

**ADVANCED COMPENSATION
SEAGRASS IMPACTS
BNP EXPLORATION AND DEVELOPMENT
May 7, 2002**

Introduction:

BNP proposes to create seagrass mitigation as compensation for future yet unspecified impacts that may result from its oil and gas exploration and development activities in the Laguna Madre between Corpus Christi Bay and Port Mansfield. BNP proposes to construct the seagrass mitigation, obtain approval from the Corps that it has met performance standards, and then use accumulated credits to offset unavoidable impacts to seagrass that may result from other in-water activities. BNP would of course adhere to all requirements and procedures associated with permitting of future projects, but seek assurance from the Corps that the accumulated credits from its advanced compensation program could be used to mitigate any future seagrass impacts resulting from BNP projects within the Laguna Madre.

Background:

BNP has several opportunities to create seagrass mitigation associated with other construction projects. The first opportunity presents itself with the Plum/Plum Deep exploration project, which does not have seagrass impacts, but could be used to create seagrass mitigation. Initially BNP would propose to build a beneficial use island in the Laguna Madre near Baffin Bay to beneficially use dredged material that would result from the Plum/Plum Deep project (Vicinity and Plan Views attached). BNP plans to submit a permit application to the Corps in late Spring, 2002. The pre-application information for this project was submitted at the Joint Evaluation Meeting (JEM) last February. The application that will be submitted this spring addresses the comments from the JEM, mainly the beneficial use island has been relocated to avoid potential predator issues from raccoons. The beneficial use island would be designed to facilitate the establishment of seagrass. At this time, we estimate that at least 17 acres of seagrass could be created, 3 acres within the beneficial use island and more than 14 acres surrounding the proposed island. We continue to evaluate the seagrass creation opportunities at this project location. The total potential acreage is estimated at 36 acres. BNP proposes to make this up front investment in mitigation, but seeks assurances that available credits could be used to mitigate unavoidable adverse impacts resulting from its future projects. Should the Corps make a favorable permit decision on the Plum/Plum Deep project, it has indicated that allowing the future use of these credits for BNP projects could be stipulated as a condition of that permit.

Proposed Framework:

BNP proposes that the Corps establish a framework for approval of advanced compensation credits resulting from seagrass mitigation constructed at the Plum/Plum Deep project or other BNP projects as opportunities present themselves. RGL 01-1 contains guidance on determining credits, the content of a mitigation plan, and definitions of terms. The Corps has indicated that the most likely mechanism to authorize the use of advanced compensation credits for the future BNP projects would be as a condition of a Corps permit. BNP offers the following topics for consideration:

- The Corps in consultation with the resource agencies would approve a site-specific mitigation plan designed to establish seagrass and accumulate mitigation credits for future use for BNP projects that result in unavoidable seagrass impacts.
- The mitigation plan would include Corps approved performance criteria that would be used to determine when credits would be available for use by BNP.
- A Corps approved functional assessment method would be applied to both the mitigation site and the proposed impact site to determine the appropriate exchange of credits and debits. BNP requests that it obtains one acre of mitigation credit for each acre of seagrass that it successfully establishes as part of its Advanced Compensation Plan.

PROPOSED DREDGING OF ACCESS ROUTES, BASIN, AND
WORK AREA FOR SURFACE LOCATION IN ST 211 FOR ST 211-PLUM NO. 1
WITH BOTTOMHOLE LOCATION UNDER PADRE ISLAND NATIONAL
SEASHORE AND SURFACE LOCATION IN ST 211 FOR ST 211-PEACH NO. 1 WITH
BOTTOMHOLE LOCATION UNDER PADRE ISLAND NATIONAL SEASHORE
LAGUNA MADRE, KLEBERG COUNTY, TX

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SeaGrass Creation at the Plum/Plum Deep Location

BNP proposes to create seagrass beds initially in two areas. One area would be approximately 3 acres in size within the proposed beneficial use island. The second area would be at least 14 acres in size and up to 33 acres in size surrounding the proposed beneficial use island. In the 3-acre area, BNP would plant seagrass (*Halodule wrightii*) on 3-ft centers during the first growing season after the island is completed. In the 14+ acre area, BNP would conduct a pilot-planting program during the first growing season after island completion. BNP proposes to plant several plots totaling 1 acre within the more than 14+ acre advance compensation. If BNP determines that the plots are successful, the remainder of the advance compensation area or portions of that area will be planted on 3-ft centers during the second growing season after installation of the island. Proposed monitoring and success criteria for both the 3-acre and 14+ acre areas are described as below.

