



United States Department of the Interior

NATIONAL PARK SERVICE

Padre Island National Seashore
P. O. Box 181300
Corpus Christi, Texas 78480-1300

IN REPLY REFER TO:

L 3025

VIA CERTIFIED MAIL- RETURN RECEIPT REQUESTED

December 13, 2001

Mr. Scott Taylor
BNP Petroleum Corporation
Energy Plaza
500 North Water Street, Suite 1000
Corpus Christi, Texas 78471

Re: Approval of BNP Petroleum Corporation's Plan of Operations for Drilling and Production Operations, Lemon/Lemon Seed Unit, wells No. 1000S and 1008S at Padre Island National Seashore.

Dear Mr. Taylor:

The National Park Service (NPS) has reviewed the Plan of Operations submitted by BNP Petroleum Corporation for drilling and production operations, Lemon/Lemon Seed Unit, wells No. 1000S and 1008S within Padre Island National Seashore. We have determined that the Plan is substantially complete. Therefore, we are officially accepting the Plan and processing it for consideration for approval.

Comments from the NPS review accompany this letter as an enclosure. They are recommendations to clarify aspects of the plan. As an alternative to incorporating these comments into another revision of the Plan of Operation, BNP may elect to incorporate them as conditions of approval following the public review and Regional Director's decision-making process.

Your contractor Belaire Environmental, Inc. is developing the Environmental Assessment (EA) for this proposed action for the National Park Service. Upon completion and acceptance by Padre Island NS as being ready for public review, the environmental document and the Plan of Operations will concurrently be submitted for public notice. To expedite this process we will need 3 additional copies of the Plan of Operations, 4 hard copies, and an electronic version of the Environmental Assessment.

NPS DOCUMENT # 488

Public notice of the availability of the Plan of Operations and accompanying Environmental Assessment will be made in a local newspaper and the Federal Register, giving the public 30 days to review and comment. Based on comments received, the Regional Director, Intermountain Region, may incorporate additional mitigating measures as conditions for approval of the Plan into the Decision Document for the proposed operation.

In accordance with 36 CFR §9.37, the Regional Director will make a decision to accept or reject the Plan within 60 days from the date of this letter, unless an additional 30 days is requested by the National Park Service to complete the EA and public review process. At this time our goal is to meet the 60-day time schedule, but it will depend on the timely completion of the EA for public review. Also, consider adequate review time frames and mailing delays, etc. in developing your project schedule. We will notify you in writing of the Regional Director's decision.

If you have any questions regarding this matter, please contact Arlene Wimer of my staff, at (361) 949-8173 extension 224.

Sincerely,

Jock Whitworth
Superintendent

Enclosure

cc: Linda Dansby, NPS-IMSF
Jim Woods, NPS GRD

NPS Comments, Lemon/Lemon Seed Plan of Operations

BNP has developed environmentally sound drilling and production programs for the Lemon/Lemon Seed wells. The steps that BNP proposes to carry out the project fall within the standards set forth in the Padre Island Oil and Gas Management Plan and the NPS nonfederal oil and gas regulations (36 CFR, Part 9B).

The few comments below can be incorporated into the NPS decision letter as conditions of approval or used in the project's environmental analysis.

Water Supply Well and Surface Casing Setting Depth of Well 1008S

BNP is considering drilling a water well to supply water for drilling operations. The NPS supports the use of a water supply well because it minimizes the number of water tanker truck trips up and down the beach. However, the NPS is concerned about the setting depth of the surface casing for Well 1008S just 50 feet deeper than the base of the proposed water supply zone. The general rule is to not drill a water well deeper than the surface casing if there is a reasonable chance of encountering abnormal pressures while drilling. The primary target for the well is a potentially overpressured gas zone. The concern is related to well control and possible communication to the water supply well. While BNP meets the general rule, the depth of the water supply zone and the casing shoe are close enough to be of concern.

