



1101-02a(2) Liberty DPP  
DTS#618



BP Exploration (Alaska) Inc.  
P. O. Box 196612  
900 East Benson Boulevard  
Anchorage, AK 99519-6612

March 2, 2009

Mr. Jeffery Walker, Regional Supervisor, Field Operations  
Minerals Management Service  
3801 Centerpoint Dr., Suite 500  
Anchorage, AK 99503

Development and Production Plan Approval  
Condition #2  
Liberty Development

Dear Mr. Walker:

BP Exploration (Alaska) Inc. (BPXA) is submitting this letter to the Minerals Management Service (MMS) as the initial action to address Condition 2 of the Liberty Development and Production Plan (DPP) approved on January 3, 2008. Condition 2 states the following:

**Condition 2 – BPXA must provide this office with documentation of compliance with the State of Alaska Office of Project Management and Permitting, Coastal Management Program *final consistency determination* alternative measure: “BPXA agrees to cooperate with the North Slope Borough (NSB) Wildlife Department to design and conduct at least three years of monitoring programs both at the island and at the bridge”. The MMS requests that BPXA provide this office with copies of the final monitoring plans and any report results resulting from the monitoring programs.**

Enclosed is the North Slope Borough Ordinance Serial No. 75-6-52 which contains the program of studies agreed with the NSB Wildlife Department and formalized in the ordinance.

**RECEIVED**  
Anchorage, Alaska

**MAR 3 2009**

REGIONAL SUPERVISOR  
FIELD OPERATION  
MINERALS MANAGEMENT SERVICE

The following monitoring plans and reports will be submitted to the MMS:

<b>1. NSBMC §19.70.050, Noise Studies and Monitoring</b>	<b>Expected Submission Date</b>
Written report documenting the noise generating activities and equipment at Liberty, including predictive modeling showing the type and amount of noise that will likely be generated, as well as the amount of sound that will be propagated through the island and the marine waters.	December 2009
Monitoring plan for acoustic recorders to field verify the actual noise levels, including infrasound, produced by the Liberty Project.	June 2010
Noise monitoring report	June 2011, 2012, 2013
<b>2. NSBMC §19.70.050, Bathymetry and Geomorphology Studies</b>	
Study developed and approved by NSB.	March 2009
Written report	February 2010
<b>3. NSBMC §19.70.050, Waterfowl Studies</b>	
Written report	March 2009, 2010, 2011
<b>4. NSBMC §19.70.050, Fish Study</b>	
Dedicated chapter or section related to expansion of the satellite drilling island.	June 2010, 2011, 2012

If you have any questions concerning this submittal or require additional information, please contact me at (907) 564-4325.

Sincerely,



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Martin Johnson  
Liberty HSE Team Leader

Enclosure

cc:  
Randy Howell, MMS  
Daniel Hartung, MMS

**NORTH SLOPE BOROUGH  
ORDINANCE SERIAL NO. 75-6-52**

**AN ORDINANCE ADOPTING THE LIBERTY  
MASTER PLAN AND AMENDING THE OFFICIAL  
ZONING MAP TO EXPAND THE BOUNDARIES OF  
THE DUCK ISLAND - ENDICOTT UNIT  
RESOURCE DEVELOPMENT DISTRICT**

**WHEREAS**, BP Exploration (Alaska), Inc. (BPXA) is producing the Endicott oil reservoir in the Duck Island -Endicott Unit Resource Development Zoning District by the means specified in its Master Plan, as approved in North Slope Borough (NSB) Ordinance No. 75-6-15 (An Ordinance Adopting the Endicott Master Plan and Rezoning the Endicott Project as a Development District, approved February 12, 1985); and

**WHEREAS**, BPXA proposes to produce the Liberty oil reservoir adjacent to the Endicott oil reservoir by expanding the Endicott Satellite Drilling Island (SDI) to accommodate ultra extended reach drilling (uERD) from SDI to the Liberty oil reservoir; and

**WHEREAS**, a portion of the uERD will cross submerged NSB land in the Conservation Zoning District located outside the boundary of the current Duck-Island Endicott Resource Development Zoning District; and

**WHEREAS**, BPXA has applied to expand the boundary of the existing Duck-Island-Endicott Unit Resource Development Zoning District to include the additional lands necessary to encompass the Liberty Development Project; and

**WHEREAS**, BPXA has submitted its Liberty Development Project Master Plan for NSB's approval; and

**WHEREAS**, the Planning Commission recommends approving the Liberty Reserve Master Plan and extending the boundary of the Endicott Resource Development Zoning District set in ORDINANCE SERIAL NO. 75-6-15 provided that BPXA complies with the existing as well as certain additional conditions, as set forth in the Planning Commission resolution attached hereto and marked as Exhibit 2.