Proposed Success Criteria:

BNP proposes that credits would be gained when monitoring demonstrates that all or part of the site is 70% covered with seagrass. Seagrass coverage would be determined using methods typically employed by the Corps, Galveston District. Transects would be established across the narrow dimension of the site, and spaced no more than 100-ft apart. At 10-ft intervals on each transect, three 6-inch diameter bottom samples would be examined for the presence or absence of seagrass and other species that may be present. The percent coverage on each transect would be calculated by dividing the number of samples with seagrass by the total number of samples taken. To obtain the percent coverage of an area between two adjacent transects, the percent coverage of the combined samples taken on the two transects would be used. If the percent coverage is greater than or equal to 70% for two adjacent transects, then the area between the two transects would be considered successful. BNP would receive mitigation credit for the area between the two transects. The partial credit would be product of the area between the two transects and the percent coverage for the two transects divided by 70%. For example, if the percent coverage for two adjacent transects is 50% and the area between the two transects is 0.5 acres, then the mitigation credit would be .36 acres ($0.5 \text{ ac.} \times 50\% \div 70\% = 0.36 \text{ ac.}$).

Proposed Monitoring/Availability of Credits:

BNP would initially monitor the seagrass mitigation area 60 days after planting to determine plant survival. BNP would monitor for coverage at six months, one year, two years, and three years after initial planting. Mitigation credit would be available to BNP as compensatory mitigation for other projects once 70% seagrass coverage is achieved. If, after three years, an area has less than 70% seagrass coverage, then BNP would receive partial credit based upon the equation shown above. BNP may elect to extend the monitoring period to five years and to replant the area in order to achieve a higher percent coverage and thus increase the available credits.

