



Big Thicket National Preserve
Texas

**CENTURY EXPLORATION HOUSTON, LLC PROPOSAL TO DRILL AND PRODUCE
THE PHINEAS #3 AND WILE E. COYOTE WELLS FROM
ONE LOCATION OUTSIDE THE BEAUMONT UNIT
IN ORANGE COUNTY, TEXAS**

FINDING OF NO SIGNIFICANT IMPACT

BACKGROUND

In September 2013, the National Park Service (NPS) began the evaluation of potential environmental impacts from the directional drilling of Century Exploration Houston, LLC's (Century) proposed Phineas #3 and Wile E. Coyote wells from one previously existing surface location outside the Beaumont Unit of Big Thicket National Preserve (Preserve) to reach bottomhole targets beneath the Preserve.

One reason the analysis was performed was to determine whether Century's directional wells qualify for an exemption from the NPS's nonfederal oil and gas rights regulations found at 36 CFR 9B. Specifically, § 9.32(e) governs operators that propose to develop nonfederal oil and gas rights in any unit of the National Park System by directionally drilling a well from a surface location outside unit boundaries to a location under federally-owned or controlled lands within park boundaries. Per § 9.32(e), an operator may obtain an exemption from the 9B regulations if the Regional Director is able to determine from available data that a proposed drilling operation under the park poses "no significant threat of damage to park resources, both surface and subsurface, resulting from surface subsidence, fracture of geological formations with resultant fresh water aquifer [sic] contamination or natural gas escape or the like." The analysis also served the purpose of disclosing to the public the potential impacts on the human environment, both inside and outside the Preserve.

This document records 1) a Finding Of No Significant Impact (FONSI) as required by the National Environmental Policy Act (NEPA) of 1969, and 2) a decision to exempt the operation from the NPS nonfederal oil and gas regulation found at 36 Code of Federal Regulations (CFR) Part 9, Subpart B in accordance with 36 CFR § 9.32 (e). Also appended to this document is a non-impairment determination as required by the NPS Organic Act of 1916.

Big Thicket National Preserve Enabling Act

When Congress authorized the establishment of the Preserve on October 11, 1974, the U.S. Government acquired surface ownership of the area. Private entities retained the subsurface mineral interests on most of these lands, while the State of Texas retained the subsurface mineral interests underlying the Neches River and navigable reaches of Pine Island Bayou. Thus, the federal government does not own any of the subsurface oil and gas rights in the Preserve. To protect the Preserve from oil and gas operations that may adversely impact or impair Preserve resources and values, NPS regulates the operations in accordance with NPS laws, policies and regulations. The Park Service recognizes that the applicants possess private property rights to nonfederal oil and gas in the Preserve.

SELECTED ALTERNATIVE

The Park Service chose Alternative B, Proposed Action Application as Submitted, as the selected alternative because Century holds valid oil and gas lease rights which, if developed, will not result in major or significant adverse impacts or an impairment of park resources and values. The Park Service believes this alternative fulfills its park protection mandates while allowing Century to exercise their property right interests.

Access, Construction

The Phineas/Ferb well pad, which is entirely on private land, will be accessed via an existing unpaved road off of Lakeview Road. The well pad is an existing well pad that is located in an area that was recently harvested for timber. Thus, it does not require additional construction.

Drilling

Century's proposed production operations inside the Preserve for each wellbore (Wile E. Coyote and Phineas 3) consist of drilling a 9 7/8-inch hole from approximately 3,225 feet to 10,470 feet TVD and a 6 1/2-inch hole from 10,470 feet to completion depth at 11,100 feet TVD. The well will then be completed or plugged and abandoned as a dry hole.

Per Texas Commission on Environmental Quality Form TCEQ-0051 (Depth of Usable Quality Ground Water to be Protected) usable-quality water occurs from the land surface to a depth of 1,600 feet. Century will comply with all provisions of the RRC's statewide oil and gas regulations to drill and eventually plug the well to ensure the protection of usable quality water zones. The proposed drilling period is approximately 45 days. All mud and cuttings will be contained in a closed system of aboveground storage tanks to recirculate drilling mud and aboveground tanks to contain drill cuttings prior to removal from the site. Earthen pits will not be utilized to store drilling mud or the cuttings, and all fluids and cuttings will be hauled offsite to a third-party disposal facility.

Flowlines

Should either of the wells be successfully completed as a producing oil and/or gas well, a 6-inch diameter (maximum) flowline will be installed. The flowline of wrapped and welded steel, will be buried to a minimum depth of 3 feet below surface. Any sensitive resource areas (wetlands) will be bored to minimize impacts and existing rights-of-way will be followed to the extent practicable.

Production Facilities

If oil and gas is discovered and the proposed wells are completed as producers, production facilities will be constructed on the existing well pad. Features could include the wellhead with a Christmas tree valve system, line heaters and separation devices, a glycol dehydration unit, a tank battery consisting of water tanks) and condensate/oil tank(s) constructed within the areas utilized to drill the wells outside of the Preserve, a flowline connecting the components, and a gas sales line and meter. The facility will be developed and maintained according to Century's SPCC Plan and 40 CFR 112.7.

The tank battery, in accordance with RRC requirements, will have an earthen firewall (covered with rock to reduce erosion) surrounding the feature that provides secondary containment with a capacity of 1.5 times the capacity of the single largest tank. The approximate height of the firewall will be 2 feet. The off-load connection will have a safety drip device below it to catch any dripping fluid lost during hook-up and disconnection.

All oil and water lines from the production facilities to the tanks will be buried at a minimum depth of 1 foot below the surface. Depending on the rate of production, one to two compressors equipped with hospital-grade mufflers may be required at the well pad.

Reclamation Plans

Once drilling and completion operations are finished, or if a well is not productive, the portion of the drill site no longer needed will be reclaimed, and the washout/emergency and water pits will be filled with native soil in accordance with RRC Statewide Rule 8. Upon final abandonment, the equipment and all related materials will be removed, the area returned to its original contour, and the well plugged according to RRC Statewide Rules 13 and 14. The site will be reclaimed in conformance with the surface use agreement between the surface owner and Century. The disposal of excess drill fluids and water will occur offsite or downhole depending on Century obtaining the necessary permits and approvals.

Reclamation of the areas disturbed during installation of the flowline associated with the wells if they are produced will include restoration of preconstruction contours to promote revegetation in areas that were cleared.

MITIGATING MEASURES

In order to reduce impacts on the human environment, Century has incorporated the mitigation measures listed in Appendix 1 as part of their application for the proposed operation. While many of the mitigation measures are required by other State and Federal requirements, the Park Service does not have the regulatory authority under § 9.32(e) to require mitigation for operations that qualify for option #1, Exemption with No Mitigation. The wells qualify for an exemption with no mitigation because they will originate on land located outside of the Units, and the wellbores will cross through the Units at a sufficient depth so as to have no impact on the surface of the Units.

ALTERNATIVES CONSIDERED

Two alternatives were described and evaluated in the EA, Alternative A, No Action, and Alternative B, Proposed Action, Application as Submitted. The No Action Alternative was required under NEPA and established a baseline for comparing the present management direction and environmental consequences of the action alternative.

Under No Action, the two wells will not be developed. Under Alternative B, Century will directionally drill the wells as described in the *Preferred Alternative* section above. During the scoping process, alternative locations were considered for siting the wells. These alternative locations were discussed in consultation with Century, Perennial Environmental Services, LLC (Century's contracted consultant), and NPS staff at the Preserve, Regional and Washington Offices. Alternative locations for siting the wells within the Preserve were dismissed from further analysis. Siting the wells within the Preserve will have entailed access into the Preserve and an approved plan of operations. There are no existing roads inside the Unit near the location considered; therefore, a new access road will have been needed. Access through the Unit would have been required, crossing wetlands and floodplains. Although drilling wells from inside the Unit is technically feasible, this alternative was judged to be unreasonable in terms of economics, logistics, degree of environmental impact, and time required to implement the proposal.