**NOW, THEREFORE, BE IT ENACTED:**

Section 1. Classification. This ordinance is a non-code ordinance.

Section 2. Conditions of Rezoning. BPXA shall comply with all conditions set forth in the Planning Commission resolution attached hereto and marked as Exhibit 2.

Section 3. Official Maps. In accordance with NSBMC 19.40.010 and 19.60, the Official Zoning District Map of the North Slope Borough is amended as follows: the designations of the lands necessary for the development activity associated with uERD between SDI and the three-mile boundary of state waters that are not already included in the Duck-Island Endicott Resource Development Zoning District are hereby changed from the Conservation Zoning District to the Resource Development Zoning District. The Official Map and the master digital copy of such shall be updated by the NSB Planning Department to reflect this amendment when all of the conditions set forth in this ordinance have been met.

Section 4. Legal Descriptions. The legal description of the area to be rezoned is as follows: 282 acres of submerged state land located within Township 11N, Range 18E, Sections 20 near the Umiat Meridian, constituting the area outlined in orange on the attached map (Exhibit 1) and labeled as "Area Requested for Resource Development District Rezoning."

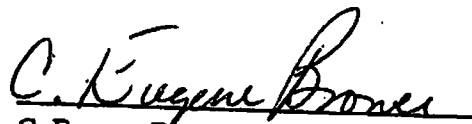
Section 5. Master Plan. The Master Plan entitled "Liberty Development Project Master Plan" is hereby approved.

Section 6. Severability. If any provision of this ordinance or any application thereof to any person or circumstances is held invalid, the remainder of this ordinance and the application to other persons or circumstances shall not be affected thereby.

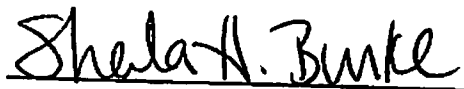
Section 7. Effectiveness. This ordinance shall become effective upon adoption.

INTRODUCED: October 14, 2008

ADOPTED: November 3, 2008

  
C. Eugene Brower, President  
Date: 11/02/08

ATTEST:

  
Sheila H. Burke, Borough Clerk  
Date: 11-3-08

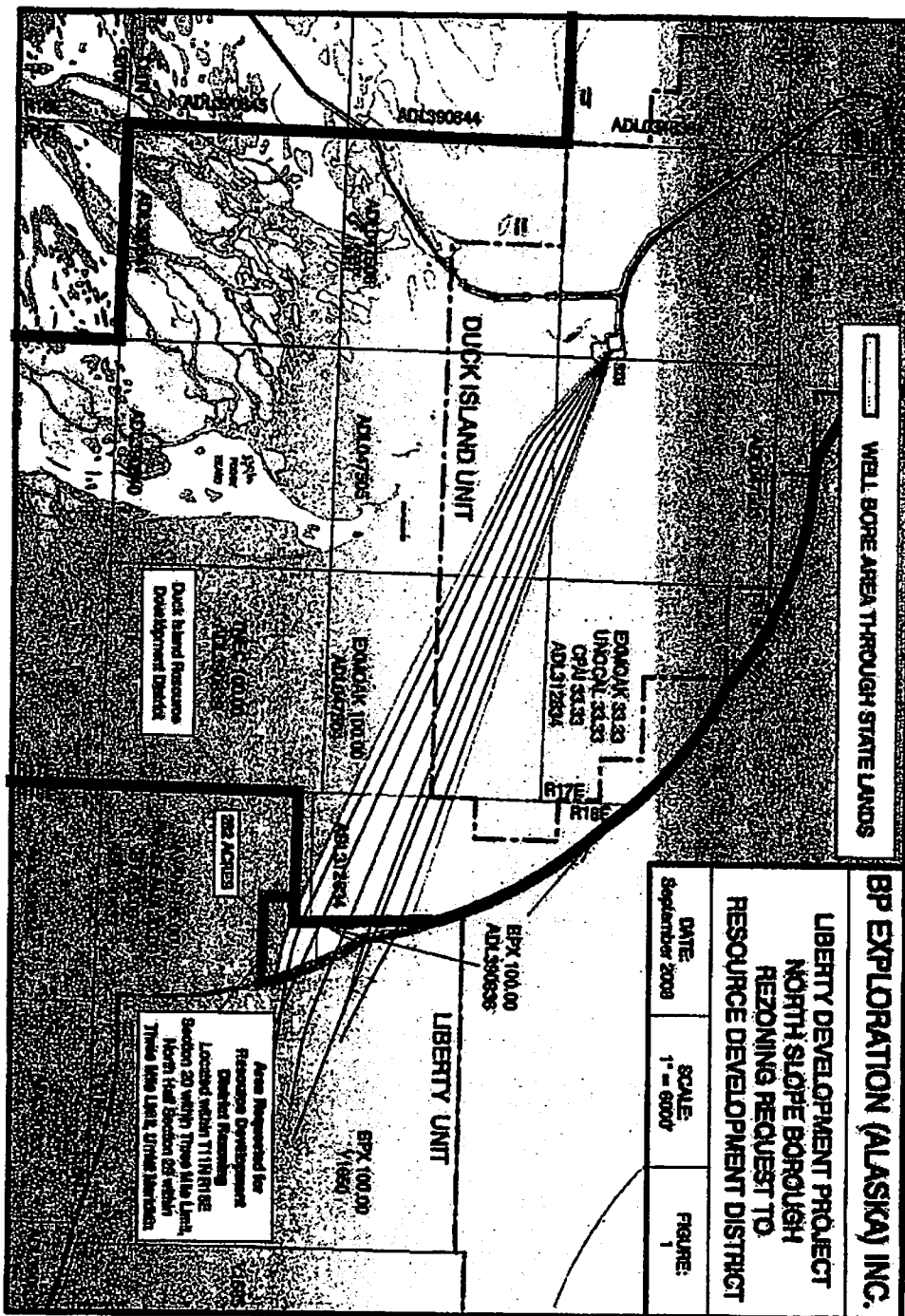


Edward S. Itta, NSB Mayor

Date: Nov. 23, '88

Exhibit 1

**Ordinance Serial No. 75-6-52, An Ordinance Adopting the Liberty Master Plan and Amending the Official Zoning Map to Expand the Boundaries of the Duck Island-Endicott Unit Resource Development District**



**Exhibit 2: Planning Commission Resolution 2008-12**

**NORTH SLOPE BOROUGH PLANNING COMMISSION  
RESOLUTION 2008-12**

**A RESOLUTION RECOMMENDING THE  
ASSEMBLY ADOPTING THE LIBERTY MASTER  
PLAN AND AMENDING THE OFFICIAL ZONING  
MAP TO EXPAND THE BOUNDARIES OF THE  
DUCK ISLAND - ENDICOTT UNIT RESOURCE  
DEVELOPMENT DISTRICT**

**WHEREAS, BP Exploration (Alaska), Inc. (BPXA) is producing the Endicott oil reservoir in the Duck Island -Endicott Unit Resource Development Zoning District by the means specified in its Master Plan, as approved in North Slope Borough (NSB) Ordinance No. 75-6-15 (An Ordinance Adopting the Endicott Master Plan and Rezoning the Endicott Project as a Development District, approved February 12, 1985); and**

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**WHEREAS, a portion of the uERD will cross submerged NSB land in the Conservation Zoning District located outside the boundary of the current Duck-Island Endicott Resource Development Zoning District; and**

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**WHEREAS, BPXA has submitted its Liberty Development Project Master Plan for NSB's approval; and**

**WHEREAS, the Planning Commission recommends approving the Liberty Reserve Master Plan and extending the boundary of the Endicott Resource Development Zoning District set in ORDINANCE SERIAL NO. 75-6-15 provided that BPXA complies with the existing as well as certain additional conditions:**

1. NSBMC §19.70.030, **Economic Opportunity Plan**



BPXA will comply with the Liberty Economic Opportunity Plan (EOP) as it is set forth in the Liberty Master Plan at Section 10. Liberty hiring statistics will be included in the Endicott Alaska local hiring report submitted quarterly to NSB.

