit (MPU) and the Schrader Bluff Participating Area (SBPA). The approval of this expansion will result in the second revision to the SBPA and the fifth revision to the MPU and will add approximately 1,280 acres to the SBPA and 1,360 acres to the MPU.

The western half of ADL 380110 is in the SBPA, BP proposes to expand the SBPA by 1280 acres by including the rest of the lease. BP has already two wells in the expansion area and is in the process of completing a third. Depending on the location of the oil water contact, there is the possibility that BP will drill an additional two wells in the area. The MPU will be expanded to conform to the new SBPA boundary.

The 80-acre difference between the SBPA and MPU expansions results from BP's request to amend the application and expand the MPU an additional 80 acres in the NW corner of ADL 375133. The MPU holds ADL 375113 and the 80-acre area was part of the MPU before the automatic contraction occurred in November 2001. BP is requesting this expansion so the road and pipeline to the K-Pad can continue to be administered under the MPU Plan of Operations.

For reasons set out in this decision, the Division approves the second expansion of the SBPA and the fifth expansion of the MPU. The effective date of the expansion is April 1, 2003.

II. APPLICATION FOR THE EXPANSION OF THE SCHRADER BLUFF PARTICIPATING AREA AND THE MILNE POINT UNIT AREA

BP applied to expand the SBPA and MPU on March 25, 2003. The Department of Natural Resources, Division of Oil and Gas (Division) deemed the application complete on April 10, 2003. Public Notice of the application was published in the Anchorage Daily News and The Arctic Sounder on April 17, 2003. The public notices invited interested parties and members of the public to submit comments by May 19, 2003, but no comments were received.

On April 18, 2003, the Division gave approval for BP to begin production and injection on a Tract basis while the Division reviewed and processed the application.

On May 19, 2003, BP sent in a request to amend the application to include an additional 80 Acres in the Unit Expansion. Since no one from the public chose to view the public record or comment on the application, the amendment was considered and accepted without going back out to public comment on May 20, 2003.

The SBPA and MPU expansion includes the eastern half of ADL 380110, the MPU expansion also includes an 80-acre area in the northwest corner of ADL 375133. The

leases proposed for the inclusion in the second revision to the SBPA and the fifth revision to the MPU, the map showing the expansion areas, and the proposed Exhibits A, B and C to the MPU Agreement are included as Attachments to this Findings and Decision.

Geologic evidence supports expansion of the SBPA to develop the Schrader Bluff reservoirs within the MPU under a unified plan of development. The expansion acreage is capable of production or contributing to production in paying quantities. BP has conducted tract operations in the expansion area while the Division processed this application.

Production from the expansion began in April 2003 from MPS-01 and the well currently averages approximately 454 barrels of oil per day. MPS-04 began production in May and currently produces an average 2,282 barrels of oil per day.

Under Article 11 of the MPU Agreement, the effective date of any revision to the SBPA shall be the first of the month in which knowledge or information is obtained on which the revision is predicated. A more appropriate date may be used if justified by the unit operator and approved by the Division Director. BP requested that the second revision to the SBPA be effective May 1, 2003 but since production occurred in April, the effective date is April 1, 2003.

In addition to the above SBPA and MPU expansion, BP also requested that the MPU be expanded to include an 80-acre section of ADL 375133. On March 17, 1995, the Department of Natural Resources (DNR) issued rights-of-way for the road and pipeline to K Pad (ADLs 415454 and 415604, respectively). On November 1, 1996, the MPU expanded to encompass ADL 375133 (Tract 25). On February 13, 2001, BP formally requested that the DNR terminate ADLs 415454 and 415604, and administer the road and pipeline under the MPU Plan of Operations. On February 26, 2001, DNR terminated the rights-of-way and issued a decision letter stating that the road and pipeline to K Pad were approved under LO/NS 95-01.

In November 2001, the Unit automatically contracted so that a portion of the road and pad lay within the boundaries of ADL 375133, but outside of the MPU boundaries. This Decision approves the 80-acre expansion that will allow the road and pipeline to be administered under the MPU Plan of Operations.

III. DISCUSSION OF DECISION CRITERIA

The Commissioner of the Department of Natural Resources (Commissioner) reviews unit-related applications, including expansion of units and the formation of participating areas, under AS 38.05.180(p) and 11 AAC 83.303--11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003 and delegated this authority to the Director of the Division of Oil and Gas (Director). The Division's review of BP's 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. Criteria Considered under 11 AAC 83.303(b)

1. The Environmental Costs and Benefits of Unitized Development

Alaska statutes require DNR to give public notice and issue a written finding before disposal of the state's oil and gas resources. AS 38.05.035(e); AS 38.05.945. DNR develops lease stipulations, or mitigation measures, through the lease sale process to mitigate the potential environmental impacts from oil and gas activity. In preparing a written finding before an oil and gas lease sale, the Commissioner may impose additional conditions or limitations beyond those imposed by law. AS 38.05.035(e).

DNR includes mitigation measures in oil and gas leases. The proposed MPU expansion leases contain stipulations designed to protect the environment and address concerns regarding impacts to the area's fish and wildlife species, habitat and subsistence activities, and cultural resources and privacy. They address such issues as the protection of primary waterfowl areas, site restoration, construction of pipelines, seasonal restrictions on operations, public access to, or use of, the leased lands, and avoidance of seismic hazards. Including the additional portions of these leases in the MPU will not result in additional restrictions or limitations on access to the lands or to public and navigable waters. In addition, all lease operations after unitization are subject to a coastal zone consistency determination, and must comply with the terms of both the state and North Slope Borough coastal zone management plans.