Park Service acquisition of the mineral rights that are part of Century's proposal was also considered. With respect to Century's drilling proposal, mitigation measures were identified and applied, most notably directionally drilling from surface locations outside the Preserve. These mitigation measures substantially reduced the potential for adverse impacts to the Unit's resources and values, visitor use and experience, and public health and safety. As a result, the acquisition of mineral rights was dismissed from further consideration in this EA.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

According to the CEQ regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative."

The environmentally preferred alternative for drilling and producing a directional well is based on these national environmental policy goals. Under Alternative A, No Action, the wells would not be drilled. Because there would be no new impacts, Alternative A would provide the greatest protection of the area and Unit resources and values, thereby making it the environmentally preferable alternative.

Century's Proposal, Alternative B, will have greater effects on the environment because of the drilling and production activities. Although mitigating measures will reduce effects to Unit resources and values, there will still be effects, and, therefore, this alternative will not meet the Park Service's environmental policy goals as well as the No Action Alternative.

The Park Service did not choose the environmentally preferred alternative because Century holds valid oil and gas lease rights which if developed, will not result in major impacts or an impairment of park resources and values. The Park Service believes Alternative B will fulfill its park protection mandates while allowing Century to exercise their property right interests.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the context (including duration) of an impact, and its intensity, including a consideration of the criteria that follow. Based on the analysis in the EA, which is summarized in the following sections, the NPS has determined that the selected alternative can be implemented without significant adverse effects. All impact threshold definitions (negligible, minor, moderate, major) referred to in this FONSI are defined in the EA.

Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance that the effect will be beneficial.

Implementation of the preferred alternative will result in adverse impacts ranging from short-term to long-term and negligible to moderate. Resource topics whose projected impacts exceeded minor levels were retained for further analysis within the EA. The

impacts on socioeconomics, catastrophic incidents, environmental justice, prime or unique farmland soils, geology and soils, water quality and resources, fish and aquatic life, wildlife, vegetation, species of management concern, cultural resources, air resources, lightscape, visitor experience, and climate change did not exceed minor levels and were therefore dismissed from further analysis.

Soundscape impacts will occur from connected actions outside the Preserve boundary, mainly due to the operation of machinery and trucks. These will be no worse than moderate, because the noise produced by the machines is attenuated by distance and surrounding vegetation and the most intense impacts will be temporary (approximately 45 days per well).

Adjacent land impacts, specifically to geology and soils, will occur from construction and associated land grading outside the Preserve boundary. These impacts will be no worse than moderate. Geology and soil impacts will be limited to the project footprint outside the Preserve boundary.

If production of hydrocarbons results from the Preferred Alternative, it will result in only a negligible beneficial effect on the local or regional economy, because the proposed wells represent such a small amount of the total production in the Texas Railroad Commission (RRC) district 3. The amount of revenue generated from leases, royalties, and rents will be very limited, and revenue related to production will not necessarily be retained locally. Revenue from sales of goods to crews will be limited, sporadic, and short-term.

The degree to which the proposed action affects public health or safety.

The wellbores for the Phineas #3 and Wile E. Coyote wells will cross into the Preserve at 7,139 and 1,301 feet respectively. The wellbores will cross into the Preserve well below the usable quality water zone designated by the Texas Commission on Environmental Quality (TCEQ). The wells will be cased to protect usable-quality water following RRC regulations, regardless of the depth at which they cross the Preserve boundary. As noted below in the discussion of unknown risks, because there will be no potential for a catastrophic incident, such as a well blowout, well fire, or major spill occurring as a result of the in-park operations, and because the likelihood of such incidents occurring as a result of the connected actions is very low, it is not expected that the action will result in more than negligible impacts to public health and safety.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, ecologically critical areas.

Cultural resources effects are discussed below in "the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources".

Prime and Unique Farmland Soils: Soils inside the Preserve and on other NPS-administered lands are not considered prime and unique farmland soils because they are public lands unavailable for food or fiber production. Further, NPS does not assess effects under the Farmland Protection Policy Act (Public Law 97-98) to the proposed project activities outside of NPS administered lands because NPS has no regulatory authority on those lands.

Wetlands: There will be no direct impacts to wetlands or waters of the United States due to the proposal; however, potential wetland or water resources impacts may occur from connected actions outside the Preserve boundary if there is a release that results in resource contamination. These impacts will be no worse than minor due to the distance from activities to water resources, and the use of ring levees and a SPCC Plan.

Wild and Scenic Rivers: There are no wild and scenic rivers within the operations area.

Ecologically Critical Areas: There are no ecologically critical areas within the operations area.

The degree to which the effects on the quality of the human environment are likely to be highly controversial.

Under NEPA "controversial" refers to circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed (43 CFR 46.30). Past concerns raised regarding 9.32(e) exemptions have primarily focused on the framework for NPS decision-making, rather than the actual environmental effects. Lack of public comments during review is an indication the environmental impacts are well-understood and that there is no substantial factual dispute.

The degree to which the possible effects on the quality on the human environment are highly uncertain or involve unique or unknown risks.

As of September of 2012, there were approximately 7,697 oil producing wells and 3,733 regular gas producing wells in RRC District 3, totaling 11,430 wells. Of these wells, a total of 2,934 or 25 percent of the District total are located within the seven counties where the Preserve is located. These include 2,100 oil wells (27 percent of the District total) and 834 gas wells (22 percent of the District total). The likelihood of well blowouts, well fire, or major spills within the RRC District 3 has been analyzed by the RRC and is detailed within the EA.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Park Service has addressed the future of nonfederal oil and gas operation within the Preserve's Oil and Gas Management Plan published in 2006. This plan presents a

reasonably foreseeable development scenario for the Preserve derived using available drilling, production, and other geologic data for the area, and analyzes the impact of the estimated wells on Preserve resources. The activities covered by this EA are consistent with the actions described in that plan, and therefore do not set precedent or represent a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

In the EA, NPS disclosed to the public the potential impacts that could occur both inside and outside of the Preserve. The Park Service also analyzed the cumulative impacts of past, present, and reasonably foreseeable actions within and outside Preserve boundaries. No significant cumulative impacts were identified in the EA.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

Under the Preferred Alternative, the wells will be directionally drilled from two surface locations outside the Units. The wellbores will cross into the Units at a depth below usable quality groundwater to extract hydrocarbons and other fluids from beneath the Units. The wells will qualify for an exemption with no mitigation because they will originate on land located outside of the Units, and the wellbores will cross through the Units at a sufficient depth so as to have no impact on the surface of the Units. Under this scenario, actions by NPS with respect to the National Historic Preservation Act are non-discretionary. Because the in-park operations will have no effect on cultural resources inside the Units, NPS has no §106 responsibility, nor authority, associated with the wells for the proposed in-park operations for which a §9.32(e) exemption is being evaluated.

The NPS has no authority under 36 CFR § 9B to require archaeological surveys on land adjacent to the Preserve; however, Century contracted Perennial to perform site-file reviews of the area to identify the likelihood of cultural resources being in the project area. Perennial archaeologists determined that due to the results of previous surveys in the area and the highly disturbed nature of the area resultant from timber harvesting, the project would not impact cultural resources on the land adjacent to the Preserve.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Under NPS policy, the proposed operations qualify for an exemption with no mitigation. Under this scenario, actions by NPS with respect to the Endangered Species Act (1973) are non-discretionary. The wells will originate on land outside of the Units, and the wellbore will cross through the Units at a sufficient depth to preclude any effect on surface resources (species or habitat). Therefore, NPS has no Endangered Species Act §7 responsibility or authority associated with the proposed wells, other than

assessing potential impacts to threatened and endangered species from connected actions outside the Units.

The Park Service determined that the directional drilling and production of the Century wells will neither have an effect on federally-listed threatened and endangered species or their habitat in or outside the Unit, nor will there be an effect to the state-listed species that may possibly occur in the Unit. This determination is based upon a combination of factors. First, the habitat in the project areas is not suitable for any of the species identified by U.S. Fish and Wildlife Service. Second, there is an absence of observations of any of these species based on site-specific surveys completed by the proponent. Third, the depths at which the wells will enter the Unit eliminate the possibility of surface habitat disturbance.

Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

The Preferred Alternative is in compliance with all applicable RRC, TCEQ, and federal environmental protection laws and regulations.

PUBLIC INVOLVEMENT

The EA was made available for public review and comment during a 30-day period ending November 8, 2013. A direct mailing notifying interested and affected parties was distributed to the Preserve's mailing list and the document was posted to the NPS Planning, Environment, and Public Comment website. The following state and federal agencies were notified: the RRC District 3; the Texas Historical Commission; the Texas Parks and Wildlife Department; the U.S. Army Corps of Engineers Galveston District; and the U.S. Fish and Wildlife Service. Also, a notice of availability was sent to the Alabama-Coushatta Tribe of Texas, the Big Thicket Association, Davis Bros. Oil Producers Inc., Century Exploration Houston, LLC, Perennial Environmental Services LLC, the Lone Star Chapter and Houston Regional Group of the Sierra Club, the Texas Conservation Alliance, and one unaffiliated individual from Beaumont, Texas. A notice of availability was also sent to the congressional offices of Senator John Cornyn, Senator Ted Cruz, Congressman Steve Stockman, and Congressman Randy Weber. One response was received regarding the EA from the Sierra Club Lone Star Chapter. The Park Service determined there were numerous substantive comments from the Sierra Club's letter. Generally, these comments were in reference to NPS policy regarding 36 CFR 9B implementation, mitigation measures, cumulative impacts, impact determinations and thresholds, drilling and production methodologies, and the definition of terms used. Responses to the substantive comments are attached, and changes made to the text of the EA are indicated on the Errata Sheet. The FONSI will be sent to those who provided substantive comments on the EA, or those who requested a copy.

CONCLUSION

As described above, the Preferred Alternative does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The Preferred Alternative will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized to widespread, short- to long-term, and negligible to moderate. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law. Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

DECISION

In accordance with 36 CFR 9.32(e) I hereby grant, to Century Exploration Houston, LLC an exemption with no mitigation to the NPS nonfederal oil and gas regulations found at 36 CFR Part 9 Subpart B.

Recommended: *for D. Neighbor* 11/22/13
Douglas S. Neighbor,
Superintendent, Big Thicket National Preserve Date

Approved: *Colin Campbell* 11/27/13
Colin Campbell, ACTING
Regional Director, Intermountain Region Date

APPENDIX 1: Mitigations Measures under the Preferred Action

No.	Mitigation Measures - Proposed Action (Alternative B)	Resource(s) Protected	Required or Voluntary
Project Planning and General Procedures			
1	Conduct a desktop archeological survey of the proposed project area	archeological resources	Voluntary
2	Prepare and comply with a Spill Prevention Control and Countermeasure (SPCC) Plan	all natural resources, and human health and safety	EPA requirement as per 40 CFR, Chapter 1, Subchapter D, Part 112 – Oil Pollution Prevention
3	Site both wells, flowline, and production facilities outside of the Preserve boundary	all natural resources and values	Required to qualify for NPS exemption under 36 CFR § 9.32(e)
4	Use existing openings to the extent possible and use existing roads to minimize construction of access road	soils, water resources, floodplains, wetlands, vegetation	Voluntary
5	Construct ditch and 1-foot' high ring levee around the well pad	water resources, vegetation, soils	Voluntary
6	Construct washout/emergency pit and line with plastic	water resources, soils, vegetation	Construction, design and maintenance of pit in conformance with RRC Statewide Rule 8, liner will be voluntary
7	Utilize hooded lights for well drilling activities	lightscares	Voluntary
Well Drilling			

No.	Mitigation Measures - Proposed Action (Alternative B)	Resource(s) Protected	Required or Voluntary
8	Directionally drill well so that wellbore intercepts useable quality groundwater outside of the Preserve	water resources	Required to qualify for NPS exemption with no mitigation measures
9	Use a closed-loop containerized mud system	water resources, soils, vegetation	Voluntary
10	Set surface casing according to State of Texas RRC requirements	water resources	RRC requirement as per Statewide Rule 13(b)(2)
11	Dispose of drilling mud and well cuttings offsite or downhole	all natural resources	Disposal in accordance with RRC Statewide Rule 8
Production			
12	Reduce size of well pad after drilling completion and fill in washout/emergency and water pits with native soil in accordance with Statewide Rule 8	soils, vegetation, water resources	Reduction in well pad size voluntary, fill in washout/emergency and water pits required by RRC Statewide Rule 8(d)(4)(G)
13	Construct a 2-foot earthen, rock covered firewall around the tank battery with a capacity 1.5 times the largest tank	water resources, soils, vegetation	EPA requirement as per 40 CFR, Chapter 1, Subchapter D, Part 112.9(c)(2) to construct secondary containment capable of holding the volume of largest tank plus sufficient freeboard to contain precipitation, voluntary to build capacity for holding 1.5 times volume of largest tank
14	Use mulching, seeding, silt fences, and hay bales	water resources, soils	Voluntary
15	Use compressors equipped with hospital-grade mufflers	soundscapes	Voluntary

No.	Mitigation Measures - Proposed Action (Alternative B)	Resource(s) Protected	Required or Voluntary
16	Notify regulatory authorities and Big Thicket Superintendent within 24 hours in the event of a release or spill of hydrocarbon condensate, crude oil, or other contaminating substance exceeding five barrels	all natural resources	RRC requirement to report well blowout/well control problems or spills exceeding 5 barrels as per Statewide Rules 20 and 91(e), in the event of any condensate spill, operator must consult with RRC as per Statewide Rule 91(b) and any spills of crude oil into water must be reported to the RRC as per Statewide Rule 91(e)(3), spills of other contaminating substances may require reporting to the TCEQ or EPA under a variety of laws and regulations depending on the substance released, the amount, whether or not the release was into soil, water or air, whether the release was ongoing, etc., notification to NPS voluntary
Well Plugging			
17	Consult RRC district office regarding well plugging, plug well to isolate each productive horizon and usable water quality strata according to RRC Statewide Rules 13 and 14 and Bureau of Land Management Onshore Oil and Gas Order No. 2, § III.G., Drilling Abandonment Requirements	all natural resources	RRC requirement as per Statewide Rule 14, compliance with Onshore Oil and Gas Order No. 2 voluntary
Reclamation			
18	If the wells are not produced, equipment and related materials will be removed and the area will be restored to original contours and/or as agreed to with the surface owner.	all natural resources	RRC requirements as per Statewide Rule 14(d)(12), this section of the Statewide Rules requires an operator to "contour the location to discourage pooling of surface water at or around the facility site," restoration of original contour voluntary

No.	Mitigation Measures - Proposed Action (Alternative B)	Resource(s) Protected	Required or Voluntary
19	Reclamation in conformance with the Land Entry Permit or surface agreement between surface owner and Century	all natural resources	RRC requirements as per Statewide Rule 14(d)(12), required by landowner as per surface use agreement

APPENDIX 2: Non-Impairment Finding

National Park Service's *Management Policies, 2006* require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given NPS the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of these resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment, but an impact would be more likely to constitute an impairment when there is a major or severe adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;

- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS's threshold for considering whether there could be an impairment is based on whether an action would have major (or significant) effects.

Impairment findings are not necessary for visitor use and experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, because impairment findings relates back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

After dismissing the above topics, topics remaining to be evaluated for impairment include natural soundscapes, air quality, lightscares, and wildlife. These topics are important aspects of the fundamental resources and values for Big Thicket National Preserve which are identified in the Preserve's *General Management Plan* (1980), and which are considered necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; are key to the natural or cultural integrity of the park; and/or are identified as a goal in the park's General Management Plan or other relevant NPS planning document.