The surface casing setting depth for Well 1000S is 2230 feet. The deeper setting depth is to accommodate permit requirements for annular injection of drilling fluids, but at the same time minimizes the concern of communication to the water well if high pressure gas enters the wellbore during drilling (i.e., well kick).

If BNP intends to drill a water supply well, the NPS requests that it provide a written explanation to the following question.

Is communication to the water supply well a well control concern given the maximum anticipated pressures that the surface casing shoe of Well 1008S could be exposed to during a gas kick?

Also related to the setting depth of the surface casing is the depth to which usable quality water must be protected. The TNRCC "Depth of Usable Quality Ground Water to Be Protected" forms in Appendix C have not been completed by the TNRCC. BNP states elsewhere in the plan that usable quality ground water must be protected to a depth of 1700 feet, but BNP should provide the completed forms.

Source of Water and Annular Injection

Two issues remain open-ended in BNP's plan. First, BNP is evaluating the feasibility of drilling a water well to support drilling operations. Secondly, BNP has discussed the possibility of disposing of waste drilling mud via annular injection and has applied to the State of Texas for the required permit. Both are strategies aimed at lowering the cost of hauling water to and drilling waste from the site. Coincidentally, these courses of action would reduce impacts to the park resources and visitor experience. However, until an operator demonstrates the feasibility of drilling water supply wells and using annular injection to dispose of drilling fluids, the environmental assessment should continue to evaluate the impacts of hauling water and drilling fluids up and down the beach. The analysis could then state the anticipated reduction in tanker trips (and thus impacts) should either the water well or annular injection prove to be feasible.

Fill from Sources outside Padre Island National Seashore

The plan states or infers in several sections that soils from outside of Padre Island National Seashore may be used to contour during reclamation or replace any contaminated soil that may be removed. The plan appropriately states that soils would be "clean" and "free from contaminants" and similar to native soils, but does not address the potential for introducing non-native species. To avoid introduction of exotics species, the NPS recommends the following condition of approval:

"Sources of fill material from outside of Padre Island National Seashore must be approved by the Superintendent. All imported fill material shall be free of contaminants and shall not provide for the introduction of exotic plant species to the park."

Dry Hole Well Plugging

The plan appropriately states that plugging will meet both federal and state standards. BNP provides the necessary detail for the NPS to ascertain that the plugging program in the event of a dry hole does indeed meet NPS standards, with the one exception discussed below. Thus, if the well is found to be noncommercial, BNP may proceed directly to plugging operations as set forth in the plan without further NPS approval. Should actual well conditions necessitate wide variation from the plugging plan, BNP would need to obtain concurrence from both the state and the NPS. Pat O'Dell, the NPS -Intermountain Regions petroleum engineer, will monitor drilling progress and will be available to respond to substantial deviations from the plan's plugging program. Work, home, and cell phone numbers will be provided to Arlene Wimer. At the park's request, Mr. O'Dell would be available to provide onsite assistance.

The plug set to isolate the surface casing shoe in Well 1008S is the only plug between the base of the usable quality water zones and deeper zones containing gas or fluids having the potential to migrate. Therefore, the NPS standard would be to test that plug to ensure its integrity. The plug will need to be tested by either tagging with the working pipe string, or pressuring to a minimum surface pressure of 1,000 pounds per square inch. A successful pressure test will be recorded on a chart (or equivalent) and have no more than a 10 per cent drop during a 15-minute period. The following condition of approval would notify BNP of the requirement:

"Should Lemon/Lemon Seed Unit No. 1008S be plugged and abandoned as a dry hole, BNP shall test the plug set to isolate the surface casing shoe to ensure its integrity. The plug will need to be tested by either tagging with the working pipe string, or pressuring to a minimum surface pressure of 1,000 pounds per square inch. A successful pressure test will be recorded on a chart (or equivalent) and have no more than a 10 per cent drop during a 15-minute period."

Spill Reporting

In Section VI., Contaminating or Toxic Substance Spill Control Plan, BNP appropriately includes Padre Island Nation Seashore in the agency spill notification list. The plan does not provide detail as to the content of a verbal notification. Also, the NPS recommends that a written report follow spills of contaminating substances in excess of 5 barrels.

