

**ONSHORE OIL AND GAS GEOPHYSICAL EXPLORATION
SURFACE MANAGEMENT REQUIREMENTS (PUBLIC)**

BLM Site Specific Conditions of Approval for Nord Kraken 3D

1. No Surface Disturbing activities are authorized with this action.
2. Notify Andy Perez (Authorizing Officer) 72 hrs prior commencement of work.
3. Disruptive activities are prohibited or restricted on public surface in the project area from March 15th through June 30 in suitable sage-grouse nesting and early brood-rearing habitat.
4. Disruptive activities are prohibited or restricted for operations occurring within 0.5 mile of all active raptor nests (Identified in BHEC 2015 report found in AR) will take place between 9 a.m. and 3 p.m. on public lands from February 1st – July 31st.
5. All identified cultural sites in the project area shall be avoided by at least 30 meters by all geophysical operations.
6. Vehicular travel shall be suspended when ground conditions are wet enough to cause rutting or other noticeable surface deformation and severe compaction. As a general rule, if vehicles or other project equipment create ruts in excess of four inches deep when traveling cross-country over wet soils, the soil shall be deemed too wet for vehicular use.
7. The staging area(s) shall be kept clean and free of litter. Appropriate human waste facilities will be provided and properly maintained. Such waste facilities shall be removed from the site upon completion of the project.
8. All flagging, lath, pin flags, and similar materials used in the seismic project will be removed from public land and disposed of at an authorized landfill.
9. Roads will not be constructed for geophysical projects authorized under a categorical exclusion.
10. Operators of vehicles and equipment shall be responsible for not damaging fences and keeping gates as found. As a last resort, should a fence be cut for access, that fence must be repaired to former or better condition, immediately after equipment has passed through.
11. If soil is disturbed to the extent that erosion is likely or visual impacts are readily apparent, the disturbed areas will be rehabilitated utilizing the following techniques:
Ruts and vehicle tracks will be filled with soil and/or obliterated by either hand raking or similar method. When completing this work, care will be taken to minimize disturbance to surrounding lands that have not been disturbed. All areas where rehabilitation work is accomplished will be reseeded with the seed mix provided below.

The seeded area should be hand raked to assure the seed is covered with approximately ¼ to ½ inch of soil. The seed shall be certified, pure live seed, and seed tags must be available if requested by the authorized officer. Certified weed free seed is to be used to rehabilitate disturbed land.

Sandy/Loamy Ecological Site Seed Mix

Species	% in Mix	Lbs PLS*
<i>Western Wheatgrass</i> (Pascopyrum smithii)	30	3.6
<i>Bluebunch Wheatgrass</i> (Pseudoroegneria spicata ssp. Spicata)	20	2.4
<i>Green needlegrass</i> (Nassella viridula)	20	2.4
<i>Thickspike Wheatgrass</i> (Elymus lanceolatus ssp. lanceolatus)	15	1.8
<i>Prairie coneflower</i> (Ratibida columnifera)	5	0.6
Prairie sandreed – <i>Goshen</i>	5	0.6
Indian ricegrass – <i>Paloma or Rimrock</i>	5	0.6
Totals	100%	12 lbs/acre

BLM Standard Terms and Conditions

1. The operator’s representative will attend a meeting with the BLM to discuss cultural artifacts and potential penalties for tampering with cultural artifacts. The meeting can be held as part of the pre-work conference.
2. The operator will obtain permission from right-of-way holders prior to drilling and setting charges within authorized limits of the rights-of-way.
3. Existing routes and trails will be used to the maximum extent possible. The heliportable drill or other BLM approved technique will be used on the areas with steep slopes and rough terrain. Attempts to traverse irregular, soft, or steep slopes and terrain by all vehicles and equipment shall be kept to a minimum to avoid excessive rutting, soil erosion, excessive crushing of vegetation, and excessive visual impacts. Vehicular travel along the flagged lines will be kept to a minimum and be in a zigzag pattern between source points to reduce straight line disturbances. This procedure does not apply to vehicles following trails or roads.
4. The staging area(s) will be situated with good, safe access to county roads or state highways. The fuel truck for the helicopter will also be utilized at the staging area(s).
5. Operators of vehicles and equipment shall be responsible for not damaging fences and keeping gates as found. As a last resort, should a fence be cut for access, that fence must be repaired to former or better condition, immediately after equipment has passed through.