- **Natural Soundscape** – Big Thicket National Preserve was established “to assure the preservation, conservation, and protection of the natural, scenic, and recreational values” of the Big Thicket area, of which the natural soundscape is a part. This project involves temporary impact to the natural soundscape of the Preserve by elevated noise from connected actions outside Preserve boundaries. Although natural sound resources are an important resource to the Preserve, the preferred alternative would result in only negligible to moderate (impact ranges from the lowest levels of detection to measurable), temporary, site specific adverse impacts to natural sounds; therefore, there would be no impairment to the natural soundscape.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there would be no impairment of park resources and values from implementation of the preferred alternative.

ERRATA SHEET
PROPOSAL TO DIRECTIONALLY DRILL AND PRODUCE THE
THE PHINEAS #3 AND WILE E. COYOTE WELLS FROM ONE LOCATION OUTSIDE
THE BEAUMONT UNIT BIG THICKET NATIONAL PRESERVE

Changes are indicated by bold text.

Page 1-19 Section 1.4.2 Catastrophic Incidents, such as Well Blowouts, Well Fires, or Major Spills, *Cumulative Impacts*, change the following sentence:

There are very low rates of occurrence for all three types of incidents, ranging from 1 well fire to 1 major spill reported in 2011 out of a total of 11,300 wells in service.

to

There are very low rates of occurrence for all three types of incidents, ranging from 1 well fire to 7 major spills reported in 2012 out of a total of 11,300 wells in service.

Page 2-37 Section 2.2.6 Production Facilities, third paragraph, last sentence, change the following sentence:

Depending on the rate of production, one to two compressors equipped with hospital-grade mufflers may be required at the well pad.

to

Depending on the rate of production, one to two compressors equipped with hospital-grade mufflers, which decrease noise production by 35-40 dBA, may be required at the well pad.

Page 3-53, Section 3.3.4, Impacts on Natural Soundscapes in and outside the Beaumont Unit, Environmental Consequences, Impacts from Connected Actions, second paragraph, sentence before last, change the following sentence:

If the wells were productive, production operations would result in noise levels of approximately less than 50 dBA at the nearest preserve boundary if an unmitigated compressor is used; however, Century proposes to utilize compressors equipped with hospital-grade mufflers during production, if necessary.

to

If the wells were productive, production operations would result in noise levels of approximately less than 50 dBA at the nearest preserve boundary if an unmitigated compressor is used; however, Century proposes to utilize compressors equipped with hospital-grade mufflers during production, which decrease noise production by 35-40 dBA, if necessary.

SUBSTANTIVE COMMENTS

(All from the Lone Star Chapter and Houston Regional Group of the Sierra Club)

#	Comment	Response
1	<p>The Sierra Club supports the acquisition of the mineral estate, so that oil/gas activities in BTNP, over time, will cease and the landscape of BTNP can then be restored. If this alternative is not chosen then the Sierra Club supports Alternative 1, No Action, because this is the most environmentally protective alternative.</p> <p>The Sierra Club believes that this proposal is significant because drilling of this and all other wells next to or through the BTNP, via slant drilling, in addition to any proposals to drill wells within the BTNP, do constitute crossing of the significance threshold and requires that an environmental impact statement (EIS) be prepared for this proposal on a landscape level.</p> <p>NPS has stated in the past that it implements its responsibilities by "considering acquisition of the nonfederal oil and gas interest." If NPS has done this then it should have documentation that shows the analyses it conducted during the consideration for the two wells that it proposes to approve. These analyses should include cost estimates for acquiring private mineral rights under BTNP as a whole and certain units or areas of units. NPS has never presented any information in its EAs for any oil/gas activity. NPS has not made a serious attempt to consider acquisition of private oil/gas mineral rights and continues to stonewall the Sierra Club and the public by doing no such analysis or providing the appropriate information so the light of public review and comment is shone on NPS actions.</p> <p>The Sierra Club appreciates that NPS listed four alternatives during scoping. While the Sierra Club does not support all of the alternatives listed we do agree they are "reasonable" and therefore require full NEPA analysis.</p> <p>NPS has refused to conduct an alternative analysis on "all reasonable alternatives" in</p>	<p>Comment noted.</p> <p>Section 2.3, on page 53 of the EA, describes <i>Alternatives Considered but Dismissed from Further Analysis</i>, including purchasing the mineral rights that are part of Century's proposal and drilling the wells from inside the Preserve, and explains why they were dismissed from further consideration. These alternatives are amongst the range considered, and by dismissing them, the NPS is focusing the NEPA document consistent with NPS Director's Order 12 and CEQ's NEPA regulations (40 CFR §1500-1508).</p>

	<p>any EA as required by the President's Council on Environmental Quality's (CEQ) NEPA rules. In Section 1502.14(a) of these rules CEQ states, "Rigorously explore and objectively evaluate all reasonable alternatives". Such an "all reasonable alternatives" analysis would include an alternative for buying the mineral rights for the Century wells.</p> <p>The Sierra Club is aware of about 61 wells (34 drilled + 23 approved but not drilled + plus two wells proposed for Fort Apache + the two wells in this proposal) that NPS has approved or is in the process of approving that involve slant drilling under the BTNP. NPS must develop an alternative analysis in the EA that seriously assesses and evaluates an alternative that buys the mineral rights that Century will use to drill under the BU and the landscape scale environmental impacts that have occurred (including fragmentation) with wells drilled along BTNP boundaries.</p> <p>Such an alternative is a "reasonable" alternative and is required to be assessed under the NEPA and the CEQ regulations that implement NEPA. Although NPS listed such an alternative in the scoping notice it has never provided an analysis in an EA that seriously contemplates buying mineral rights under BTNP for any individual oil/gas drilling proposal. Therefore there is no estimate of what mineral rights are worth and how much they would cost to buy.</p> <p>A further documented lack of analyses for all reasonable alternatives is that NPS in the past has refused to conduct environmental analysis in any EA for the option of drilling a well within a unit. The Sierra Club does not favor this type of alternative. However, it is a "reasonable alternative". NPS must analyze and include in an EIS "all reasonable alternatives" including drilling in the BU.</p>	
2	<p>NPS has also not provided to the public what the potential impacts are of two wells drilled under BTNP. Instead, NPS has only provided a qualitative, not quantitative description of what the environmental impacts will be of one well.</p>	<p>In the EA, NPS discussed the two separate wellpads from which the 2 wells will be drilled, the impact of constructing and maintaining these locations, and the estimated resource impact from the drilling of each well. Because the wells will not be</p>

	<p>NPS is required by NEPA to reveal all potential environmental impacts. NPS never provides the public with the analysis and information that documents what the quantitative environmental impacts will be if five wells are drilled. The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p>	<p>drilled simultaneously, impacts will not vary in their intensity, only their duration. The NPS believes this analysis provided sufficient reasoning upon which to base its conclusions regarding the context, duration, timing, and intensity of the impacts.</p>
3	<p>The NPS should require maintenance standards for the monitoring and upkeep of flow-lines, tank batteries, compressors, heaters, and other associated equipment used at the well site. This will ensure that leaks or spills are prevented or their damage is minimized. This has not been done as a mitigation measure. The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p>	<p>The scope of the NPS's jurisdiction under its regulations at 36 CFR Part 9B, including its authority under section 9.32(e), is limited to operations that occur inside the boundary of the park. Therefore, the NPS does not have regulatory authority to require additional mitigation.</p>
4	<p>Page 1-7, 1.2.2 NPS Nonfederal Oil and Gas Regulations, 36 CFR 98, NPS states "The NPS identified no resource occurring on the surface of the Preserve that could be affected by the well bore crossing into the plane of the Preserve at a substantial depth ... ". NPS ignores that resources on the surface, due to slant drilling under BTNP, will be impacted by air pollution, noise pollution, light pollution, visual pollution, and gradual subsidence of the surface when gas/fluids are removed. The level of NEPA analysis by NPS is incomplete, distorted, and misleading. The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p>	<p>The quoted text refers to the anticipated impact to natural resources as a result of actions <i>within the boundary of the Preserve</i>. NPS has also fully analyzed the impact that connected actions outside the boundary of the Preserve will have on NPS resources and values. These impacts are discussed for every impact topic at a level of detail consistent with the potential impacts.</p>
5	<p>Because the Sierra Club disagrees with the NPS that it is not granting an approval we disagree with the three so-called "legally permissible options" that have been used in this EA (page 1-7). The Sierra Club disagrees with NPS, on page 1-8, that "While it can be argued that NEPA is not triggered ...". NPS does authorize oil/gas drilling' via a waiver (exemption) which is a form of approval.</p> <p>Therefore National Environmental Policy Act (NEPA) does apply and a full EA/EIS should be prepared with mandatory mitigation and not voluntary mitigation</p>	<p>The scope of NPS's jurisdiction under its regulations at 36 CFR Part 9B, including its authority under section 9.32(e), is limited to operations that occur inside the boundary of the park. Under this authority, there are two listed mitigation measures—no surface access to the Preserve, and directional drilling so as not to intercept usable quality groundwater within the Preserve—that are requirements of the NPS in the sense that they are necessary for the operators to qualify for exemptions with no (further) mitigation required by NPS. This is the extent of the mitigation which the NPS can require. The analysis in the EA was based on</p>