Ongoing mitigation measures, such as seasonal restrictions on specific activities in certain areas, can reduce the impact on bird, fish, and mammal populations. For example, DNR requires consolidation of facilities to minimize surface disturbances. With these mitigation measures, the anticipated exploration and development related activity is not likely to significantly impact bird, fish, and mammal populations. Area residents use the unit area for subsistence hunting and fishing. Oil and gas activity may impact some wildlife habitat, and some subsistence activity. The environmental impact will depend on the level of development activity, the effectiveness of mitigation measures and the availability of alternative habitat and subsistence areas. In any case, the anticipated activity under the expanded MPU will impact habitat and subsistence activity less than if the lessees developed the leases individually because unitized exploration, development and production will minimize surface impact. Including the new portions of the leases in the MPU will promote the conservation of both surface and subsurface resources through unitized (rather than lease-by-lease) development. The expansion of the MPU and the SBPA will provide for a plan of development governing that production that will help avoid unnecessary duplication of development efforts on and under the surface. Facilities can be located to maximize recovery and to minimize environmental impacts, without regard for individual lease ownership.

The approval of the MPU and SBPA expansions itself has no environmental impact. The unit and PA expansions do not entail any environmental costs in addition to those that may occur when permits to conduct lease-by-lease exploration or development are issued.

The Commissioner's approval of the unit and PA is an administrative action that does not convey any authority to conduct any operations on the surface within the unit area. Unitization does not waive or reduce the effectiveness of the mitigation measures that condition the lessee's right to conduct operations on these leases. DNR's approval of the Unit Plan of Development is only one step in the process of obtaining permission to drill a well or wells or develop the known reservoirs within the unit area. The Unit Operator must still obtain approval of a Plan of Operations from the state, and permits from various agencies on state leases before drilling a well or wells or initiating development activities to produce known reservoirs within the unit area.

2. Geologic and Engineering Characteristics of the Proposed Expansion Areas

The Schrader Bluff accumulation is located within the Milne Point Unit. The Schrader Bluff formation is part of a larger accumulation collectively referred to as the Shallow Oil Sands that include the Ugnu and West Sak Sands of the Kuparuk River Unit and the Schrader Bluff Formation within the Prudhoe Bay and Milne Point Units.

The Schrader Bluff Sands have been subdivided into 5 major sand intervals designated (from oldest to youngest) as O, N, M, L, and K. Each individual sand interval is further subdivided into members by letters with A the youngest and B older, etc. The M, L, and K sands are roughly equivalent to the Ugnu Sands in the Kuparuk River Field and are Paleocene (early Tertiary) in age. The O and N sands are lateral stratigraphic equivalents of the West Sak reservoir sands A through D in the Kuparuk River Field and are Maastrichtian (Latest Cretaceous) in age. In some areas the N sands and the lower Ugnu Sands may straddle the Cretaceous-Tertiary boundary. Within the Milne Point area well data demonstrate a correlative unconformity between the Schrader Bluff N sandstones (upper West Sak sandstone equivalent) and the overlying Schrader Bluff M sandstones (lower Ugnu sandstone equivalent). The O sands contain the primary producing sands within the Schrader Bluff formation, with secondary accumulations locally present in thickened N sandstones. The Ugnu sandstones were deposited as delta plain sequences. The West Sak and Schrader Bluff sandstones were deposited as laterally extensive, coarsening upward delta-front sequences comprised of sandstones, siltstones, and mudstones that were part of a northeasterly prograding deltaic system that was deposited on an extensive, relatively flat (one to two degree) open marine shelf of late Cretaceous to early Paleocene age. The paleoshelf extended in a northwest to southeast direction over the present Prudhoe, Kuparuk, and Milne Point units.

In the Milne Point Unit, the Schrader Bluff sandstones are part of a regional homocline that gently dips one to two degrees to the east-northeast between the depths of -3,400' and -5,200'. The Schrader Bluff Sands in the S-Pad area of Milne Point occur approximately between the depths of -3,700' to -4,500'. The area is broken up by two sets of normal faults: one set of faults trends west-northwest; the other set of faults trends north-northeast. The faults break up the area into grabens, half-grabens, and horsts that separate the reservoir into discrete, separate, compartmentalized, independent, hydraulic units with separate and distinct oil-water contacts. Faulting, structure, and stratigraphy define the oil trap. The Schrader Bluff reservoir is defined by structure (up-dip) to the

south and west against several west-northwest faults that cut some of the O and N sandstones. Sandstone pinch-outs define the reservoir to the south and west. The Schrader Bluff accumulation is bounded to the north and east by the down dip intersection of the top of the reservoir sandstones with localized faults that form discrete hydraulic units. The Schrader Bluff formation producing area within Milne Point is divided into fifteen hydraulic units that are defined by localized fault blocks with unique oil-water contacts and oil viscosities. At least two of the identified hydraulic fault blocks lie on the Milne Point expansion acreage. Structure maps and hydrocarbon pore foot maps for the OA and OB intervals and a hydraulic unit map, along with well and production data supplied by BP provides technical evidence that the 1280 acre SBPA expansion acreage in the eastern portion of ADL 380110 is in oil communication with the existing MPU SBPA acreage to the west.

BP has economically developed S-Pad by concentrating their engineering and technical efforts on portions of the Schrader Bluff shallow oil accumulation with common reservoir properties. BP has customized extended reach drilling in innovative ways to improve productivity in capturing Schrader Bluff reserves. BP has drilled extended reach multilateral horizontal wells to reach shallow targets out to 10,000 feet (in a horizontal direction relative to the surface location). BP is using slotted liner completions and downhole jet pumps that have minimized sanding problems associated with these relatively unconsolidated shallow sands and maximized oil productivity of the viscous Schrader Bluff oil. Milne Point S-Pad wells are completed open hole with slotted liners. The sole artificial lift mechanism is jet pumps. BP manages the water flood of the reservoir with dual injectors in the O sands. Dual injectors have two sets of tubing in the borehole. The individual reservoir sands are separated by packers. With this set up, BP is able to directly control the flow of injected water into the OA and OB sandstones from the surface and provide control over each zone. BP is able to shut down one of the producing zones in case of injected water breakthrough and thus, optimize well production. BP has increased individual well productivity from about 300 barrels of oil per day (BOPD) to approximately 1,200 BOPD due to their innovative drilling and completion technology.