To clarify reporting requirements, the NPS recommends the following condition of approval be included in the Regional Director's decision letter:

"For all releases to the ground of contaminating or toxic substances, BNP will promptly report the following initial information to Padre Island NS: the time the spill was discovered; the type of product released; the location; estimated spill volume; cause of spill; area covered; estimated rate

of release if spill is ongoing; direction of spill movement; description of contaminated area; proximity to surface waters, roads, or trails; weather conditions; what steps are being taken to remedy the situation; and initial response equipment required. For releases in excess of five barrels in the aggregate, BNP will provide a written report to Padre Island NS within 10 working days of the incident. In addition to the information reported in the initial notification, the written report will include steps that will be or have been taken to prevent recurrence of the incident."

Performance Bond Amount

The well plugging and surface reclamation costs listed in Section I. of the Reclamation Plan total more than \$200,000. Therefore, the NPS recommends setting the performance bond at \$200,000 – the maximum allowed for any one operator in a given park under 36 CFR §9.48(d)(3). If BNP still maintains a bond specific to the Dunn-Murdock Well No. 1 plan of operations, its language should be modified to include the Lemon/Lemon Seed operations.

Section X. Background Environmental Information

In part D of Section X, BNP provides a very useful summarization of the actions it will take to minimize the project's effects on Padre Island National Seashore's resources. It would be helpful to include in that list the actions that BNP will take in the event of a hurricane. Appendix C includes the Hurricane Preparedness and Evacuation Plan that could be used to write this item. The measure could read something like:

"In accordance with the approved Hurricane Preparedness and Evacuation Plan, BNP will secure the well site in the event of a hurricane. If a hurricane or tropical storm is within 540 miles or 36 hours of the operation site and the operation site is predicted to be in the severe weather area, BNP will fill the hole with drilling mud; set drill pipe slips safety clamps and safety valves 50' above the deepest casing string; lay down and secure drillpipe; close and lock pipe rams and annular BOP; secure loose tools, equipment and electrical connections; lower drilling derrick; close all valves in mud system; and place generators, SCR on oilfield truck floats and chain down. If the well is producing hydrocarbons, BNP will close the storm valve in the well or install backpressure valve in the tree, shut in all valves on tree, replace all hydrocarbons in storage tanks with water, and remove or secure all loose equipment and supplies."

These Comments have as been forwarded to Charlie Belaire to help with the preparation of the Environmental Assessment.

EA's for plans of operations have routinely described and evaluated 3 alternatives:

- Alternative A, No-Action (baseline conditions – well would not be drilled);
- Alternative B, Plan of Operations as Submitted; and
- Alternative C, Plan of Operations with Additional Mitigation Measures.

Alternative C has typically been required to describe and evaluate additional mitigation measures that are not included in a plan, but the NPS determines are needed to describe the proposed operations utilizing least-damaging methods to avoid or minimize impacts. If additional mitigation measures are identified, BNP has two choices for how they would be addressed: incorporate the additional mitigation measures into the plan, or have them incorporated under a third alternative in an EA. Preparation of an EA with the minimum two alternatives would save time and effort because one less alternative needs to be addressed.

- Comprehensive list of mitigation measures compiled while reading the plan. BNP may want to substitute the list in Section X, Item D, on pages 41-43 with this more comprehensive listing. Mitigation measures must be described in the EA for each alternative being evaluated. The comprehensive list could also be imported into the EA to describe mitigation measures proposed under Alternative B, Plan of Operations as Submitted.

Mitigation Measures, Plan of Operations as Submitted

Comprehensive list of mitigation measures, for easy import into the EA as Mitigation Measures under Alternative B, Proposed Action, Plan of Operations as Submitted. Reference(s) where each mitigation measure is located in the plan is provided in parentheses.

