REHABILITATION PLAN FOR KUPARUK RIVER STATE, PRUDHOE BAY OILFIELD, ALASKA

FINAL

Prepared by **BP Exploration (Alaska), Inc.** and **ABR, Inc.—Environmental Research and Services** 4 February, 2002

INTRODUCTION

<u>LOCATION</u>: The Kuparuk River State exploratory well site is located within the active floodplain of the Kuparuk River (Figure 1).

<u>HISTORY</u>: The exploration well at Kuparuk River State was drilled in 1969 and the site was abandoned in the same year.

<u>SITE DESCRIPTION</u>: The site includes a gravel airstrip and a thin gravel pad that cover a total of approximately 8.6 acres. There is no indication that a reserve pit is present.

<u>SURROUNDING VEGETATION</u>: Kuparuk River State is mostly surrounded by unvegetated sand or gravel river bars (ABR field data 2001).

<u>CONTAMINANTS</u>: Some contaminated gravel is present within the pad (URS 2001, CH2M Hill 2001), but the airstrip gravel was determined to be free of contamination.

<u>SALINITY</u>: Electrical conductivity (EC) values in the gravel at this site were <0.5 dS/m, within the normal range for freshwater environments (ABR field data, 2001). EC values in stressed tundra adjacent to the site were higher (1.3 to 5.4 dS/m), indicating conditions ranging from brackish to saline.

<u>REHABILITATION APPROACH</u>: Because this site is in the active floodplain of the Kuparuk River, rehabilitation will be limited to removal of contaminated gravel and any contaminated soil, and backfilling the excavations with remaining clean gravel. No plant cultivation treatments are planned. <u>GOALS AND OBJECTIVES</u>: The primary goal for rehabilitation of Kuparuk River State is to recontour the site so it will resemble a natural gravel bar. To achieve this goal, the immediate objective is to remove straight lines along the edge of the pad and remaining portion of the airstrip.

SITE PREPARATION

<u>AIRSTRIP</u>: Most of the airstrip gravel has already been removed and used for construction of Northstar Island. The remaining clean gravel will be used to backfill areas excavated for removal of contaminated material.

<u>GRAVEL PAD</u>: Contaminated gravel, along with any underlying sandy soil that exceeds cleanup levels (2,000 mg/kg DRO), will be removed for off-site thermal remediation. Onsite clean gravel will be used to backfill excavated areas. The excavated areas will be regraded to allow for natural drainage and to minimize the presence of straight lines. In additon, a pond adjacent to northwest corner of the pad will be backfilled with two feet of gravel. The well marker will be cut and capped at a depth of five feet below the final elevation.

REHABILITATION TREATMENTS

AIRSTRIP: No plant cultivation treatments are planned.

<u>GRAVEL PAD</u>: No plant cultivation treatments are planned.

PERFORMANCE STANDARDS

No performance standards are being proposed for this site. Revegetation is not expected to occur because very little organic soil is present. In addition, the final surface will be two to four feet below the current elevation, which likely will result in the site being completely flooded each spring.

MONITORING

After gravel removal, samples will be collected to ensure that the cleanup level (2,000 mg/kg DRO) has been met. Further monitoring will be limited to occasional site visits during the 10-year performance evaluation period. Erosion is expected to be minor, because the site is located on the inside of a bend where current velocities generally are low.

DISCRETIONARY RESEARCH

No discretionary research is planned at Kuparuk River State.

Table 1.Proposed schedule for site preparation, site monitoring and reporting, Kuparuk River State exploratory
well site, Prudhoe Bay Oilfield, Alaska.

Year	Treatment and Monitoring	Reporting
Year 1 (2002)	Gravel removal, visit and photograph site.	Progress report describing conditions at site.
Year 4 (2003)	Visit and photograph site.	Progress report describing conditions at site.
Year 7 (2006)	Visit and photograph site.	Progress report describing conditions at site.
Year 10 (2011)	Visit and photograph site.	Final report describing conditions at site, determination of whether performance standard has been met.

Table 2.Goals, objectives, performance standards and monitoring methods for rehabilitation of Kuparuk River
State, exploratory well site, Prudhoe Bay Oilfield, Alaska.

Goal	Site to become integrated with surrounding habitat.
Objective(s)	Contour site so that it is visually integrated with surrounding tidal flats.
Performance Standards	1. Year 1: site visually integrated with adjacent habitat
	2. Year10: site remains integrated with adjacent habitat
Monitoring Methods	Site visits, photographs.

