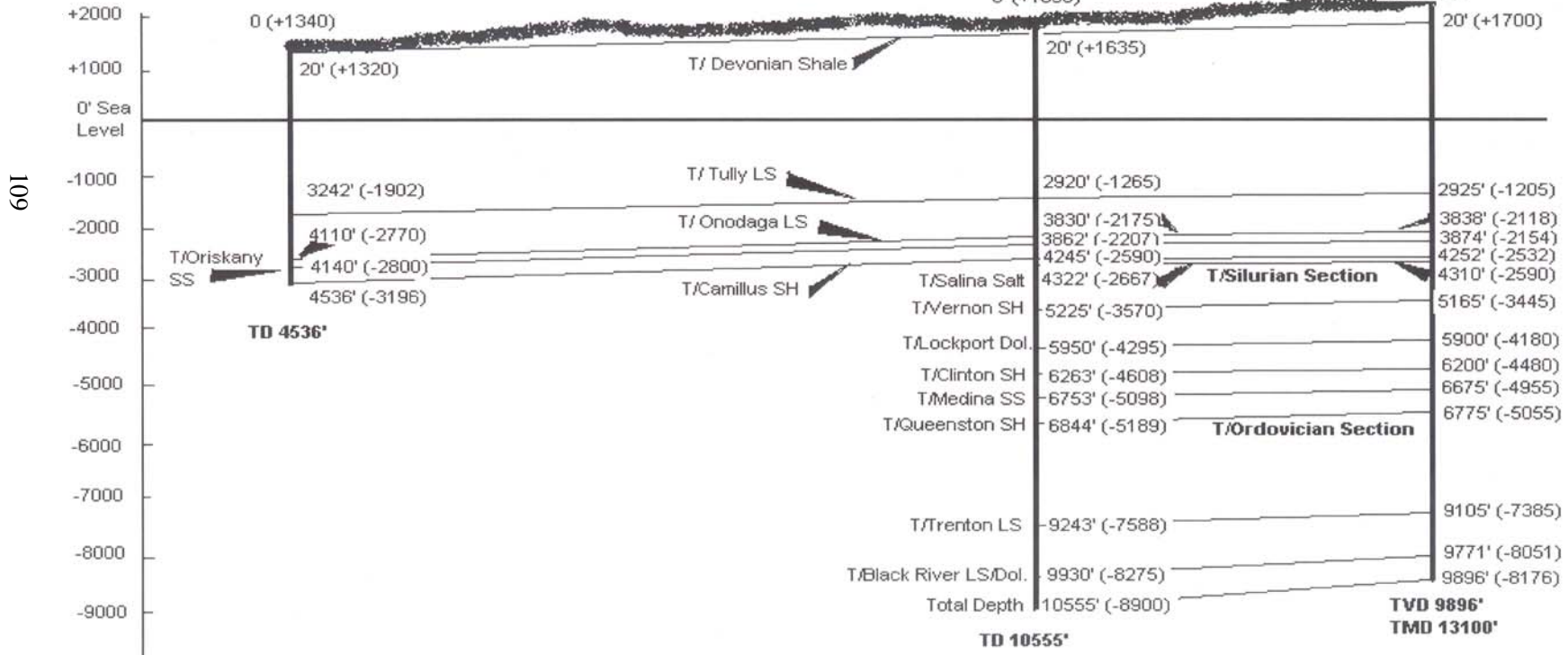


Erwin Unit Geologic Cross Section A'-A

Atwood Energy Inc.
Hand #1
31-101-17530
KB 1340'

Fairman Drilling Co.
NYS Erwin GMA #2
API# 31-101-22861
KB 1655'
0' (+1655)

Fortuna Energy Inc.
Erwin WMA #1
API# 31-101-23085
KB 1720'
0' (+1720)



Appendix I: Wildlife Harvest

Calculated Legal Deer Take in the Towns within the Erwin Unit Management Plan Area (2000 - 2004)

Town of Addison 26.4 sq. mi.
Town of Erwin 41.5 sq. mi.

| Town/Year | 2000 | 2001 | 2002 | 2003 | 2004 |
|------------------|-------------|-------------|-------------|-------------|-------------|
| Addison | 577 | 486 | 592 | 433 | 280 |
| Erwin | 495 | 569 | 534 | 477 | 266 |

management practices for the control of erosion, and integrated pest management for the control of insects will be followed. Acquisition of adjoining land from willing sellers will be sought, when possible. All silvicultural, gas or other mineral activity will be monitored, and best management practices (BMPs) followed. Endangered, threatened and species of special concern will be protected as well as historical and archaeological resources.