1. Direct impacts to wetlands, wind-tidal algal flats, seagrass beds, and cultural resources would be avoided by directionally drilling the well from a location using a polygon-shaped well/production pad which would utilize approximately 95,605 square feet (2.20 acres) of hummocky uplands for the 329-foot long access road and wellpad/production facility (Section II(C)(2), page 4; and Section X, Item E, Land Features, page 43).
2. BNP would educate all employees and contractors regarding the need for and ways and means of minimizing disturbances to the land, natural resources, wildlife, and people at PINS (Section X, Item D(25), page 42).
3. BNP proposes to install culverts, as needed, along the proposed 350-foot access road, where fill may directly affect surface water run-off. Culvert locations would be selected to minimize alteration of natural surface_drainage patterns (Section X, Item D(10), page 41; and Section X, Item E, Soils, page 44).
(Note: Need to consistently state that culverts, as needed, would be installed along the access road. In many places in the plan it states that no culverts or bridges are proposed.)

4. The proposed well/production pad site would allow the Dunn-Murdock #1 flowline to tie into the existing Duke Energy 6" gathering line that crosses under the proposed location, thereby avoiding additional surface disturbance associated with new flowlines (Section II(B)(6), pages 3 and 4).
5. To the extent possible in regard to rig scheduling and availability, BNP intends to use a diesel electric (SCR) rig to drill the well (Section X, Item D(28), page 43).
6. If possible, BNP would avoid moving in the rig via the Gulf beach during the months of April through September in order to avoid disturbing sea turtle nests; however, should rig scheduling force BNP to move equipment down the beach during this period, a monitor would be utilized to avoid potential adverse impacts to turtle nesting (Section X, Item D(2), page 41).
7. BNP would cut and store vegetation prior to ground-disturbing activities for use in later mulching and native seeding for reclamation/revegetation (Section X, Item D(21), page 42);
8. If at any time, any unknown cultural resource is discovered during the conduct of approved operations, and such resource might be altered or destroyed by the operations, the operator will immediately cease operations in the immediate area and notify the superintendent. The operator must leave the discovery intact until the superintendent grants permission to proceed with the operations. Before any further activities occur, a qualified cultural resource expert will assess the cultural resources, evaluate their National Register eligibility, and consult with the State Historic Preservation Officer (Section X, Item D(26), page 42).
9. The following methods would be applied to prevent leaks and spills of hydrocarbons and produced water: all separators would be equipped with pressure relief valves that vent to the water tank; the inside wing valve on the tree would be equipped with a pressure controlled hi-lo safety shut-off actuator; all tanks would be equipped with liquid level controls to prevent overflow; and, cathodic protection would be installed at each end of the proposed pipeline (Section II(C)(5)(a), page 5).
10. BNP would utilize a water-based drilling mud for drilling the well (Section X, Item E, page 46, Drilling Procedures).
11. Lost circulation mud additives would be used to prevent and control lost circulation (Section II(C)(5), page 6).
12. The drill pad would be designed to slope to an 8-foot diameter by 8-foot deep corrugated galvanized steel cellar to collect spilled contaminating substances; and drainage ditches would be dug (12 inches wide and 9 inches deep) that would route all runoff to the cellar. A portable sump pump would be used to pump the gathered liquids to steel tanks for re-use or disposal (Section V, Item A(4), pages 9-10).

