

CHAPTER 2

PROPOSED ACTION AND PROJECT ALTERNATIVES

2.1 PROPOSED ACTION

Quantum is proposing to acquire 6.82 total miles of 2D seismic data for AEC Oil & Gas USA, Inc. (AEC) within the Adobe Town WSA. AEC has existing oil and gas leases inside the WSA covering tracts the proposed seismic line would cross. The sections affected by the seismic line include:

T.14 N., R.98 W.	Sections: 1
T.15 N., R.97 W.	Sections: 8, 9, 16 (State of Wyoming), 17, 19, 20, 30
T.15 N., R.98 W.	Sections: 36 (State of Wyoming)
T.15 N., R.97 W.	Sections: 4

Specific components of the Proposed Action are as follows:

Quantum proposes to utilize 2 survey crews accessing the seismic line by foot travel, helicopter, or existing roads. No new roads or improvement to existing roads are proposed. A pin flag would be placed every 110 feet to indicate receiver points with a lath placed every 440 feet to indicate a shot point location. Shot points would be located every 440 feet on AEC's leases within the WSA although some modification of shot points may occur to avoid cultural or paleontological sites. No shot points are proposed off lease. Where the receiver line is proposed off AEC leases (approximately 4,800 feet total, about 3,000 feet on the north end of the line and 1,800 feet on the south end of the line), the receiver line (geophones, cable) would be hand-placed and receiver points located every 110 feet. There would be approximately 5.90 miles of shot point locations, located on lease only, with approximately 70 shotholes and 6.82 miles of receiver line. Seismic operations are expected to take 7 days. The project would commence upon approval by BLM, which is anticipated to be May, 2002.

Quantum proposes to set up staging areas on existing disturbed areas located on private lands (Eversole Ranch) for the deployment of equipment and a helicopter landing area. The staging area would consist of two highboy equipment trailers and a parking area for crew transport vehicles. They also plan on using private property or existing roads for the recording truck or "doghouse" locations where possible. If it is necessary to set up a staging area on public lands administered by BLM, Quantum would conduct appropriate surveys (i.e., cultural, special status plant and animal species, etc.) prior to approval for use of these areas.

Drilling operations would be conducted utilizing heliportable drills powered by air. Drill units would be flown to each location, and placed on sites devoid of or having sparse vegetation in order to minimize crushing or breakage of plants. Drill operators and helpers would be transported by helicopter to and from each location. At each location a 3.5-inch diameter hole would be drilled to a depth of 80 feet and loaded with a 30-pound charge of 60 percent seis-gel explosive. Each hole would immediately be plugged with the drill cuttings in accordance with Wyoming Oil and Gas Commission Rule 406 and BLM requirements. Any drill cuttings left over would be either removed or scattered. The area affected at each shot point would be about 8 feet by 8 feet. There would be 70 shot points along the line affecting approximately 0.10 acre. Due to the limited disturbance (no clearing of vegetation, portable drills on skids, small drill holes) no reclamation is proposed.

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Recording operations would be conducted by deploying equipment with a helicopter to a location every 660 feet on line. The cable, geophones, MRX data processing boxes and battery packs would then be hand carried and placed on the line by crews operating on foot. Personnel would be transported to the line by helicopter from a staging area located outside the WSA or enter by foot travel. The recording truck would be located on the existing road that is the western boundary of the WSA. Detonation of the explosive charges would occur during recording operations. The resulting sound waves would be recorded.

Once the recording line is no longer required, crews of four individuals would load the equipment and trash into the bags. "Bag runners" hook the bags to the helicopter long line and the equipment is removed along with all trash, survey flagging, and lath. On the source lines the shooters would remove any trash once they have completed detonating each hole. The garbage detail is kept current with seismic crew progress.

The recording crew consists of the following vehicles:

- 1 - F800 recording truck
- 1 - 15 passenger crew van
- 2 - 3/4 ton pickup trucks
- 2 - 1/2 ton pickup trucks
- 3 - 1 ton stake trucks to transport recording equipment
- 1 - 1 ton mechanic truck
- 1 - truck trailer (transport portable drill rig equipment)
- 1 - small support trailer (misc. equipment)
- 1 - Llama helicopter
- 1 - support truck for the helicopter

Project clean-up would concurrently proceed with the completion of recording operations with all pinflags, lath, and trash collected as the program progresses.

2.1.1 Applicant-Committed Measures

- Vehicular traffic would be limited to BLM-approved existing routes. Vehicles would travel at slow speeds to limit disturbance to wildlife. All off-road project-related activities within the Adobe Town WSA would occur by foot travel or by helicopter.
- Explosive charges would not be detonated within 500 feet of springs, flowing wells, or stock water wells.
- Portable drills would not be placed on slopes in excess of 25%.
- No drilling would occur and no explosive charges would be detonated within 0.5 mile (1.0 mile for ferruginous hawks) of an active raptor nest during the mating/nesting season (February 1 through July 31) unless approved by BLM. Quantum has requested an exception to the seasonal restriction. Any exceptions approved would be in accordance with the procedures found in Appendix 7, Green River RMP. A survey of known raptor nests in the vicinity of the seismic line occurred in late April. Appendix A provides criteria for exception approval.
- No drilling would occur and no explosive charges would be detonated within greater sage-

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grouse nesting habitat (suitable habitat within 2.0 mile of an active lek) during the breeding and nesting season of February 1 - July 31, or on important wintering areas as determined by BLM. No sage grouse leks are known to occur within 2 miles of the line and a survey of wintering areas is not necessary due to timing of the operations.