<p>measures. A mitigation plan must be developed and provided in the EA/EIS so that the public and decision-maker can review, comment on, and learn about this NEPA required element.</p> <p>Page 1-7, 1.2.3 Protecting Park Resources from External Activities, the NPS states "The NPS may seek compensation ... if any activities outside park boundaries ... damage park resources." This is not a proactive policy. NPS admits that it must wait until damage is done which could be extensive and permanent before it sues the company. Preventive actions, like mitigation measures that will not adopt for this exemption approval would help prevent pollution and damage to BTNP. However, the NPS hampers itself because it will not incorporate other agencies' mitigation measures into its exemption approval to ensure proactive protection.</p> <p>Page 1-8, 1.2.4 NPS Monitoring of Nonfederal Oil and Gas Operations, NPS states "In the event the NPS becomes aware of a compliance concern ...the NPS should alert that agency in a constructive manner." NPS has a public obligation to alert natural resource agencies about damage to natural resources that it sees. NPS fails to state that before 2002 it put other agencies' natural resource protection requirements in its exemption as mandatory mitigation measures to ensure that NPS had authority to enforce them if the other agency did not. Only due to oil/gas company pressure has NPS removed this requirement and weakened its regulatory authority. NPS is not doing all that it can to ensure that natural resources are protected. The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p> <p>Page 1-8, 1.2.4 NPS Monitoring of Nonfederal Oil and Gas Operations, NPS states that "The NPS must coordinate the timing of such access with the operator". There is no law which requires NPS to do this. NPS, as a regulatory body, can ensure that this exemption is followed and enter</p>	<p>these mitigation measures as described in the applications for exemption submitted by Century.</p> <p>Nonetheless, in the EA, NPS discloses to the public potential impacts to park resources associated with operations occurring outside park boundaries and outside the Service's regulatory jurisdiction. The Park Service also works with operators to encourage them to adopt voluntary mitigation measures on their operations outside park boundaries. The fact that NPS discloses and discusses these broader issues as part of the NEPA process and impairment evaluation required by the Organic Act does not alter the limited scope of the decision to be made under the regulations.</p>
---	---

	<p>private property to determine compliance with the exemption. NPS at one time did this but in 2002 quit when Davis Brothers oil company complained and applied political pressure. Any enforcement officer who has experience with natural resource regulation will tell you that you tip-off the operator when you contact them ahead of time and tell them you are coming to inspect their facilities. Operators then have time to cover-up or correct violations. NPS's statement is based upon flawed reasoning with regard to compliance and enforcement actions and is not in the public interest.</p> <p>It is important to note that many of the mitigation measures that NPS relies upon are either voluntary, which it cannot enforce, or those of other agencies which it cannot enforce because it has not made these mitigation measures a mandatory part of the exemption. NPS has virtually no enforcement capability because most of the "mitigation measures" are completely voluntary, partly voluntary, or can only be enforced by another agency. NPS touts that it can sue the operator after a problem occurs but good enforcement ensures that problems are taken care of before they damage public lands. The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p> <p>Pages 2-38-2-41, 2.2.8 Mitigation Measures, Table 6, of the 19 mitigation measures listed, 13 are entirely/partially voluntary (68.42%) for an operator to comply with. Another 10 mitigation measures are entirely/partially the requirements of another agency (52.63%).</p> <p>This means that 17 of the 19 mitigation requirements are entirely/partially not required (voluntary) or not enforceable by the NPS because mitigation measures are required by another agency. Only 2 (10.53%) of the 19 mitigation measures are required or enforceable by NPS. Since NPS cannot enforce mitigation measures that are voluntary for operators to comply with or are the requirements of another</p>	
--	--	--

	<p>agency NPS is helpless to guarantee that mitigation measures will be enforced or complied with.</p> <p>What really brings the helplessness of NPS home is that on page 2-40, mitigation measure 16, states that if there is a spill the notification to NPS is voluntary. So NPS could be blind about a spill because the applicant does not even need to notify NPS when a spill occurs. Talk about a pathetic effort to protect a unit of the National Park System. NPS should do more proactively to protect BTNP and the BU.</p> <p>Page 2-41, 2.3.2 NPS Acquisition of the Mineral Rights that are Part of Fort Apache's Proposal, NPS states "mitigation measures were identified and applied". However, NPS cannot make any claim that mitigation measures that are voluntary or that it cannot enforce will be applied or implemented. This is sham protection and does not obviate NPS from conducting a realistic appraisal of what it would cost to buy mineral rights.</p> <p>NPS states "These mitigation measures substantially reduced the potential for adverse impacts to Unit resources and values ... As a result the acquisition of mineral rights was dismissed from further consideration in this EA."</p> <p>The problem is that 89.47% of the mitigation measures that NPS relies upon to protect BTNP and the BU in particular cannot be enforced and or required by NPS because they are voluntary or require another agency to enforce them. This should affect NPS's analysis regarding risk/safety and the potential adverse impacts to BU resources and values, visitor use and experience, and public health and safety due to the oil/gas exploitation proposal. NPS must revise its analysis to take this factual information into account.</p> <p>The NPS has not addressed what monitoring will be required and how often it will be done, and who will conduct the monitoring. NPS has weakened its monitoring activities by limiting what it will monitor, by hiring</p>	
--	--	--

	<p>third party monitors instead of using qualified NPS employees, and by requiring that the operator be notified before monitoring instead of conducting unannounced monitoring inspections.</p> <p>NPS must address in the EA/EIS that the enforcement authority it has and how willing it is to use that authority. NPS must tell the whole story and the whole truth. The basic problem is trust. The EA must address what illegal actions are expected and excused by NPS or will be prosecuted.</p>	
6	<p>Page 1-10, 1.3 Issues and Impact Topics Evaluated, NPS states "Based on project scoping concerns ... the NPS determined that the impacts topics listed ... would likely have more than minor impacts". This statement is incorrect. The Sierra Club brought up many "scoping concerns". NPS has ignored the concerns the Sierra Club provided to it in our May 31, 2013 scoping letter and does not cover them and this is the reason the Sierra Club repeats many of these concerns.</p>	<p>NPS acknowledged Sierra Club's scoping concerns in the previous paragraph "Substantive scoping comments focused on analyzing cumulative effects, acquisition of mineral rights, analysis of alternatives, and enforceability of mitigation measures." As stated in the EA, the decision to carry forward an impact topic was based on internal and external scoping concerns as well as the "level and extent of potential impacts likely to occur."</p>
7	<p>Page 1-12, Table 3. Impact Topics Eliminated from Further Analysis and pages 1-32 to 1.33, 1.4.13 Air Quality, the Sierra Club disputes NPS that air quality is a topic that should be eliminated from analysis. NPS fails to mention the fugitive volatile organic compound (VOC) emissions and leaks that come from tanks, valves, flanges, pumps, compressors, and other equipment during construction, production, and maintenance. There is no quantification of these air pollutants and no acknowledgment of this air pollution problem and not mitigation proposed for air pollution reduction. The Sierra Club three years ago sent the NPS a study that the Houston Advanced Research Center (HARC) about fugitive emissions from oil/gas production operations. In addition, the TCEQ has conducted monitoring studies of benzene and other air pollutant emissions from oil/gas drilling and production activities. NPS has failed to acknowledge and use this best available science. NPS is required by NEPA to cover potential environmental impacts.</p>	<p>The NPS described the potential impact to Preserve resources from increased emissions associated with construction, drilling, and production of the proposed wells. As is stated in the EA, these emissions will lead to no more than minor impacts to Preserve resources. Any fugitive volatile organic compound (VOC) emissions from tanks, valves, flanges, pumps, and compressors would be a result of non-compliance with Texas Commission on Environmental Quality (TCEQ) regulations.</p>
8	<p>12) Page 1-14, 1.4.1 Socioeconomics, the reasonably foreseeable development (RFD) is out-of-date. Already the NPS has</p>	<p>The Park Service has addressed the future of nonfederal oil and gas operations within Big Thicket National Preserve in the Preserve's</p>