Location:

Erwin Unit: Erwin Mountain State Forest, Town of Erwin in Steuben County; McCarthy Hill State Forest, Towns of Erwin and Addison in Steuben County; Erwin Wildlife Management Area, Town of Erwin in Steuben County.

Reasons Supporting This Determination:

(See 617.7(a)-(c) for requirements of this determination; see 617.7(d) for Conditioned Negative Declaration)

Activities planned for the unit will be covered by the following Programmatic/Generic Environmental Impact Statements:

State Forest Commercial Products Sales Program, Habitat Management Activities, Wildlife Habitat Management on State Forest Land, Red Pine Plantation Clearcut Program, New York State Open Space Plan, and the State Forest Recreation Management Program, The Oil, Gas and Solution Mining Regulatory Program (Final, 1992)

Activities which would require a site specific environmental review under the State Environmental Quality Review Act (SEQRA) include: prescribed fire of 10 acres or more, site preparation with herbicide, and clearcuts larger than 40 acres. In addition, if after the public review process, activities are added to the plan to provide better management of the unit and are not covered by this Negative Declaration or cited Programmatic/Generic Environmental Impact Statements, DEC will undertake a site specific environmental review for such activities. Activities relating to oil and gas exploration would also require a site specific environmental review and permit.

Activities in the plan will be performed in accordance with the standards and policies and procedures set forth in the following DEC documents:

Continuous Forest Inventory Handbook, State Forest Multiple Use Management Plan, Unpaved Forest Road Handbook, and the Timber Management Handbook.

In addition, activities in the plan will be guided by the Environmental Conservation Law, best management practices, the expertise of foresters and biologists, and the views expressed by the participating public.

Construction of new facilities shall include the construction of one parking lot and improving parking as needed along the shoulders of existing roads. These projects will be placed to minimize short and long term impacts by constructing the lots on level ground with reasonable slope. These projects will entail: clearing of brush and some trees,

grading and applying gravel and the installation of culverts and ditches used to control drainage and erosion as necessary. This will improve public access and safety.

The aesthetic resources will be protected by law enforcement activities, screening of logging activities, and by limiting disturbance in sensitive areas. Scenic views will be preserved by the removal of screening vegetation. There will be a favorable impact on energy resources, since timber management will produce fuelwood and gas well drilling may provide natural gas. The noise impact of construction and logging will occur so briefly as to be inconsequential.

Small water hole amphibian activity centers are constructed by scooping out soil in a suitable location, such as near a spring or on soil that will hold water. They are at least 6 foot deep, and vary in size and shape from 10 feet up to 40 feet. They are left to fill naturally with water and animals such as salamanders and frogs. Construction will take place during periods of dry weather. Best management practices (bmp's) will be followed to minimize any potential erosion or sedimentation problems to surrounding water bodies. These may include the use of hay and/or filter fabric to stabilize the soil surface.

The hardening or relocation of the trail system on the McCarthy Hill State Forest will require some minor tree cutting, the application of some gravel and the use of filter fabric to minimize any erosion as necessary. If the boardwalk is constructed it will require some minor tree cutting, and some holes dug to support the structure. Any other permits for this will be acquired at time of construction.