S-Pad was brought on line on September 1, 2002. Originally BP planned for only OA and OB sandstone horizontal well development at S-Pad because those sands are thicker, more consolidated (fewer sanding problems), and have higher API gravity oil (20-21 API) than the overlying N sandstones. The N sands typically exhibit higher permeability, but contain heavier oil, and are completely unconsolidated, requiring the use of more expensive sand control. BP encountered thick N sands in the western part of the S Pad area and is currently planning to develop this area of S Pad for N sand reserves along with the OA and OB sandstones. The first well completed in the N sandstone produced at a rate of 1,200 BOPD with 30% water cut. BP will likely develop the western side of S Pad with tri-lateral wells completed in the OA, OB, and N sands. The N sands could also be developed with individual horizontal laterals. Five producers were on line by October 2002 with each producing more than 1,500 BOPD. Total production rate of the combined wells was about 8,000-10,000 BOPD on about half of their lift capacity. BP currently plans a total of 14 producing wells and 21 injectors for the S Pad development.

Within the area the current estimate of original oil in place (OOIP) for the O sands ranges between 187 to 222 million stock tank barrels (MMSTB) and the combined total OOIP for both N and O sands ranges between 247 to 363 MMSTB. The expansion area could contain up to 10.9 MMBO in gross reserves. As of May 2003, twelve producing wells (eleven with laterals) and ten injectors have been drilled from S Pad. Currently, eleven producers and nine injectors are active. The active producing wells are: S-01, S-03, S-04, S-05, S-12, S-17, S-19A, S-23, S-24, S-25, and S-27. The current injection wells are: S-07, S-11, S-13, S-15, S-18, S-20, S-21, S-30, S-31, and S-33.

In the SBPA expansion area, BP has drilled two producing wells with laterals: MPU S-01 and MPU S-04 and one injector, MPS-09. Injector S-07 and producing multilateral well S-03 lie within a few hundred feet west of the western boundary of the SBPA expansion area, within the current Schrader Bluff PA. The Alaska Oil and Gas Conservation Commission (AOGCC) reported May, 2003 Schrader Bluff oil production for the wells in and near the SBPA expansion area as follows:

S-01: 14,082 BO; 67,839 BW; 7,153 MCFG; GOR 508; and 82.81% water

S-04: 27,384 BO; 0 BW; 10,849 MCFG; 396 GOR; and 0% water.

S-03: 30,374 BO; 0 BW; 59,127 MCFG; 1,947 GOR; and 0% water.

Two other wells were also drilled. S-09 is an injector within the SBPA expansion area with no water injection figures reported for May. S-29 is an oil well that had no production reported for May 2003, but had production from December 2002 and January 2003.

Evaluation of the geological, geophysical and engineering data submitted by the applicant justifies the proposed expansions of the Milne Point Unit and the Schrader Bluff Participating Area.

3. Prior Exploration Activities

Prior exploration activity in the expansion area includes one exploration and one development well drilled through the Schrader Bluff Formation. Based on core and log data, both wells encountered hydrocarbons in the Schrader Bluff Formation. The Texaco Prudhoe Bay-01 well was drilled in 1982 and was cored over part of the Schrader interval. In 2002, the MPS-09, a development well, was drilled but not cored in the Schrader Interval.

4. Applicant's Plan of Development

The revised unit Plan of Development (Attachment 6 of this Findings and Decision and Attachment 10 of the application) calls for BP to drill one producer/injector pattern and an additional producer in the expansion area. Depending upon the location of the oil water contact, BP may drill a second pattern to increase the ultimate recovery of the Schrader Bluff reserves.

5. Economic Costs and Benefits to the State and Other Relevant Factors

Approval of the SBPA and MPU expansion will provide economic benefits to the state by including the area in the MPU Plan of Development, which proposes to maximize the physical and economic recovery of hydrocarbons from the Schrader Bluff reservoir. Attempting to maximize hydrocarbon recovery will most likely enhance the state's long-term royalty and tax revenues.

Any additional administrative burdens associated with the proposed revised SBPA are far outweighed by the additional royalty and tax benefits derived from the expansion area production.

Under 11 AAC 83.351 and 11 AAC 83.371, BP submitted with the application an allocation of production and cost for the leases in the proposed SBPA expansion area (Attachment 5). The proposed tract allocation schedule distributes working interest equity among the leases according to original recoverable reserves. The basis of tract allocation schedule—recoverable reserves—is consistent with the original SBPA allocation schedule. Division staff agrees with BP's estimate of recoverable reserves from the expansion area tracts, and the Division finds BP's tract allocation methodology acceptable for allocation of production and costs among the leases in the expanded SBPA.

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

1. Promote the Conservation of All Natural Resources.

The unitization of oil and gas reservoirs is a well-accepted means of hydrocarbon conservation. Without unitization, the unregulated development of reservoirs tends to be a race for possession by competitive operators. The results can be: (1) overly dense drilling, especially along property lines; (2) rapid dissipation of reservoir pressure; and (3) irregular advance of displacing fluids. These all contribute to the loss of ultimate recovery or economic waste. The proliferation of surface activity; duplication of production, gathering, and processing facilities; and haste to get oil to the surface also increases the likelihood of environmental damage (such as spills and other surface impacts). Requiring lessees to comply with conservation orders and field rules issued by the AOGCC would mitigate some of these impacts without an agreement to unitize operations. Unitization, however, provides a practical and efficient method for maximizing oil and gas recovery, and minimizes negative impacts on other resources.

The expansion of the SBPA and the MPU will promote the conservation of both surface and subsurface resources through the unitized (rather than lease-by-lease) development. Unitization allows the unit operator to explore the area as if it were one lease. The expansion of the unit will allow this area to be comprehensively and efficiently explored and developed.

Exploring and developing the leases under a unified Plan of Development will reduce the incremental environmental impact of the additional production.

2. Prevention of Economic and Physical Waste

Traditionally, under unitized operations, the assignment of undivided equity interests in the oil and gas reservoirs to each lease largely has resolved the tension between lessees to compete for their share of production. Economic and physical waste, however, could still occur without a well-designed and coordinated development plan and an equitable cost sharing formula. Consequently, unitization must equitably divide costs and production, and plan to maximize physical and economic recovery from any reservoir.