13. To the extent possible, BNP will use directional, shielded lighting to prevent unnecessary night time light pollution, and focus all lighting at the rig and rig work area itself (Section X, Item D(23), page 42).
14. After leveling the access road and pad area, a 20-millimeter thick polyethylene protective liner would be placed on the pad area (Section V, Item A(5), page 10). A 3-foot high caliche berm would be constructed around the perimeter of the pad for emergency containment (Section V, Item A(6), page 10). The berm and liner shall provide temporary containment of spills and fires and prevent the downward movement of fluids through the soil to the groundwater (Section X, Item E, Soils, page 44).
15. Throughout the drilling operations a bulldozer would be used to assist vehicles in the transportation of personnel, services and materials thru the dune line; and a maintainer would be on the beach route to smooth out any rutting that may occur (Section V, Item B), page 10).
16. After setting surface casing and installing the braidenhead, a blow-out preventer would be installed on the well. Additional well control equipment would include a choke manifold equipped with a hydraulically remote controlled adjustable choke (Section V, Item C(1)(a) and (b), page 11).
17. A closed loop "zero discharge system" would be utilized for drilling the well. No earthen pits would be utilized. All mud, drill cuttings, sewage and produced water would be collected in steel tanks for re-use or hauled by sealed dump trucks for disposal at state-approval disposal facilities outside of the park boundaries, or disposed down the well annulus (Section V, Item D(2) and (3), page 13; Section VII, Item B, page 27; and Section X, Item D(13), page 42).
(Note: this has been rephrased by combining text from the 3 referenced locations.)
18. A temporary three-strand barbed wire fence would be placed around the perimeter of the location prior to when the pad is constructed to deter unauthorized persons from entering the operations area during drilling and completion operations. If production is established, a gate and permanent chain link fence would be installed around the production facilities as specified by the superintendent (Section V, Item N(6), page 21).
19. If the well is placed in production, all produced water would be stored in a closed top fiberglass tank(s). The water would be transported to an off site state-approved disposal facility by vacuum truck (Section V, Item K(4), page 18).
20. A tank battery and a berm or "firewall" would be constructed and maintained to contain 1.5 times the volume of the largest tank, and an impermeable liner would be installed at the tank battery to protect soils and ground water (Section V, Item (K)(2), page 17).

21. BNP would construct an open-vent exhaust stacks on production vessels designed to heat the product using an open flame in a manner that prevents birds and bats from entering or perching (Section X, Item D(22), page 42).
22. BNP would cover all open-topped tanks and/or drain water containment areas to effectively minimize the likelihood of accidental deaths of migratory birds (Section X, Item D(23), page 42).
23. BNP would plant native willow shrubs or trees around the production facility to minimize visual impacts to visitors utilizing the Murdock Pass Boat Dock. Plantings of native willow or native trees could also provide and perpetuate valuable habitat for migratory birds.
(Note: This mitigation measure would also meet ESA Section 7(a)(1) goals.)
24. Production facility equipment and wellhead would be painted a neutral color, approved by PINS, to blend with the natural environment (Section X, Item D(7), page 41).
25. During production, the gauger would check the facilities daily for leaks, damage, corrosion, etc. and repair as needed (Section V, Item K(6)(b), page 18). If leaks, damage, etc... are found, gauger shall report status to NPS staff upon leaving the site.
26. During production, the gauger would check supply gas pressure daily. A hi-lo pressure sensor would be installed at a strategic point in the flowstream to monitor the system pressure. Should system pressure go above or below the safe range of operating pressure set by a technician, the sensor would trip a relay that actuates the safety valve, shutting in the well (Section V, Item K(7)(c), pages 18-19).
27. Vegetation within the facility would be maintained using mowers and hand tools (Section V, Item K(6)(g), page 18).
28. BNP would have in place a Hurricane Evacuation Plan to minimize effects of flooding (Section X, Item D(17), page 42).
29. BNP would have in place fire suppression equipment to prevent wildfires (Section X, Item D(18), page 42).
30. During production, and as the reservoir depletes and compressors are placed at the central tank battery to maintain the gas production rates, all compressors would be equipped with hospital mufflers to reduce noise levels and oriented so that exhaust faces within prevailing wind direction (NW). (Section V, Item K(11), page 19).
31. BNP would maintain the 350-foot long access road by keeping it level with a maintainer on an as needed basis (Section V, Item K(13), page 19).
(Note: Page 43 says the access road is 329 linear feet – recommend a consistent length be used throughout the Plan of Operations.)