The construction of the Great Eastern Trail (GET) will mostly consist of painting trail markers along existing trails. Any small trail sections that need new construction will require DEC approval, and will follow bmp's for foot trail construction. A lean-to may be constructed along the small section of the Great Eastern Trail in the project area. There are several good locations on McCarthy Hill State Forest. The exact location would have to be approved by a NYS DEC Forester. Suitable locations would be along the trail, near water, and 0.5 mile, or more, from the gate. It will be constructed to ADA standards, and if possible, located along the section of CP-3 trail, or near enough that extending the CP-3 trail would be feasible. Best management practices for lean-tos will be followed. These include: locating lean-tos to minimize necessary cut and fill and tree cutting, locating lean-tos away from streams, wetlands and unstable slopes, use of drainage structures on trails leading to lean-to sites, to prevent water flowing into the site, locating lean-tos on flat, stable, well drained sites and limiting construction to periods of low or normal rainfall.

Archaeological and historical impacts will be minimized by disturbing the ground as little as possible. Any construction, forestry or minerals activities will incorporate the use of best management practices, including but not limited to such considerations as: locating improvements to minimize necessary cut and fill; locating improvements away from streams, wetlands, and unstable slopes; use of proper drainage devices such as water bars and broad-based dips; locating trails to minimize grade; laying out trails on existing old roads or cleared or partially cleared areas; using stream crossings with low, stable banks, firm stream bottom and gentle approach slopes; constructing stream crossings at right angles to the stream; limiting stream crossing construction to periods of low or normal flow; avoiding areas where habitats of threatened and endangered species are known to exist; and using natural materials to blend the structure into the natural surroundings. Parking lots or other structures will be located on flat, stable, well-drained

sites in areas that require a minimum amount of tree cutting. Construction will be limited to periods of low or normal rainfall. The size of the parking lot will be the minimum necessary for the intended use. Wherever possible, wooded buffers will be used to screen parking areas from roads.

When possible, gas pipelines and well pads will be constructed along existing roads or other corridors. All well pads, pipelines, and well pad access roads will require site approval by a DEC land manager, and other permits such as a Temporary Revocable Permit (TRP) and a Permit to Drill, Deepen, Plug Back or Convert a Well Subject to the Oil, Gas and Solution Mining Law (form 85-12-5)(Drilling Permit). Site review approvals will consider environmental factors including the presence or absence of rare and endangered species, sensitive soils, topography and unit management plan goals and objectives.

There are no significant impacts on the environment as a result of the actions in this plan. There are no impacts on significant habitats, threatened or endangered species or other significant impacts on natural resources or the removal of large quantities of vegetation or actions that could result in the substantial interference with the movement of any resident or migratory fish or wildlife species.

If Conditioned Negative Declaration, provide on attachment the specific mitigation measures imposed, and identify comment period (not less than 30 days from date of publication in the ENB)

For Further Information:

Contact Person: Gretchen Cicora

Address: 7291 Coon Rd.
Bath, NY 14810

Telephone Number: (607) 776-2165 ext. 29

For Type 1 Actions and Conditioned Negative Declarations, a Copy of this Notice is sent to:

Appropriate Regional Office of the Department of Environmental Conservation

Chief Executive Officer, Town/City/Village of

Other involved agencies (if any)

Applicant (if any)

Environmental Notice Bulletin - NYS DEC - 625 Broadway - Albany, NY 12233-1750 (Type One Actions Only)

GLOSSARY

Access Trails - May be permanent, unpaved and do not provide all-weather access within the Unit. These trails are originally designed for removal of forest products and may be used to meet other management objectives such as recreational trails. These trails are constructed according to Best Management Practices.

Allegheny Hardwoods - Composed of primarily of black cherry, white ash, and tulip poplar. May contain lesser amounts of sugar maple, beech, red maple, red oak and basswood.

Allowable cut - The amount of wood fiber that may be harvested annually or periodically for a specified area over a stated period in accordance with the objectives of management.

Alluvium - Clay, silt, sand, gravel or similar material deposited by running water.

Anticlinal - Rock layers that are folded so that the layers are inclined away from each other (like the legs of a capital A).

Basal Area - The cross sectional area of a tree at breast height, measured in square feet. (Forestry Handbook, 2nd Edition, 1984, p.287) For a stand: the total basal area per unit of area, usually expressed as square feet per acre. ("Silvicultural Systems For The Major Forest Types of The United States", USDA Ag. Hndbk. #445, 1973, p.103)

Bedrock - Hard lithified or consolidated rock units that underlie the unconsolidated or partially-consolidated surface (geology) sediments and soils deposited during recent sedimentation and glacial sedimentation.