An equitable allocation of hydrocarbon shares among the working interest owners (WIOs) discourages hasty or unnecessary surface development. Similarly, an equitable cost sharing agreement promotes efficient development of reservoirs and common surface facilities and encompasses rational operating strategies. Such an agreement further allows the WIOs to decide well spacing requirements; scheduling, reinjection and reservoir management strategies; and the proper common, joint use surface facilities. Unitization prevents economic and physical waste by eliminating redundant expenditures for a given level of production, and avoiding loss of ultimate recovery by adopting a unified reservoir management plan.

Unitized operations greatly improve development of reservoirs beneath leases that may have variable productivity. Marginally economic reserves, which otherwise would not be produced on a lease-by-lease basis, often can be produced through unitized operations in combination with more productive leases. Facility consolidation saves capital and promotes better reservoir management by all WIOs. Pressure maintenance and secondary recovery procedures are much more predictable and attainable through joint, unitized efforts than would otherwise be possible. In combination, these factors allow less profitable areas of a reservoir to be developed and produced in the interest of all parties, including the state.

By combining the efforts of multiple leases into a single effort, infrastructure can be shared and this eliminates the need to construct stand-alone facilities to process the volume of recoverable hydrocarbons that may be discovered on each individual lease, thus preventing economic and physical waste.

3. Protection of All Parties

Because hydrocarbon recovery will more likely be maximized, the state's economic interest is promoted. Diligent development and exploration under a single approved unit plan without the complications of competing leasehold interests and variable royalty interests is certainly in the state's interest. It promotes efficient evaluation and development of the state's resources, yet minimizes impacts to the area's cultural, biological, and environmental resources.

The lease form and the conditions of this decision provide, in part, that the state's royalty share will be free and clear of all lease expenses. Operating under the terms and conditions of the lease and Unit Agreement also provides for accurate reporting and record keeping, royalty settlement, in kind taking, and emergency storage of oil, all of which will further the state's interest.

These conditions ensure that the inclusion of the expansion lands in the unit and the formation of the SBPA and the MPU promotes the state's interest in the evaluation and development of those lands sooner rather than later.

IV. FINDINGS AND DECISION

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

- 1. Under 11 AAC 83.351(a), a participating area may include only the land reasonably know to be underlain by hydrocarbons and known or reasonably estimated through use of geological, geophysical, or engineering data to be capable of producing or contributing to the production of hydrocarbons in paying quantities.
- 2. Under 11 AAC 83.303(c), the department will consider the factors specified in 11 AAC 83.303(a) and (b) when evaluating requests concerning participating and unit areas.
- 3. The proposed expansion of the MPU and the SBPA meet the requirements of 11 AAC 83.303 and 83.351.
- 4. The producing wells in the Schrader Bluff formation reservoirs within the area proposed for the second SBPA revision are certified as meeting the paying quantities test. The acreage is underlain by hydrocarbons and known and reasonably estimated to be capable of production or contributing to production in sufficient quantities to justify the expansion of the SBPA and MPU.
- 5. The geological and engineering data justify the inclusion of the proposed tracts within the SBPA. Under the terms of the applicable regulations governing formation and operating of oil and gas units (11 AAC 83.301 11 AAC 83.395) and the terms and conditions under which these lands were leased from the state, the lands described in the Attachments to this Findings and Decision are to be included in the SBPA and the MPU.
- 6. The SBPA expansion provides for the equitable division of costs and an equitable allocation of produced hydrocarbons, and sets forth a development plan designed to maximize physical and economic recovery from the reservoirs within the expanded and approved participating area. The allocation of production and costs for the tracts within the SBPA (revised Exhibit C), Attachment 5 to this Findings and Decision, is approved.

- 7. The production of SBPA hydrocarbon liquids through the existing production and processing facilities within the MPU reduces the environmental impact of the additional production. Utilization of existing facilities will avoid unnecessary duplication of development efforts on and beneath the surface.
- 8. The MPU Owners plan diligent exploration and delineation of the reservoirs underlying the MPU under approved plans of development and operations.
- 9. The plan of development for the SBPA expansion area meets the requirements of 11 AAC 83.303 and 11 AAC 83.343. Annual updates to the MPU plan of development which describe the status of the SBPA projects undertaken and the work completed, and any changes or expected changes to the plan, must be submitted in accordance with 11 AAC 83.343.
- 10. Approval of the second expansion of the SBPA, the fifth expansion of the MPU, the revised Exhibits A, B and C to the MPU Agreement (Attachments 3, 4, and 5 respectively to this Findings and Decision) are effective retroactive to April 1, 2003.
- 11. The MPU operator and royalty payers must submit revised operator and royalty reports back to April 2003, zeroing out production under tract operations MP-13 and including these volumes under accounting unit SCHR. These revised reports will be submitted before September 30, 2003.

For these reasons and subject to the conditions and limitations noted, I hereby approve the second revision of the Schrader Bluff Participating Area and the fifth revision of the Milne Point Unit.

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 Tom Irwin, Commissioner, DNR, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by e-mail to dnr_appeals@dnr.state.ak.us. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court.