	<p>approved 59 wells, with 34 wells drilled and 23 approved but not drilled plus the two wells proposed for Fort Apache and plus the two wells for this proposal means that there are at least 61 wells that have been approved or are proposed to be approved. The RFD only makes provision for 40 wells drilled over the next 15-20 years. So 57 wells have been approved for drilling with four more are proposed for approval. The NPS must update the RFD so that it reflects the reality of more drilling under BTNP.</p>	<p><i>Oil and Gas Management Plan</i> published in 2006. This plan presents a reasonably foreseeable development scenario for the Preserve derived using available drilling, production, and other geologic data for the area, and analyzes the impact of the estimated wells on Preserve resources.</p>
9	<p>Page 1-12, Table 3. Impact Topics Eliminated from Further Analysis, the Sierra Club believes that NPS errs in eliminating catastrophic incidents from analysis in the EA. Since catastrophic events have occurred in the counties where the BTNP exists and have occurred at a well that was approved (Sierra Club word) by NPS via the exemption process, this potential environmental impact and issue should be analyzed in the EA.</p> <p>Pages 1-16 through 1-19, 1.4.2 Catastrophic Incidents, such as Well Blowouts, Well Fires or Major Spills, there are different ways of looking at data. NPS attempts with the data on dangerous incidents to state that incidents are not likely to happen. Yet, for major oil spills, of the 3 that occurred in the 29 county RRC District 3 in 2011, 1 or 33% occurred in the 7 counties where BTNP is. For 2012, these figures show of the 9 major oil spills, 7 or 78% occurred in these 7 counties. These figures document that major oils spills (not including minor oil spills) are more likely to occur within the 7 counties that BTNP exists in than in the 22 other counties in RRC District 3. In 2011, the only well fire that occurred in RRC District 3, occurred in one of the 7 counties where the BTNP occurs, next to BTNP, by a well that NPS exempted, for a 100% risk occurrence. These are not trivial risks and they occur frequently enough so that NPS should use the EA to address what the risk is for BTNP and not attempt to denigrate or explain away that risk. NPS fails to include releases of air pollutants and explosions as catastrophic events that should be specifically enumerated.</p>	<p>The Park Service analyzed the potential for catastrophic events quantitatively, and reached the conclusion that this topic does not warrant detailed analysis in the EA based on the likelihood of those events affecting resources and values within the Preserve. The Park Service is not denying that such an event could occur within or near the Preserve, potentially affecting Preserve resources and values. However, statewide oil and gas regulations require oil and gas operators like Century to apply downhole well control technologies which make such events unlikely as noted by the number of incidents versus the amount of drilling activity in the seven-county area containing the Preserve. These events are even more unlikely to affect the Preserve because of the small amount of drilling activity that actually is close enough to have any potential to affect the Preserve.</p> <p>The oil and gas wells found in the Preserve's seven counties represent approximately 25% of the wells found within RRC District 3. Given this percentage, it is within reason that more incidents occur within these counties.</p> <p>Regarding the analysis of cumulative effects, please see the errata sheet attachment of this FONSI.</p>

<p>NPS states on page 1-19 that "rates of occurrence for such incidents are low and are not a reasonable expectation of project implementation." Perhaps NPS should tell that to the RRC, operators, neighbors, and land that was affected by these incidents. Perhaps NPS should tell these stakeholders what moderate and high risks are. What would be significant to NPS to take a catastrophic event seriously? This is the same type of logic that Minerals Management Service used before the BP spill occurred in 2010. This led to MMS's demise. Has NPS learned nothing?</p> <p>NPS states that "impacts are short-lived" and "could be remedied and mitigated over time". How much time? What does short-lived mean? What impacts are NPS talking about? Just what does NPS believe is a "substantial threat"? What does "would provide for timely response and cleanup" mean? How fast is this? What does "reasonable expectation" mean? What are "negligible effects", "very low rates of occurrence", "would be no potential for catastrophic incident", and "is very low" mean? Why is "further analysis on this topic would be highly speculative"? The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p> <p>It is disconcerting that NPS should say on page 1-18, that it can seek a remedy after the damage is done to BTNP due to one of these incidents. In other words, NPS proposes that it wait until the damage is done before doing anything to prevent it in the future. It is indeed sad when the public's number one protector of parks is not "preventive" with regard to the safety and health of BTNP but wants to wait until the "horse is out of the barn" before closing the door. This type of attitude does not breed confidence for park users that BTNP will be protected and is "penny-wise and pound-foolish".</p> <p>Page 1-19, Cumulative Impacts, NPS mentions 2011 incident data while</p>	
---	--

	ignoring that the incident data for 2012 for major spills is greater than 2011.	
10	<p>Page 1-23, 1.4.7 Fish and Wildlife, Impacts from Connected Actions, NPS states "Century's proposed mitigation measure to use hospital-grade mufflers would minimize this impact allowing wildlife in the area to become acclimated over time." NPS fails to mention that this mitigation measure is voluntary and therefore Century does not have to implement it. Therefore NPS's reliance on a voluntary mitigation measure may result in no mitigation and there is no legal way that NPS can prevent this unless it writes the voluntary mitigation measure into the exemption approval so that it is enforceable. NPS also fails to explain how a hospital-grade muffler would be better than a regular muffler or no muffler. NPS must state how much noise pollution will be reduced by a hospital muffler versus no muffler versus a regular muffler.</p> <p>Page 2-37, 2.2.6 Production Facilities and page 3-53, Impacts from Connected Actions, NPS states that one or two compressors may be equipped with hospital-grade mufflers. NPS must tell the public what these mufflers are in comparison to no mufflers or regular mufflers and whether these mufflers will or will not be used. If NPS does not know then it cannot state that this voluntary mitigation measure will be implemented because NPS does not know.</p>	<p>Please see Table 6: Mitigation Measures for the Phineas/ Ferb Wells under the Proposed Action (Alternative B) item number 15, "use compressors equipped with hospital-grade mufflers". This mitigation measure is labeled as voluntary.</p> <p>Please see the errata sheet for this FONSI regarding the impact of hospital grade mufflers.</p>
11	<p>Pages 1-33-1-35, 1.4.14 Climate Change, NPS must address climate change adequately and comprehensively. Climate change is due mostly to the release of carbon dioxide (CO2) air pollution from activities like the combustion of oil/natural gas and their products. Climate change will alter existing ecosystems and make it more difficult for plants and animals to adapt successfully to these changed ecosystems.</p> <p>Page 1-34, NPS mentions the Intergovernmental Panel on Climate Change (IPCC) 2007 report. A new report by IPCC came out on October 4, 2013. NPS must incorporate and use this new report as a source about climate change and not</p>	<p>Climate change is a subject of concern for NPS. However, as stated in the EA, climate change research is still largely lacking a quantifiable method for predicting its effects.</p> <p>The recommended CCERRP is outside the scope of this EA. Furthermore, the Park Service does not consider the consumption of the minerals that may be generated due to the drilling of these wells to be a connected action for this project. The Park Service cannot analyze the impact of the proposed project on EPA guidelines regarding CO₂ regulation until they have been issued.</p> <p>This EA was released on September 22, 2013,</p>