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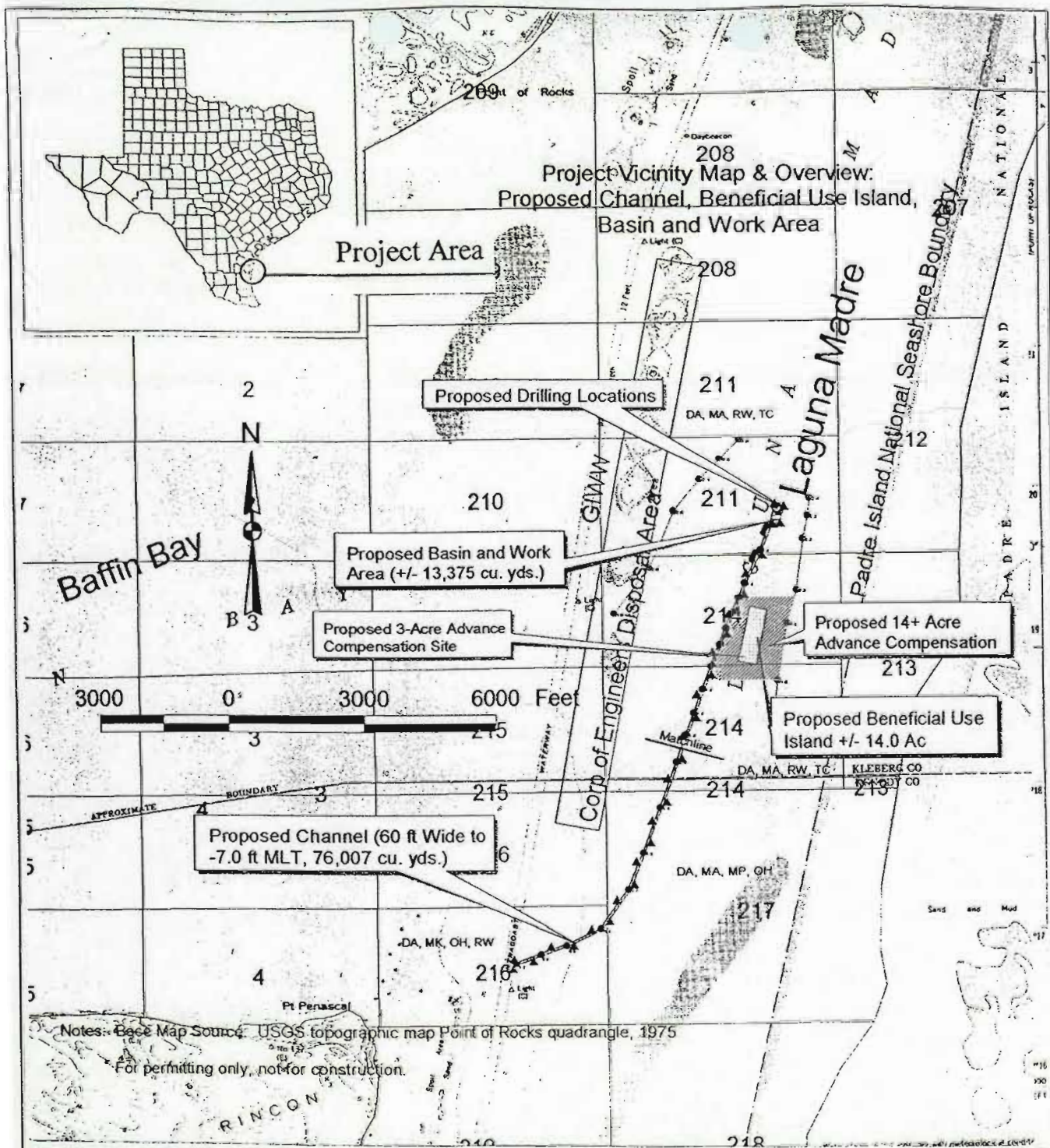
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PROPOSED DREDGING OF ACCESS ROUTES, BASIN, AND WORK AREA FOR SURFACE LOCATION IN ST 211 FOR ST 211-PLUM NO. 1 WITH BOTTOMHOLE LOCATION UNDER PADRE ISLAND NATIONAL SEASHORE AND SURFACE LOCATION IN ST 211 FOR ST 211-PEACH NO. 1 WITH BOTTOMHOLE LOCATION UNDER PADRE ISLAND NATIONAL SEASHORE LAGUNA MADRE, KLEBERG COUNTY, TX

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Plan View 1- Area North of Matchline

Proposed Surface Location in ST 211 for
ST 211-Plum No. 1 with Bottomhole
Under Padre Island National Seashore
X=2359277
Y=593120.5

Proposed Basin and Work Area

Temporary Piling Clusters

Temporary Piling Clusters

Channel Markers

Proposed 14+ Acre
Advance Compensation

Proposed Surface Location in ST 211 for
ST 211-Peach No. 1 with Bottomhole Under ST 213
X=2359327
Y=593050.5

Proposed Channel (60 ft Bottom Width
to -7.0 ft MLT)

Proposed 3-Acre
Advance Compensation

Centerline of Levee

Channel Markers

Notes: Base Map Source: USGS topographic
map Point of Rocks quadrangle, 1975

Sounding estimates are based on Mean Low Tide,
(MLT, COE datum) using the tide staff at
GIWW marker 207.

For permitting only, not for construction.

Mean High Water is approx. equal to +2.0 ft MLT.

All pile, clusters and pilings will use Coast Guard
approved navigation aids.