Signed by W. Van Dyke for Mark Myers	July 17, 2003
Mark D Myers	Date
Division of Oil and Gas	

cc: Jeff Landry, Department of Law Sarah Palin, AOGCC

Attachment 1: Listing of Lands in the SBPA and MPU Expansion Areas

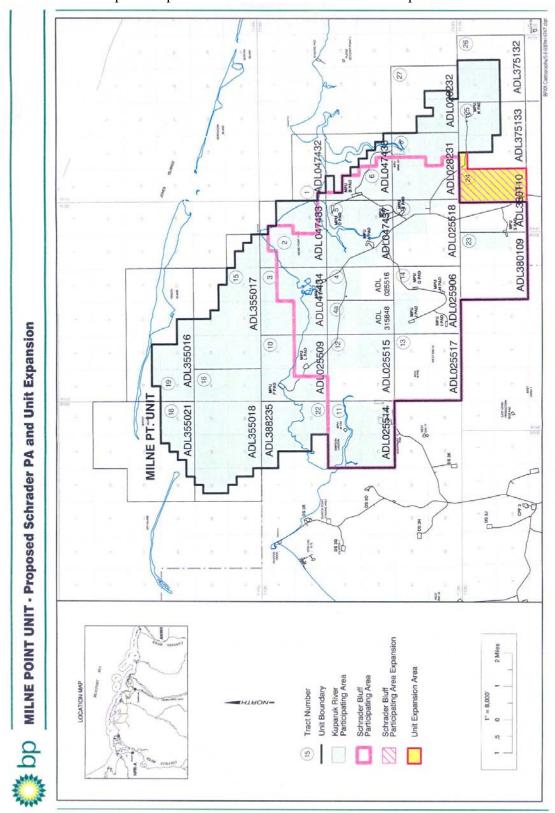
MPU Expansion

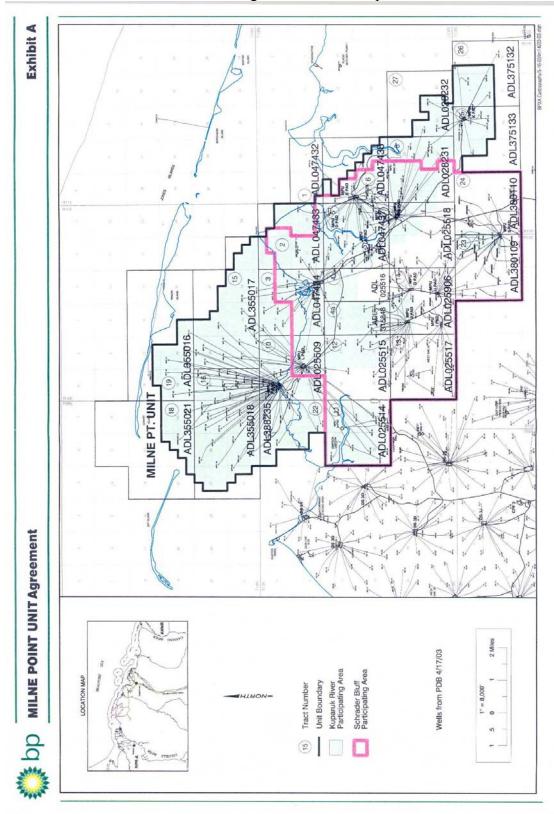
Umiat Meridian, Alaska Township 12 North, Range 11 East, Sections 5 and 8 Township 12 North, Range 11 East, Section 4 N1/2 NW1/4

SBPA Expansion

Umiat Meridian, Alaska Township 12 North, Range 11 East, Sections 5 and 8

Attachment 2. Map of Proposed Schrader Bluff PA and Unit Expansion Areas





Attachment 4. Exhibit B to the Unit Agreement – Tract Description

*ORRI described as percentage of gross production

MILNE POINT UNIT — EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, OII And Gas Interests (Submitted March 25, 2003)

y Interest Owner rship (%)*	0.4500000	1.2500000	1.7000000				0.9000000	1.0833500		1.9833500															
Overriding Royalty Interest Owner and Ownership (%)*	UMC	ORYX	Total ORRI				UMC	ORYX		Total ORRI				None						None					
Interest r and hip (%)	91.190	8.810	100.000				91.190	8.810		100.000				91.190	8.810	100.000				91.190	8.810	100.000			
Working Interest Owner and Ownership (%)	BPXA	BP APC	Total WI				BPXA	BP APC		Total WI 100.000				BPXA	BP APC	Total WI 100.000				BPXA	0	Total WI			
NPSL (%)	00.0						0.00							0.00						0.00					
Royalty (%)	20.00						20.00							12.50						12.50					
Tract Acreage		640.00	640.00	640.00	640.00	2,560.00		431.00		633.00	400.00		1,464.00		640.00	636.00	639.00	640.00	2,555.00		640.00	640.00	640.00	640.00	2,560.00
Legal Description of Acreage in Unit (all in Umiat Meridian, Alaska)	T13N, R10E	Sec. 13: All	Sec. 14: All	Sec. 23: All	Sec. 24: All	•	047438 T13N, R11E	Sec. 18: NWWNEW, NEWNWW,	W½NW¼, SW¼, W½SE¼, SE¼SE¼	Sec. 19: All	Sec. 20: W%NW%, SE¼NW%,	SW¼, W½SE¼, SE¼SE¼		T13N, R11E	Sec. 29: All	Sec. 30: All	Sec. 31: All	Sec. 32: All		T13N, R10E	Sec. 25: All	Sec. 26: All	Sec. 35: All	Sec. 36: All	
ADL Lease No.	047437						047438							028231						025518	-		-		
Unit Tract No.	2(e)						(()							80						6					

MILNE POINT UNIT -- EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, Oil And Gas Interests (Submitted March 25, 2003)

Tract	Lease	Legal Description of Acreage in Unit		Rovalty	NDS	Owner and	Owner and	Overriding Boyalty Interest Owner
No.	No.	(all in Umiat Meridian, Alaska)	Tract Acreage	(%)	(%)	Owners	Ownership (%)	and Ownership (%)*
9	025509	T13N, R10E		12.50	0.00	BPXA	91.190	None
		Sec. 5: All	640.00			BP APC	8.810	
		Sec. 6: All	625.00			Total WI	100.000	
		Sec. 7: All	628.00					
		Sec. 8: All	640.00					
			2,533.00					
11	025514	025514 T13N, R9E		12.50	0.00	BPXA	91.190	None
		Sec. 13: All	640.00			BP APC	8.810	
		Sec. 14: All	640.00			Total WI	100.000	
		Sec. 23: All	640.00					
		Sec. 24: All	640.00					
			2,560.00					
12	025515	025515 T13N, R10E	000	12.50	0.00	BPXA	91.190	None
		Sec. 17: All	640.00			BP APC	8.810	
		Sec. 18: All	631.00			Total WI	100.000	
		Sec. 19: All	633.00					
		Sec. 20: All	640.00					
			2,544.00					
13	025517	025517 T13N, R10E		12.50	0.00	BPXA	91.190	None
		Sec. 29: All	640.00			BP APC	8.810	
		Sec. 30: All	636.00			Total WI	100.000	
		Sec. 31: All	639.00					
		Sec. 32: All	640.00					
			2.555.00					