Some soils from outside the PINS on Padre Island may be hauled in to achieve pre-project contours, or to restore any spill clean-up areas. Such soils would be similar in character to pre-project soils as regards to particle size and would be free of

32. Signs would be posted at the entrance of the access road, on the tree and on the unacceptable contaminants, would be certified weed-free, and approved by PINS Superintendent prior to purchase/use. (Section X, Item E, Soils, page 44).
33. Signage at the tank battery giving operator name, lease name, well number, and Railroad Commission ID number. BNP would display a public information sign near the work area that would generally describe the management of oil and gas exploration with the PINS, and the important relationships between PINS, the general public, and oil and gas exploration (Section X, Item D(27), page 43). Signs would be posted as necessary on the flowline showing operator name and telephone number. If the well is produced, signs would be posted at the entrance prohibiting public access and smoking and requiring safety equipment (Section V, Item N(5 and 7), page 21).
34. If shut-in of the well when drilling or production operations are suspended for 24 hours or more but less than 30 days, the drill pipe will be run in the hole to approximately 100 feet above the last casing depth. The pipe rams would be closed and locked, and at least one safety valve would be installed in the top of the drill pipe and closed (Section V, Item N(3)(a), page 20).
35. If production operations are suspended for 30 days or more, a backpressure valve would be installed in the tree and the tree gate valves would be closed and the valve handles removed. (Section V, Item N(4), page 21).
36. To prevent accumulation of oil and other materials deemed to be fire hazards, all flammable liquids (i.e. condensate, compressor oil, etc.) would be stored in steel or fiberglass tanks and contained inside the firewall or a berm at the central facility. All materials not necessary for the operation of the well would be removed. Any surplus or emergency materials or supply that need to be kept at the well site would be stored at the central facility in a locked storage shed or parts box. (Section V, Item N(8), page 21).
37. BNP has included a Contaminating or Toxic Substance Spill Control Plan in the Plan of Operations to describe actions to be performed in the event of an oil spill, brine spill, release of drilling fluids, blow-out or release of any toxic substance (Section VI, pages 23 through 26).
38. Reclamation of the site would be initiated as soon as possible following completion of operations, and no later than six months unless the Regional Director authorizes a longer period of time. BNP would reduce the pad size following drilling operations as feasible for production operations (Section VII, Item A, page 27). All imported fill materials used to construct the access road and pad would be loaded in dump trucks and hauled offsite for disposal or reuse; and the liner would be removed and hauled off to disposal (Section VII, Item D).

39. The well would be plugged in compliance with NPS standards (Federal Onshore Oil and Gas Order No. 2) and state requirements (Section V, Item L, page 19).
40. After removal of the caliche, the pad and road areas would be re-contoured to as near as possible to the original contour (Section VII, Item G, page 28).
41. All disturbed areas including any rutting deeper than one inch would be recontoured and revegetated (Section X, Item D(8), page 41).
(Note: I rewrote this slightly to read more clearly.)
42. Collection and sampling of soils and surface and ground water would be performed following NPS protocols (Exhibit D) prior to the start of construction to establish baseline conditions, and at the completion of operations to determine if contaminating substances are present in concentrations that pose a threat to wildlife populations or human health, or would jeopardize reestablishment of native vegetation (Section VII, Item E, pages 27 – 28; Section X, Item A(2), page 33; and Section X, Item A(3)(e), page 35).
43. Should contaminated soils be found, where applicable the contaminated soil would be excavated to clean soil and hauled to a state-approved offsite disposal facility. The excavation would be filled with clean native soil. If necessary, contaminated soils would be re-mediated on-site using PINS approved remediation methods (Section VII, Item F, page 28).
44. After the pad and access road have been re-contoured and the soil has been prepared, previously harvested hay baled from the proposed access road and pad area containing native plant seeds would be used to mulch the disturbed areas. If needed, additional hay for mulching and seed would be obtained from a commercial harvester approved by the NPS to prevent introduction of exotic plant species (Section VII, Item H(2), page 28).
45. Herbicide application or hand-tool removal would be used to control exotic plant species in the reclamation area, as approved by the Superintendent of PINS. (Section VII, Item H(5), page 29).
46. Revegetation of the operations would be determined satisfactory when 70 percent coverage of target species is achieved (Section VII, Item H(6), page 29)