2. NSBMC §19.70.040(B) and (C), **Drilling Restrictions**

- a. Drilling of new wells or sidetracks from existing wells into major liquid hydrocarbon zones at its drill sites is prohibited during the defined periods of broken ice.
- b. The first period of broken ice begins June 1 and ends July 20. The second period begins October 1 and ends with 18 inches of continuous ice cover for one-half mile in all directions from the Main Production Island (MPI) and SDI.
- c. Drilling restrictions are not applied the rest of the year.

3. 19.70.040 (E), NSBMC §19.70.050 (A), **Conflict Avoidance Agreement (CAA)**

BPXA will work with the Alaska Eskimo Whaling Commission (AEWC) to identify appropriate activities for conflict avoidance agreements.

4. NSBMC §19.70.040(B) and (C), NSBMC §19.70.050(I)(6) and (7), **Oil Spill Control and Cleanup Plan**

- a. BPXA shall provide a copy of the ADEC approved Oil Discharge Prevention and Contingency Plan that covers the Liberty development.
- b. BPXA shall maintain an Arctic Well Control Contingency Plan that includes primary and secondary well control systems and a well capping program and a relief well plan designed for successful operation in arctic conditions. BPXA shall provide a copy of the plan to NSB. NSB shall enter a confidentiality agreement with BPXA to maintain the confidentiality of the plan. This plan shall be reviewed by leading industry well control experts and shall include but is not limited to:
  - i. Well capping equipment required to control a Liberty well blowout shall be staged in Deadhorse and shall be maintained and operational for deployment, and be on site at the Endicott SDI within eight hours;
  - ii. Within 48 hours of an unsuccessful well capping procedure, BPXA shall initiate relief well rig planning;



- iii. **BPXA shall have a trained and qualified well capping expert available to be immediately deployed to the Liberty drill site in the event of a blowout and onsite within 36 hours;**
- iv. **Primary and secondary blow-out prevention systems;**
- v. **Trained personnel capable of executing the plan; and**
- vi. **Within 90 days of issuance of this ordinance, BPXA shall provide a statement of contractual services verifying that contracts are in place for well control resources, trained personnel and equipment to respond to the worst-case oil spill at the Liberty project. During production operations, all wells capable of flowing oil and gas to the surface unassisted shall be equipped with a surface controlled or sub-surface controlled subsurface safety valve system. The subsurface safety valve shall be maintained in proper working order and the well shall be immediately shut-in if the valve fails. The well shall not resume operation until the valve has been repaired.**

**5. NSBMC §19.70.050, Noise Studies and Monitoring**

- a. **BPXA will hold public workshop(s) with affected North Slope stakeholders and present engineering specifications that describe the amount and type of noise, including infrasound, that will be generated. BPXA will provide information on how impacts to migrating bowheads will be avoided while Kaktovik and Nuiqsut are hunting. This workshop must be held prior to drilling operations.**
- b. **In preparation for the workshop, BPXA will submit a concise written report documenting the noise generating activities and equipment at Liberty, including predictive modeling showing the type and amount of noise that will likely be generated, as well as the amount of sound that will be propagated through the island and the marine waters. The written report will also include information about how noise impacts to whale hunting at Kaktovik and Nuiqsut (Cross Island) will be avoided if the modeling suggests this is an issue. Acoustic and propagation distance data collected in other locations in the Beaufort Sea should be included for comparison. This report must be submitted to the NSB DWM and the Planning Department at least one month prior to the scheduled date of the workshop for distribution to the public. After completion of the workshop and in consultation with the AEWC, the NSB DWM and the Planning Department will work with BP to develop appropriate mitigation strategies.**

- c. Should noise from drilling operations greatly exceed expected levels (e.g., noise levels of 120 dB measured in marine waters near Cross Island) then BP will work with the NSB on measures to reduce noise emissions from the drilling rig.
- d. BP will install acoustic recorders to field verify the actual noise levels, including infrasound, produced by the Liberty Project. Results of this field work will be used to verify model predictions of sound propagation and effectiveness of mitigation methods. Monitoring must continue throughout the drilling period of the Liberty project, unless the NSB Administrator approves discontinuation or intermittent monitoring. Written reports must be submitted to the NSB DWM, and NSB Planning Department, by February 1st of each year, summarizing the study work and results from the preceding year. All noise studies and monitoring plans must be developed by BPXA and approved by the NSB DWM and Planning Department, in consultation with AEWC and the Inupiat Community of the Arctic Slope (ICAS).