MILNE POINT UNIT -- EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, Oil And Gas Interests (Submitted March 25, 2003)

Unit ADL			The state of the s	100000000000000000000000000000000000000		TO THE BUILDING	Commence of the Commence of th
Lease No.	se Legal Description of Acreage in Unit (all in Umiat Meridian, Alaska)	Tract Acreage	Royalty (%)	NPSL (%)	Owner	Owner and Ownership (%)	Overriding Royalty Interest Owner and Ownership (%)*
025	025906 T13N, R10E		12.50	0.00	BPXA	91.190	None
	Sec. 27: All	640.00			BP APC	8.810	
	Sec. 28: All	640.00			Total WI	100.000	
	Sec. 33: All	640.00					
	Sec. 34: All	640.00					
		2,560.00					
355	355017 T14N, R10E		12.50	40.00	BPXA	91.190	None
	Sec. 27: S½SW¼	80.00			BP APC	8.810	
	Sec. 28: W%SE¼, SE¼SE¼, W%	440.00			Total WI	Total WI 100.000	
	Sec. 29: All	640.00					
	Sec. 32: All	640.00					
		640.00					
	Sec. 34: All	640.00					
	Sec. 35: SW14, S1/2NW14,	360.00					
		3,440.00					
3550	355018 T14N, R10E		12.50	30.00	BPXA	91.190	None
	Sec. 30: All	620.00			BP APC	8.810	
	Sec. 31: All	623.00			Total WI	100.000	
	T14N, R9E						
	Sec. 25: All	640.00					
	Sec. 26: All	640.00					
	Sec. 27: E½, E½SW¼, SE¼NW¼	440.00					
	Sec. 34: NEXSEX, E%NEX, NWXNEX	160.00					
	Sec. 35: All	640.00					
	Sec. 36: All	640.00					
		4 403 00					

MILNE POINT UNIT -- EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, Oil And Gas Interests (Submitted March 25, 2003)

NO. 140.	Legal Description of Acreage in Unit (all in Umiat Meridian, Alaska)	Tract Acreage	Royalty (%)	NPSL (%)	Owner and Ownership (%)	Owner and wnership (%)	Overriding Royalty Interest Owner and Ownership (%)*	y Interest Owner rship (%)*
18(a) 355021	T14N, R9E		12.50	30.00	BPXA	91.190	Joyce	0.3750000
Seg. 1	Sec. 22: SEMSEM	40.00			BP APC	8.810	Herbaly, D.	1.6875000
	Sec. 23: SE'A, S'ASW'A, NE'ASW'A, S'ANE'A, NE'ANE'A	400.00			Total WI	100.000	Herbaly, E.	1.6875000
	Sec. 24: All	1,080.00					Total ORRI	3.7500000
18 ^(b)	Same as above (deeper stratigraphic level)	level)			BPXA	45.595	None	
Seg. A					Herbaly Joyce BP APC Total WI	45.000 5.000 4.405 100.000		
19 ^(a) 355016	355016 T14N, R10E		12.50	40.00	BPXA	91.190	Bachner	0.6000000
Seg. 1	Sec. 17: SW%SE%, S%SW%	120.00			BP APC	8.810	Dieringer	0.300000
	Sec. 18: S½SE¼	80.00			Total WI	100.000	Herbaly, D	1.2375000
	Sec. 19: All	617.00					Herbaly, E	1.2375000
	Sec. 20: S½, NW¼, W½NE¼	260.00					HVA	0.2445940
	Sec. 21: SW1/4	160.00					Joyce	0.2750000
		1,537.00					Stroecker	0.4500000
							Wagner Total ORRI	0.4054060
19 ^(b)	Same as above (deeper stratigraphic level)	level)			BPXA	45.595	Bachner	0.6000000
Seg. A					Herbaly BP APC	45.000	Dieringer HVA	0.3000000
						5.000	Stroecker	0.4500000
					Total WI	100.000	Wagner Total ORRI	2.0000000

*ORRI described as percentage of gross production

MILNE POINT UNIT -- EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, Oil And Gas Interests (Submitted March 25, 2003)

Tract No.	t Lease No.	Legal Description of Acreage in Unit (all in Umiat Meridian, Alaska)	Tract Acreage	Royalty (%)	NPSL (%)	Owner and Ownership (%)	Owner and Ownership (%)	Overriding Royal and Owne	Overriding Royalty Interest Owner and Ownership (%)*
22(c)	388235	T13N, R9E		12.50	30.00	BPXA	91.190	CPAI	12.5000000
		Sec. 1: All	640.00			BP APC	8.810	Total ORRI	12.5000000
		Sec. 2: N½, SE¼	480.00			Total WI	Total WI 100.000		
		Sec. 11: NE1/4	160.00						
		Sec. 12: All	640.00						
			1,920.00						
23	380109	380109 T12N, R10E		12.50	0.00	BPXA	91.190	None	
		Sec. 1: All	640.00			BP APC	8.810		
		Sec. 2: All	640.00			Total WI	Total WI 100.000		
		Sec. 11: All	640.00						
		Sec. 12: All	640.00						
			2,560.00						
24	380110	380110 T12N, R11E		12.50	0.00	BPXA	91.190	None	
		Sec. 5: All	640.00			BP APC	8.810		
		Sec. 6: All	577.00			Total WI	100.000		
		Sec. 7: All	580.00						
		Sec. 8: All	640.00						
			2,437.00						
2(0)	375133	25 ^(d) 375133 T12N, R11E		12.50	0.00	BPXA	91.190	CPAI	2.3750000
		Sec. 3: All	640.00			BP APC 8.810	8.810	Total ORRI	2.3750000
		Sec. 4: E½, N½NW¼	400.00			Total WI	100.000		
		Sec. 10: N½N½	160.00						
			1,200.00						
(6)	375132	26 ^(d) 375132 T12N, R11E		12.50	0.00	BPXA	91.190	CPAI	2.3750000
		Sec. 1: W½NW¼, W½SW¼	160.00			BP APC	8.810	Total ORRI	2.3750000
		Sec. 2: All	640.00			Total WI	100.000		
		Sec. 11: N½N½	160.00						
		Sec. 12: NW¼NW¼	40.00						