<p>refer to the out-of-date 2007 report (6 years old).</p> <p>NPS has failed to adequately address climate change. In fact NPS does not even state that the transportation, refining, and use of oil/natural gas, fossil fuels, via burning directly or indirectly (gasoline), will result in CO2 emissions. NPS does not estimate how many CO2 emissions will be generated from the oil/natural gas that will be pumped from the two wells and the amount used during drilling and extraction and production of products that will be burned as fossil fuels or their products (gasoline). It is not clear how NPS can state that the proposal will generate "low emissions" of CO2 on page 1-35.</p> <p>NPS must answer questions like:</p> <ol style="list-style-type: none"> 1. How will BTNP and the BU be affected by climate change? 2. What can be done to create more resilient and resistant habitats and ecosystems? 3. What can BTNP do to reduce CO2 or other greenhouse gas emissions? 4. What can be done to assist plants and animals so they can adapt to climate change? <p>NPS should prepare and include in the Century EA a climate change ecological resilience and resistance plan (CCERRP). The CCERRP would assess the biological and ecological elements in BTNP and the BU and the effects that climate change has had and will have on them. The CCERRP would also assist plants, animals, and ecosystems in adapting to climate change and would require monitoring of changes and mitigation measure effectiveness. The CCERRP would be based on:</p> <ol style="list-style-type: none"> 1. Protection of existing functioning ecosystems in BTNP/BU. 2. Reduction of stressors on the ecosystems in BTNP/BU. 3. Restoration of natural functioning ecological processes in BTNP/BU. 4. Use of natural recovery in BTNP/BU, in most instances. 5. Acquisition of buffers and corridors to expand and ensure connectivity of 	<p>prior to the release of the October 4, 2013 IPCC report.</p>
--	---

	<p>ecosystems in BTNP/BU.</p> <p>6. Intervention to manipulate (manage) ecosystems in BTNP/BU only as a last resort.</p> <p>7. Reduction of greenhouse gas emissions from BTNP/BU and the two Century wells and transportation, refining, and use of the products of these wells.</p>	
12	<p>Page 3-45, 3.1 Methodology, NPS states "Where the intensity of an impact can be described quantitatively, numerical data are presented." For the negligible, minor, moderate, and major impact intensity thresholds there are no quantitative standards set for any of the impact topics even though the soundscapes impact topic has an easily used measurement, decibels, and research data specific to BTNP. All of NPS's impact intensity thresholds are qualitative even many could be quantitative.</p> <p>This EA fails to mention or implement the court ruling in favor of the Sierra Club and against the NPS about assessment of impacts and the methodology used, from impairment and NEPA perspectives, which was deemed inadequate, arbitrary, and capricious.</p> <p>NPS must quantify in the EA the impacts that potentially will occur and its methodology must remove the "conclusory statements" that Judge Bates ruled against. Judge Bates states in his decision that the descriptors "negligible", "minor", "moderate", and "major" are largely undefined or are defined in a manner that includes few objective bounds. These descriptors must be defined with objective bounds. NPS must explain the basis for its conclusion that potentially "moderate" impacts are not significant under NEPA or impairment standards.</p> <p>NPS uses conclusory language that is embedded in the definitions for negligible, minor, moderate, and major and in other places in this EA. These conclusory words or phrases are undefined. Some of the conclusory words/phrases that NPS uses in this EA include:</p> <p>1. would not exceed minor levels, page 1-</p>	<p>In the opinion on summary judgment in <i>Sierra Club v. Mainella</i>, the Court held that NPS failed to adequately explain its conclusions. The Court did not direct NPS to remove conclusions from its analysis. The Park Service must reach some conclusion regarding the nonfederal oil and gas proposals at issue. Instead, the Court directed NPS to prepare a new environmental assessment that provides explanations to support its conclusions.</p> <p>The Park Service provided explanations for its conclusions in the EA in accordance with the Court's decision. For example, before drawing any conclusions in the <i>Affected Environment and Environmental Consequences</i> section of the EA, NPS detailed the sources of possible impacts for each phase of operations, discussed the likely effects of each impact on the resources and values of the Preserve, and provided reasoning upon which to base its conclusions regarding the context, duration, timing, and intensity of the impacts.</p> <p>In the EA, NPS took a "hard look" by considering the direct, indirect, and cumulative impacts of the proposed action on the environment, along with connected, cumulative and similar actions. Impacts were described in terms of context, duration, and timing using four impact intensity threshold definitions (negligible, minor, moderate, major), which are defined for each impact topic in the <i>Affected Environment and Environmental Consequences</i> chapter. If the intensity of an impact could be described quantitatively, the numerical data was presented; otherwise the impacts were described qualitatively.</p> <p>The analysis in the EA demonstrates that the directional drilling and production of the Century wells from outside the boundary of the Preserve would create impacts that</p>

<p>12</p> <p>2. there is little controversy, page 1-12</p> <p>3. minor effect, page 1-12</p> <p>4. would be small and of little consequence, page 1-12</p> <p>5. is relatively low, page 1-14</p> <p>6. is very small in relation, page 1-14</p> <p>7. reasonable assumption, page 1-14</p> <p>8. would be rapidly contained and removed, page 1-18</p> <p>9. substantial threat, page 1-19</p> <p>10. relatively flat, page 1-27</p> <p>11. would be similar to, page 3-44</p> <p>12. to the greatest extent possible, page 3-46</p> <p>13. Inappropriate sound, page 3-47</p> <p>14. to the fullest extent practicable, page 3-47</p> <p>15. A reasonable amount of noise, page 3-48</p> <p>16. negligible change, page 3-52, NPS must explain to the public why it uses negligible in a definition to describe negligible. Does negligible as used in this instance have a different definition? If so, what is it?</p> <p>17. very infrequent, page 3-52</p> <p>18. infrequent noise, page 3-52,</p> <p>19. could be heard frequently, page 3-52</p> <p>20. would be simple and successful, page 3-52</p> <p>21. could occasionally be present, page 3-52</p> <p>22. could still be heard occasionally, page 3-52</p> <p>23. could be extensive, page 3-52</p> <p>24. would likely be successful, page 3-52</p> <p>25. would persistently dominate, page 3-52</p> <p>26. Extensive mitigation measures, page 3-52</p> <p>27. success would not be guaranteed, page 3-52</p> <p>28. would be similar to Alternative A, page 3-53</p> <p>29. The likelihood of future residential development in close proximity to any of the Project locations is low, page 3-54</p> <p>30. adjacent lands outside the Unit, page 3-54</p> <p>31. would be so slight, page 3-54</p> <p>32. would not be of any measurable or perceptible consequence, page 3-54</p> <p>33. would cause limited localized change, page 3-54</p>	<p>range in intensity from negligible to moderate levels. Whether impacts are significant under NEPA and whether they are unacceptable under the NPS <i>Management Policies</i> are separate questions.</p> <p>The CEQ defines significant environmental impacts using the 10 criteria listed in this FONSI. In the EA, major impacts are synonymous with significant impacts. In the FONSI, NPS relies on the major impact threshold definition, generally equating significant impacts with major impacts, and also applies the CEQ criteria. Based on the analysis in the EA and FONSI, there are no major (significant) effects resulting from this proposal.</p> <p>The 2006 <i>Management Policies</i> state (§8.1.1) "the fact that a park use may have an impact does not necessarily mean it will be unacceptable or impair park resources or values for the enjoyment of future generations. Impacts may affect park resources or values and still be within the limits of the discretionary authority conferred by the Organic Act. In these situations, the Service will ensure that the impacts are unavoidable and cannot be further mitigated." The Preserve Enabling Act specifically lists the extraction of minerals, oil, and gas as an appropriate use if such activities could "be conducted without jeopardizing the natural values for which the area seeks to preserve." The impacts described in the EA are an unavoidable consequence of that activity. They will not jeopardize the resources and values of the Preserve, for the reasons explained in the EA and FONSI. The Park Service also has made substantial efforts to mitigate impacts and expects that impacts will be mitigated. The Park Service has identified numerous mitigation measures, but does not have regulatory jurisdiction to make all of them mandatory.</p>
--	---