1000 0 1000 2000 Feet

Matchline

KLEB
COUNTY

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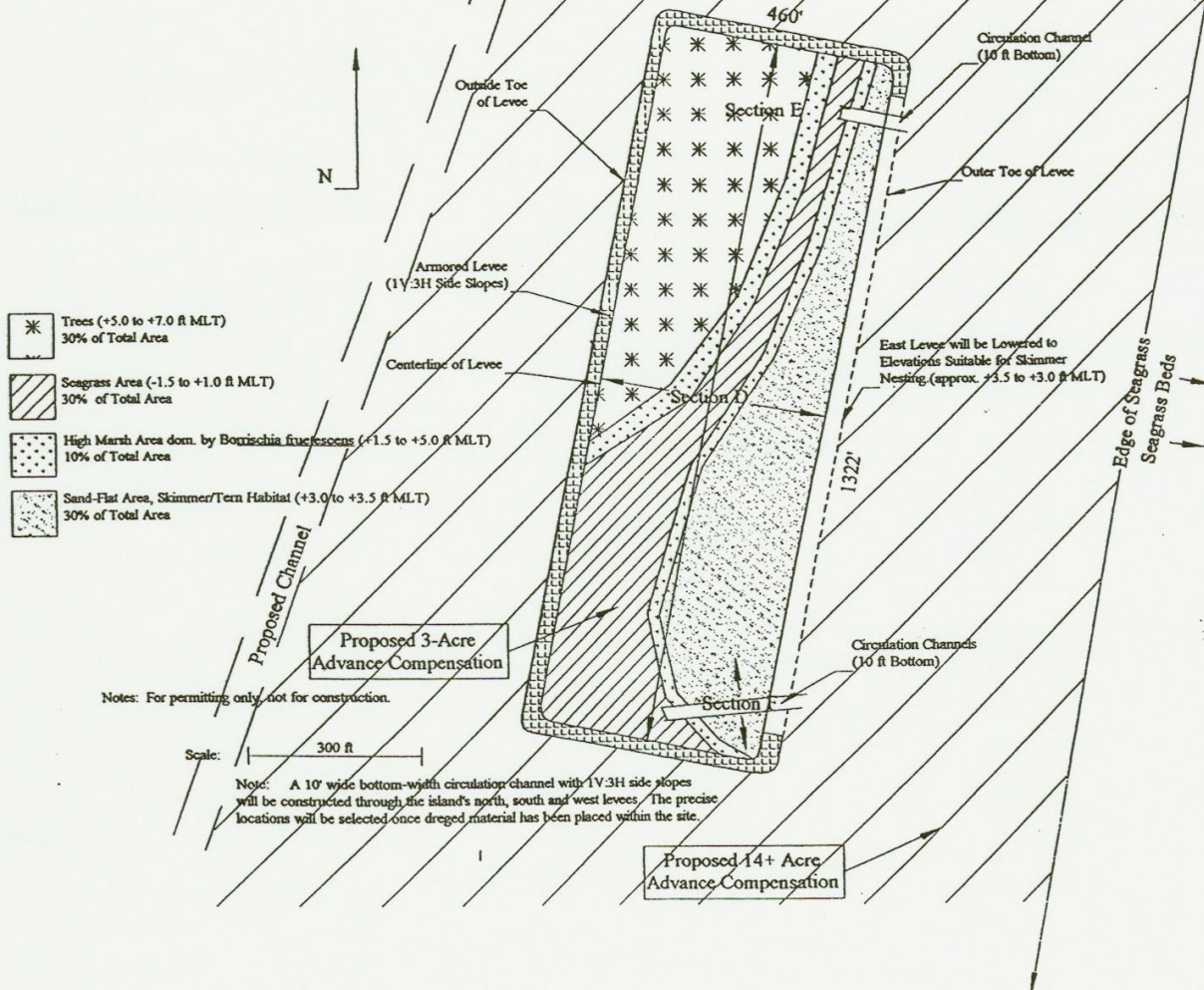
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Plan View-Proposed Beneficial Use Island +/- 14.0 Acres Total Area



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