MILNE POINT UNIT -- EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, Oil And Gas Interests (Submitted March 25, 2003)

Working Interest NPSL Owner and Overriding Royalty Interest Owner Tract Acreage (%) (%) Ownership (%) and Ownership (%)	12.50 0.00 BPXA 91.190 CPAI 2.3750000 80.00 BP APC 8.810 Total ORRI 2.3750000 Total WI 100.000 Total ORRI 2.3750000
Legal Description of Acreage in Unit (all in Umiat Meridian, Alaska)	T13N, R11E Sec. 28: S%SW% Sec. 33: W½, SE¼, S%NE¼, NE¼NE¼ Sec. 34: W½NW¼, NW¾SW!
ADL Lease No.	028232
Unit Tract No.	27(4)

49,705.00

TOTAL UNIT ACREAGE

WIO and OH	RI Owners		
BP APC BP America	BP America Production Company	Herbaly, E.	Elmer L. Herbaly
Ashland	Ashland Exploration, Inc.	HVA	HVA Royalties, Inc.
Bachner	J. Andrew Bachner	Joyce	George Alan Joyce, Jr.
BPXA	BP Exploration (Alaska) Inc.	ORYX	ORYX Energy Company
CPAI	ConocoPhillips Alaska, Inc.	RTC	Royalty Trust Corporation
Dieringer	James F. Dieringer, Jr.	Stroecker	W.G. Stroecker
Herbaly	Herbaly Exploration LLC	UMC	UMC Petroleum Corporation
Herbaly, D.	David L. Herbaly	Wagner	Richard E. Wagner

*ORRI described as percentage of gross production

MILNE POINT UNIT -- EXHIBIT B Schedule Showing The Percentage And Kind Of Ownership, Oil And Gas Interests (Submitted March 25, 2003)

		-
	Overriding Royalty Interest Owner	and Ownership (%)*
Working Interest	Owner and	Ownership (%)
	NPSL	(%)
	Royalty	(%)
		Tract Acreage
	n Unit	
	Acreage i	, Alaska)
	Legal Description of	(all in Umiat Meridian,
ADL	Lease	No.
Unit	Tract	No.

Notes concerning specific leases:

- Limited to the interval from the surface down to the stratigraphic equivalent depth of 100 ft. below 7,426 ft. TVD as measured in the Conoco
- Limited to the interval lying beneath 100 ft, below the stratigraphic equivalent of 7,426 ft. TVD as measured in the Conoco NW Milne #1 well NW Milne # 1 well (API # 50-029-22231). (API # 50-029-22231). **@**
- CPAI ORRI limited to hydrocarbon producing horizons deeper than the stratigraphic equivalent of the top of the Kuparuk Reservoir which is defined to be 6,881' true vertical depth subsea as shown in the GR/EWR log in the MPL-13 Well, located in Sec. 8, T13N, R10E, U.M., Alaska (surface) and Sec. 6, T13N, R10E, U.M. Alaska (bottomhole). (0)
- CPAI ORRI limited to hydrocarbon producing horizons deeper than the stratigraphic equivalent of the top of the Kuparuk Reservoir which is defined to be 6,830' true vertical depth subsea as shown in the DIL log in the Cascade #1 Well, located in Sec. 3, T12N, R11E, U.M., 6
- UMC Petroleum overrides for Tracts 2 & 5 are calculated as 5% of 9% and shall rise to 15% of 9% when the Milne Point Unit area production exceeds 70 mmbbls of production. (0)
- UMC Petroleum override for Tract 6 is calculated as 5% of 18% and shall rise to 15% of 18% when the Milne Point Unit area production exceeds 70 mmbbls of production.

Attachment 5. Exhibit C to the Unit Agreement

Schrader Bluff Participating Area Unit Tract Participations

Exhibit C to Milne Point Unit Agreement

Tract No.	ADL	Tract Allocated Reserves	Tract Part (%)
1	47432	21,150	0.00661%
2	47433	2,869,840	0.89686%
3	47434	6,910,990	2.15977%
4/4A	315848 & 025516	26,955,160	8.42384%
5	47437	28,389,710	8.87215%
6	47488	7,300,190	2.28140%
8	28231	10,857,160	3.39300%
9	25518	40,636,150	12.69933%
10	25509	2,252,090	0.70381%
11	25514	10,494,810	3.27976%
12	25515	22,056,010	6.89279%
13	25517	46,100,000	14.40685%
14	25906	54,646,200	17.07765%
23	380109	35,780,000	11.18172%
24	330110	24,717,200	7.72445%
Totals		319,986,660	100.00000%

Please note separately attached Exhibit C to the Milne Point Unit Agreement.

Attachment 6. Revised MPU – Plan of Development

Milne Point Unit, Plan of Development (July 1, 2002 – June 30, 2005) (Revised February 2003)

Overview

This plan of development encompasses the activities within the Milne Point Unit located on the North Slope of Alaska. Through October 1, 2002, gross production for Milne Point Unit ("MPU") is averaging approximately 50.3 gross MBOPD from the three reservoirs: Kuparuk Reservoir in the Kuparuk Participating Area, Schrader Bluff Reservoir in the Schrader Bluff Participating Area and tract operations in the Sag River Reservoir. MPU production is expected to increase in the fourth quarter of 2002 with the startup of the new Schrader Bluff S-pad development. 2002 production is forecast to average 50.9 MBD compared to 2001 average production of 53.0 MBD. This represents a 4% decrease and is due to continued decline in the Kuparuk reservoir base and unplanned facilities downtime.