- Employees and contractors would not harass wildlife, leave trash in unauthorized locations, travel off-road in vehicles, and would not collect plants or cultural artifacts.
- Seismic Line (2-D) activities, if conducted in suitable mountain plover habitat would be preceded by mountain plover surveys. These mountain plover field surveys would be conducted within mountain plover habitat along the project line and a 1/4 mile buffer on either side of the project corridor. U.S. Fish and Wildlife Service Mountain Plover Survey Guidelines (March 2002) recognizes that short-term, linear projects where actions move through an area within a day, result in no permanent habitat alteration, and no permanent project-related above ground features. Per the U.S. Fish and Wildlife Service mountain plover survey guidelines (March 2002), mountain plover surveys would be conducted 1 to 3 days before project activities begin. If an active nest is found, planned activity would be delayed 37 days or 7 days post-hatching. If a brood of flightless mountain plover chicks is observed, project activities would be delayed at least 7 days.
- Investigations for BLM-sensitive species or their habitat would be conducted prior to any disturbance in areas determined by the BLM to contain potential habitat for such species (BLM Manual 6840). These areas would be avoided to the extent possible.
- Any cultural resources discovered during operations would be reported immediately to BLM. Work would be halted in an area large enough to maintain integrity of the site and the site would be evaluated for significance. Evaluation may consist of, but not limited to, avoidance, testing, excavations, mapping, and/or further archival documentation. All evaluation efforts would be developed in cooperation or concurrence with the BLM and SHPO.
- Quantum would be responsible for clean up of any diesel or hydraulic fluid spills, including contaminated soils. All spill-related material shall be hauled to a Wyoming Department of Environmental Quality (DEQ) approved disposal site.
- As directed by the Authorized Officer, Quantum shall be responsible for reclaiming areas disturbed (staging areas) by the geophysical operations on public lands managed by BLM. All trash, flagging, lath, etc. would be removed and disposed of in an authorized location.
- Quantum would not conduct any vehicle operations during periods of saturated ground conditions when surface rutting would occur. Surface ruts deeper than 3 inches would be cause for the operations to cease.
- Location of shot points have been located to avoid cultural sites 48SW14104, 48SW14105, and 48SW14106. Receiver points (cable and/or geophones) would be hand-laid across these sites to prevent damage. No artifacts would be removed.

2.2 ALTERNATIVE A - NO ACTION

The National Environmental Policy Act (NEPA) requires that reasonable alternatives to the

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Proposed Action be analyzed (Section 40 CFR 1508.9(b)). Under the No Action Alternative, BLM would deny the Adobe Town 2D seismic project as proposed by Quantum on leases held by AEC. Quantum, and consequently their client, AEC, would be denied the opportunity to acquire seismic information which would help them make a determination of whether potential for hydrocarbon bearing formations exist on the federal leases held by AEC.

2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

2.3.1 Alternatives Considered but Dropped From Further Analysis

In accordance with 40 CFR 1502.14(a), BLM is required to rigorously explore and evaluate all reasonable alternatives and for alternatives which are eliminated from detailed study, briefly document why such alternatives were dropped from detailed analysis.

Exchange of minerals: One comment letter suggested that BLM consider exchanging minerals within the pre-FLPMA leasehold. This alternative is not analyzed for the following reasons. The heliportable drill will be located to the extent possible in areas of sparse or devoid of vegetation to minimize crushing or breakage of individual branches of plants; thus, no reclamation of vegetation is requested or required. No roads or improvement to roads are proposed. Heliportable drills will be used to drill 3.5-inch holes, every 440 feet along the 2-D seismic line within the leaseholds. Drill cuttings will be replaced into the holes once the charges are packed and cuttings will be removed or raked into the surrounding soil if any remain on the surface.

Geophysical work, because of the way it is conducted, does not cause impairment of the area's suitability for preservation as wilderness (IMP, pg 3). It basically is information gathering. It does not always cause the drilling of a producing oil and gas well. This information could lead to an Application for Permit to Drill a oil or gas well but it also could provide information showing no potential reservoir characteristics exist on these lands. Due to these factors, BLM finds any potential impacts to be minimal and meet the non-impairment criteria found in Handbook 8550-1 (IMP, pg 9) and in recognition of the valid existing rights as they pertain to the pre-FLPMA leases (IMP, pg 32). This alternative will not be given further consideration.

Application of a NSO stipulation to subsequent actions: The same comment letter also suggested application of a NSO (no surface occupancy) stipulation. This alternative is also not further considered because geophysical activity is an information gathering stage not a well drilling stage. NSOs are a stipulation applied to a parcel before it is leased. Geophysical activity may or may not occur on a lease. Again, geophysical activity does not always lead to the utilization of a lease through the drilling of a well. There is no reason to consider NSOs for geophysical activity on these leases. Geophysical activity will have little or no effect on the wilderness characteristics in this WSA. It is low-impact activity especially in the way this document describes how it will occur. Should the oil and gas lessee propose to drill well/s on their lease holds, that action will be analyzed in accordance with NEPA and IMP policy. This alternative will not be given further consideration.