	<p>34. would be simple and successful, page 3-54</p> <p>35. would be consequential, page 3-54</p> <p>36. would be relatively local, page 3-54</p> <p>37. would likely succeed, page 3-54</p> <p>38. would cause substantial alteration, page 3-54</p> <p>39. on a regional scale, page 3-54</p> <p>40. Extensive mitigation measures, page 3-54</p> <p>41. success would not be guaranteed, page 3-54</p> <p>42. existing and reasonably foreseeable uses, page 3-54</p> <p>43. at substantial depths, page 3-54</p> <p>44. would be similar to those described for Alternative A, page 3-54</p>	
	<p>All of these conclusory and undefined words and phrases leave the public in a quandary about what the environmental impacts are, what their intensity is, and how different alternatives can be compared and differentiated. The public and decision-makers need this information clearly stated and transparently presented so that it can be reviewed, commented on, and understood in relation to the environmental impacts of the proposed five wells. The NPS has not implemented Judge Bates' ruling in a convincing and complete manner. The Sierra Club objects to NPS ignoring Judge Bates' decision.</p> <p>NPS must not fail to take the "hard look" that Judge Bates admonished it to do. Ultimately, the Sierra Club asks the question "Why are moderate environmental impacts acceptable in the National Park System and in BTNP?" NPS has stated in other oil/gas EAs that "The authorizing legislation directs the Secretary of the Interior to administer the lands within the Preserve "in a manner which will assure their natural and ecological integrity in perpetuity". How can moderate environmental impacts assure BTNP's natural ecological integrity in perpetuity? How is this sustainable? The NPS has never explained this dichotomy. The EA/EIS must explain this dichotomy. The public must have this information so that it can review, comment on, and understand all the environmental impacts</p>	

	<p>of the proposal.</p> <p>Pages 3-46-3-53, 3.3 Impacts on Natural Soundscape in and outside the Beaumont Unit, the NPS does not provide a quantitative limit for noise although on page 3-45, NPS states "Where intensity of an impact can be described quantitatively, numerical data are presents." This is not true for noise and the NPS should eliminate the above sentence because it is not true. NPS has decibel data it can use for the impact intensity thresholds but refuses to use it in this EA. The Sierra Club has pointed this out previously in other EAs and NPS continues to publish and incorrect statement and refuses to use the best available science for the EA.</p>	
13	<p>Pages 3-46 and 3-47, 3.3 Impacts on Natural Soundscape in and outside the Beaumont Unit, Background and Guiding Laws, Regulations and Policies, the NPS should state clearly what the difference is between "to the greatest extent possible" and "to the fullest extent practicable". How do these two phrases differ and what is their practical effect on the protection of BTNP's soundscape resources.</p>	<p>The phrases "to the greatest extent possible" and "to the fullest extent practicable" were quoted from NPS Management Policies 2006 and Director's Order #47 respectively.</p>
14	<p>NPS should assess the impacts of illegal use of all-terrain vehicles or other off-road vehicles (including poaching of wildlife) on public and private lands due to the use of roads or other routes to access the area where drilling will occur. The public must have this information so that it can review, comment on, and understand all the environmental impacts of the proposal.</p>	<p>The Park Service has stated in the EA that there will be no vegetation removal within Preserve boundaries as a result of the proposed action, thus, no new access points will be generated for illegal ATV use.</p>
	<p>NPS has not assessed the indirect, cumulative, and connected impact that produced water, drill cuttings, and any other wastes generated by the drilling and where they will be discharged for cleaning. Just saying these wastes will be disposed of offsite is not sufficient information.</p>	<p>The Park Service does not consider the off-site disposal of drilling wastes a connected action for this project.</p>
15	<p>For an EA, dictionary usage of words or phrases will not suffice to provide the public with a clear picture of what the intensity, significance, and context of environmental impacts are from the Century wells. In other words a qualitative assessment, analysis, and evaluation of environmental impacts is not sufficient to deal with the clearly articulated CEQ</p>	<p>In its NEPA analyses, NPS brings together technical specialists who possess the knowledge and skills to assess the effects of the proposal in an interdisciplinary team, and it is their judgment that forms the basis of the analysis. This is consistent with CEQ's requirement of interdisciplinary preparation. The ultimate purpose of NEPA, as CEQ has noted, is not better documents, but better</p>

<p>requirements in Section 1502.14, that the EIS "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public".</p> <p>Quantitative assessment, analysis, and evaluation are necessary to ensure that alternatives and environmental impacts are clearly defined and shown in the ENEIS. As stated in the CEQ NEPA implementing regulations, Section 1500.1(b), Purpose, "NEPA procedures must insure that environmental information is available to public officials and citizens ... The information must be of high quality. Accurate scientific analysis ... are essential to implementing NEPA".</p> <p>As stated in Section 1501.2(b), "Identify environmental effects and values in adequate detail so they can be compared to economic and technical analyses." As stated in Section 1502.8, "which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts."</p> <p>As stated in Section 1502.18(b), about the Appendix, "Normally consist of material which substantiates any analysis fundamental to the impact statement".</p> <p>As stated in Section 1502.24, "Agencies shall insure the professional integrity, of the discussions and analyses... They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement."</p> <p>The analyses in EAs that NPS has conducted in the past is based on "best professional judgment" which is simply what a group of people think is important based on their experiences and training. This level of assessment, analyses, and evaluation for environmental impacts and alternatives is an insufficient base for an EA.</p>	<p>decisions.</p> <p>This is even truer of NPS determinations regarding impairment which (as explained in Management Policies) are expressly to be determined "in the professional judgment of the responsible NPS manager."</p>
---	--

	<p>In past EAs "best professional judgment" is not defined. NPS must define what "best professional judgment" means so that the public can review, comment on, and understand what NPS is referring to. The qualitative description of phrases used to describe environmental impacts or the protectiveness of an alternative does not provide the public with the degree of comparison required by the CEQ.</p> <p>The use of "best professional judgment" is not a substitute when quantitative information is available to show what impacts are or could be. This is the concern that the Sierra Club has when NPS develops and uses the "Methodology for Assessing Impacts". This methodology is based on "best professional judgment" but the public is not told what this phrase means. The interaction of the "Methodology for Assessing Impacts" with the requirement in Section 1502.22 of the CEQ's NEPA implementing regulations must be discussed completely in the EA.</p> <p>Section 1502.22, requires that when evaluating reasonably foreseeable significant adverse effects on the human environment in an EA that incomplete or unavailable information be plainly stated as lacking in the EA or EIS. This section also requires that if the costs of obtaining this information are "not exorbitant" then the agency must include the information in the EIS. Finally, this section also requires that if the information cannot be obtained due to exorbitant costs that the agency must state the information is incomplete or unavailable; state the relevance of this information to evaluating the significant adverse impacts; summarize the credible scientific evidence; and then provide the agency's evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community."</p> <p>In this case the use of "best professional judgment" is the theoretical approach or research method that is generally accepted in the scientific community that NPS uses to assess the environmental impacts of oil/gas activities in, on, or through BTNP.</p>	
--	---	--

	<p>Therefore NPS must give a thorough discussion of the use of this evaluation method in place of using quantitative data for the impact issue that is being discussed. NPS cannot substitute "best professional judgment" for gathering existing quantitative data that it does have or gathering quantitative data that does not cost an exorbitant amount to collect for this EA. The Sierra Club opposes the use of "best professional judgment" in lieu of using existing or not exorbitantly costly acquired quantitative data. The Sierra Club requests that NPS clarify and detail clearly the comparative differences between each alternative and define clearly what the words or phrases used mean. The environmental impact that this policy choice causes must be assessed in the EA so that the public and decision-maker can review, comment on, and learn about this NEPA required element.</p>	
--	--	--