For calendar year 2003, BP's development drilling activity for sanctioned or planned projects will require approximately one year of drilling rig activity to complete. In addition, BP will continue its efforts to debottle-neck facilities and address constraints currently experienced across field operations. The debottle-necking efforts will contribute significantly to support oil production rate and overall reserves delivery over field life. BP will continue well work-over operations, reservoir management, and water and gas injection optimization to mitigate base reservoir decline and to support 2003 production.

Final decisions to invest and develop are influenced by the prevailing fiscal outlook in Alaska, production price outlook and project economic viability. Subject to these caveats, development drilling and construction projects currently planned for the year 2003 include but are not limited to the activities described herein.

Central Facilities

With the increasing impacts of facility limitations on production, BP will continue to invest in debottle-necking projects for the central processing facilities in 2003. BP's current plans include upgrading electric power generating facilities to meet forecasted field-life electrical load requirements. The 2003 scope of this project includes the installation of two new generating units (purchased in 2002) to support field-wide development. BP will expand the water injection system at the central processing facilities to improve injection water quality which in turn supports increased oil production for 2002 and beyond. Debottle-necking of the gas compression/injection system is being considered, but is not likely in 2003.

Schrader Bluff Participating Area

S-pad Project

BP is continuing to develop MPU S-pad (located on ADL 380109 and 380110) within the Schrader Bluff Participating Area ("PA"). S-pad production commenced on September 1, 2002 as planned, and BP will drill and complete the remaining planned well locations during 2003 and 2004.

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In order to fully develop the S-pad resource, BP plans to submit by early 2003 an application to expand the Milne Point Unit and Schrader Bluff Participating Area. In early 2003, plans call for drilling/commissioning one producer (S-01)/injector (S-09) pattern and an additional producer (S-04)in the expansion area with the possibility of an additional producer/injector pattern depending upon where the oil water contact is located within ADL 380110.

Originally, the S-pad program was sanctioned to develop strictly the O-sands. However, early drilling results have shown that the western portion of the S-pad area contains thicker N-sands than previously predicted. BP will perform additional studies and technical work in 2003 to develop and implement a strategy to economically access the N-sand reserves.

S-pad EOR

The technical subsurface evaluation for an Enhanced Oil Recovery ("EOR") project at S-pad was completed in 2002. Unfortunately, BP cannot move forward with an S-Pad EOR project at this time because of the high cost of potential miscible solvents and the uncertainty concerning the terms of an Outside Substance Agreement. Work on the Schrader Bluff EOR project has been suspended pending further evaluation of the Kuparuk Enhanced Oil Recovery project and clarification of the State of Alaska's Department of Natural Resources treatment of Outside Substance.

Tract 14 Redevelopment Area

BP will continue redevelopment of the Schrader Bluff reservoir in Tracts 9 (ADL 025518), 13 (ADL 025517), 14 (ADL 025906) and 23 (ADL 380109) from existing infrastructure on Tract 14. BP will develop a plan to optimize Tract 14 reserves utilizing the knowledge gained from the multi-ateral well S-pad development. The work program will include refining our knowledge of the Tract 14 resource base, building reservoir simulators to evaluate fluid movement and optimizing waterflood patterns. With the discovery of potentially economic N-sands during the S-pad project, development efforts will include the evaluation of drilling and completion technology to obtain additional recovery from the Schrader Bluff N-Sands. The work program will also include a review on the feasibility of using jet pump technology on Tract 14 infrastructure as well as evaluating facility constraints and potential solutions.

The current development plan for Tract 14 is to drill up to four wells to replace existing low rate producers with multi-lateral sidetracks. These wells will access additional reserves and increase production rates from existing patterns. BP will continue to collect reservoir surveillance data to effectively manage the Schrader Bluff reservoir and will continue investing in well work as needed to maintain existing base production.

Kuparuk Participating Area

Kuparuk Reservoir Enhanced Oil Recovery

BP commissioned an EOR Project for the Kuparuk PA in the fourth quarter of 2001. Natural Gas Liquids ("NGLs") imported from Prudhoe Bay Unit are blended with Milne Point produced gas to form miscible injectant, which will be injected alternating with water, into existing and future Kuparuk reservoir injection wells. Due to relatively high reservoir pressure and the need to protect the submersible pumps in the field, ongoing operation of the project has proven more difficult than anticipated. During 2003, BP will continue to review the economic viability of the Kuparuk EOR project in light of flood response data as well as the State of Alaska's royalty treatment for injected Outside Substances on which royalty has been previously paid.

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Kuparuk Reservoir Development

During 2003, BP plans to drill two to four, new or sidetracked infill wells to access undeveloped reserves located in previously developed portions of the Kuparuk PA. These wells may be either new wells drilled from existing gravel pads or sidetracks from existing redundant well bores.

Sag River (Tract Operations)

No further drilling is planned in the Sag River formation during 2003 until BP completes its evaluation of the performance results from the 2002 tract operations. Evaluation of the waterflood pattern in the Sag River Reservoir is currently underway with one injector-producer pair in the F-pad area (ADLs 355018 and 355017). BP began injection in the second half of 2002 and will continue its evaluation through most of 2003 or until obvious response is seen from the water and/or gas injection. BP submitted an application for the formation of the Sag River PA in 2002, and is continuing to discuss the terms of the proposed PA with the State of Alaska. The proposed Sag River PA includes the existing F-pad pattern as well as the most prospective portion of the Sag River formation under the C-pad area (ADLs 047434 and 025516).

Milne Point Unit

Completed Drilling Listing Period Ending: March 25, 2003

Scheduled: S-33i

Kuparuk Participating Area

F-pad: F-90, F-94

Schrader Bluff Participating Area

E-pad: E-13bi I-pad: I-15

H-pad: H-07a, H-13a

S-pad: S-15i; S-21i, S-31;, S-09i; S-07i; S-27; S-25; S-13i, S-11i, S-23;

S- 05; S-03; S-17, S-29, S-19

Sag River Tract Operation No wells planned at this time.

Attachment 7. Structure map showing locations of proposed development wells