6. NSBMC §19.70.050, Bathymetry and Coastline Geomorphology Study

- a. BPXA must conduct a bathymetry and geomorphology (i.e., regionalized coastal stability, or erosion and accretion) study of the "Endicott Lagoon" using standard bathymetric survey methods and available aerial photography.
- b. This study must be developed by BPXA and approved by the NSB DWM.
- c. By February 2009, BP must submit a proposed Liberty Project Bathymetry and Geomorphology Study Plan.
- d. BPXA's study plan must be approved by the NSB DWM prior to proceeding with the study.
- e. The study must commence on or before June 2009, or within two months of the NSB DWM's approval of the study plan. The study should be repeated on 5-year intervals throughout the life of the Liberty project, unless the NSB Administrator approves discontinuation.
- f. An initial written report must be submitted to the NSB DWM within one year of NSB DWM's approval of the study plan. This date shall apply at 5-year intervals as a reporting due date throughout the life of the Liberty project.
- g. Additional mitigation may be required as a result of this study.

7. NSBMC §19.70.050, Waterfowl Study

BPXA will continue the 3-year geese capture and banding study associated with the Liberty seismic program. Should drilling and development result in additional impacts to brood rearing geese, additional mitigation may be required.

8. NSBMC §19.70.050, Fish Study

BPXA will incorporate consideration of the expansion of the Satellite Drilling Island into its ongoing, long-term coastal fish study associated with the Endicott causeway. A dedicated chapter or dedicated sections of the report describing the long-term coastal fish monitoring will be devoted to an analysis and discussion of potential and measured impacts to fish that could be related to expansion of the Satellite Drilling Island.

9. NSBMC §19.70.050 (E) and (F), Cultural and Historical Site Protection

The Liberty Project must not interfere with or disturb traditional activities at cultural or historical sites, including those sites listed on NSB's Traditional Land Use Inventory.

10. NSBMC §19.70.050, Zero Discharge of Waste into Marine Waters

BPXA shall consider the findings of the Science Advisory Committee (SAC) regarding offshore discharge recommendations for domestic/sanitary wastewater disposal.

11. NSBMC §19.70.050 (I) (2) Offshore Island, Pipeline and Structure Design

Offshore structures must be able to withstand geophysical hazards and forces which may occur while at the drill site. Design criteria must be based on actual measurements or conservative estimates of geophysical forces.

12. NSBMC §19.30.070 (B), Reclamation Plan

A reclamation plan specific to the Liberty development and consistent with the Endicott reclamation plan shall be submitted to NSB within 12 months of cessation of permitted activities.

13. NSBMC §19.70.050 (I) (11), Secondary Containment

Secondary containment capable of holding 110% of the largest tank volume shall be installed for all tanks greater than 660 gallons, or double walled tanks, used for fuel storage. Containment must be impermeable and must be designed to capture tank contents.

14. NSBMC §19.70.050, Subsistence Use Protection and User Access

BPXA must keep Native allotment owners, AEWC, and tribes informed of any project activities that may affect subsistence use or access to subsistence resources.

15. NSBMC §19.70, State, Local and Federal Compliance

BPXA shall comply with all local, state and federal laws and regulations throughout the life of the Liberty Project.

16. NSBMC §19.60. Zoning Map

A digital copy of this zoning map shall be submitted to the NSB GIS office before this zoning map amendment becomes effective.

**NOW, THEREFORE, BE IT RESOLVED THAT:**

The Planning Commission of the North Slope Borough recommends the Assembly approve adopt the Liberty Master Plan and amend the official zoning map to expand the boundaries of the Duck Island – Endicott Unit Resource Development Unit.

INTRODUCED: November 3, 2008

ADOPTED: November 3, 2008

Paul Bodfish Sr.  
Paul Bodfish, Sr., Chairman

Date: Nov. 3, 2008

ATTEST:

Lucille A. Mayer  
Lucille Mayer, Clerk

Date: November 03, 2008