6. If shot holes are utilized they will be backfilled and plugged, in accordance with state regulations, after they are loaded with the explosive charge. Any cuttings resulting from shot hole drilling and not used in backfilling the shot hole will be scattered about the immediate area to blend with natural terrain and reduce visual impacts.
7. Geophysical equipment may encounter congested areas with trees requiring one or more trees to be removed and or limbed. If such action is needed then the tree(s) and or limb(s) shall be less than eight (8) inches at diameter breast height (dbh) or at the base of the branch. Trees to be cut or limbed which are located adjacent to public roads, communities and or public facilities shall be immediately cut into smaller pieces so that it is not aesthetically displeasing and dispersed within the immediate vicinity.
8. Any and all tire tracks one hundred feet (100'), leading away from an established dirt or two track road situated on public lands, will be hand raked to blend into the surrounding soil surface.
9. Setbacks and Buffers for shot holes: the operator will adhere to setbacks or "buffer zones" that are set forth in the following tables.

Object	½ lb	1 lb	2 lbs	3 lbs	5 lbs	6 to 10 lbs	11 to 15 lbs	16 to 20 lbs
Pipeline less than 6" diameter	50'	100'	150'	150'	200'	250'	300'	400'
Pipeline 6" to 12" diameter	75'	150'	200'	200'	300'	400'	500'	600'
Pipeline greater than 12" diameter	100'	200'	250'	250'	300'	500'	600'	800'
Telephone line	20'	20'	30'	40'	40'	50'	50'	50'
Railroad Track or main paved Highway	50'	100'	150'	150'	150'	220'	280'	350'
Electric Powerline (Shot holes not to exceed 200' depth)	75'	100'	200'	200'	200'	200'	250'	300'
Water wells, buildings, underground cistern, and all other similar objects	225'	300'	400'	450'	700'	800'	1000'	1200'
Brick and/or concrete block buildings	275'	400'	500'	600'	800'	1000'	1200'	1500'
Producing oil and gas well	250'	450'	600'	700'	800'	900'	1000'	1000'
Irrigation wells	500'	800'	1000'	1200'	1500'	2000'	2500'	2500'

General Setbacks for all seismic activity:

Structures	Distance (ft)
Residences, Buildings, Concrete Base Structures	300
Water Wells	350
Concrete Water Pipeline	100
PVC/Plastic Water Pipeline	20
Oil or Gas Well	250
Oil or Gas High Pressure Pipelines	30
High Voltage Power Lines	0
Local Transmission Power Lines	0

10. No equipment, only foot traffic laying receiver lines, will be used in swampy/wetland areas.
11. If any unanticipated prehistoric or historic archaeological sites or paleontological sites are encountered during the geophysical work, the work shall stop and the appropriate BLM archaeologist at the Buffalo Field Office will be contacted. If a site is found, it will be recorded. The BLM will assume responsibility for evaluation and determination of significance, related to the historical or archaeological site. All known cultural resources sites will be avoided. Collection of any cultural or paleontological artifacts, bones or fossils from Federal lands is specifically prohibited.
12. Migratory bird nests will be avoided and not disturbed within ½ mile of the project from February 15 through July 31. Other wildlife restrictions may be applied on case by case basis.
13. All equipment will be power washed prior to entering Federal lands to help mitigate the spread of noxious plants and will be inspected prior to the commencement of work on BLM, this can be done at the pre-work conference.
14. In order to minimize watershed damage, seismic activity will only be allowed during the period from May 15 to December 15. Exceptions to this limitation may be specifically approved by the authorized officer.
15. When fire conditions reach high, the helicopter, vehicles, and equipment will carry water, shovels, and other fire-fighting equipment to extinguish any fires that are accidentally started by the seismic operations.
16. If oil, lubricants and other petroleum or man-made products are accidentally spilled onto the ground surface, the BLM Buffalo Field Office will be contacted and provided specific information about the spill and/or leak. Spills or leaks will be cleaned from the soil and any contaminated material will be bioremediated or disposed of at an authorized landfill.
17. All Applicant-Committed Environmental Protection Measures documented in the applicant's NOI will be complied with in addition to these terms and conditions.