Best Management Practices (BMP's) - Practices and techniques that control erosion of soil or other contaminants from the site.

Board Foot - A piece of lumber 1 inch thick, 12 inches wide and 1 foot long, or its equivalent.

Buffer Strips - A strip of vegetation used to protect sensitive areas from soil erosion and siltation.

Canadian Shield - the stable portion or nucleus of the North American continent, primarily igneous and metamorphic rocks, located primarily in northeastern Canada, Michigan, Wisconsin and Minnesota.

Clast - A fragment of rock

Classified Water Bodies - A system whereby water bodies are protected under Environmental Conservation Law.

Clearcut - The removal of a forest overstory. This practice is done in preparation of the reestablishment of a new forest through regeneration. One form of even aged management.

Conifer - Needle bearing trees.

Conifer/Conifer Hardwood Forest - A forest stand in which either of the two leading species is a conifer.

Conifer Stand - A forest stand containing 50% or more conifer species.

D.B.H. - (diameter at breast height) - The diameter of a tree at roughly breast height or 4½ feet from the ground.

Defoliated - Complete, or almost complete removal of leaves from a living tree.

Dip - The angle that strata (rock layers) or planar features deviate from horizontal.

Dug-Out - A 500 square foot by 3 feet deep pot hole constructed of earth and containing water.

Early Successional Forest - Trees and brush that grow after disturbance such as plowing, fire or clearcut. Common species include grass, raspberries/black berries, white pine, aspen, red maple, black cherry, birch etc.

Early Successional Wildlife Species - Animal species which require early vegetative stages such as grass, brush, aspen.

Ecological Diversity - The number of species living in an ecosystem.

Ecological Subzone - A geographic area containing fauna and flora which are adapted to that particular area.

Ecosystem - A complex of living organisms and their environment.

Endangered - Native plants (and animals) in danger of extinction throughout all or a significant portion of their ranges within the state and requiring remedial action to prevent such extinction (NYCRR Title 9 Part 193.3)

Erosion - To wear away by the action: water, wind, or ice.

Even Aged - A forest in which all of the trees are essentially the same age.

Faulting - a fracture or crack that has had movement parallel to the fracture's surface

Fluvial - pertaining to sediments deposited by stream or river actions

Fragipan - An impervious subsurface soil layer (sometimes known as "hardpan") which restricts rooting and internal soil drainage.

Glacier / Glacial - a large mass of ice and snow that is moving on the land's surface

Hardwood Forest - A forest stand in which each of the two predominant species by percent is a hardwood.

Hardwoods - Broadleafed trees.

Haul roads - Are permanent, unpaved roads but are not designed for all-weather travel. They are constructed primarily for the removal of forest products and provide only limited access within the Unit. Public motor vehicle use is not allowed, but pedestrian travel is encouraged. All administrative roads are gated and warning signs are posted. The standards for these roads are those of Class C roads as provided for in the Forest Road Handbook.

Herbaceous Opening - A non-forest vegetative type consisting of grasses and forbs.

Homocline - geologic structure that is dipping or inclined in one direction and at the same angle of inclination

Kame - a short ridge, hill, or mound of stratified glacial deposits

Lacustrine - sediments deposited in association with the processes within a lake

Large Coarse Woody Debris - The accumulation of dead woody material, both standing and fallen, which occurs in a forest stand.

Lean-To - A small, open fronted, log shelter used for overnight camping.

Linements - linear trends of weakness or fractures in the earth's crust

Log Landing - An area to which logs are skidded and then loaded for removal.

MCFGPD - thousand cubic feet of gas per day

Moraine - sediment that is accumulated due to the actions of a glacier

Multiple Use - A management philosophy by which many uses are derived for a specific land area.

Natural Regeneration - The regrowth of a forest stand by natural means.

Natural Forest - A forest established by natural regeneration.

No Entry / No Surface Occupancy Lease - A lease to explore and develop underground mineral resources without any surface disturbance. Above ground facilities and equipment to remove mineral resources must be located off the subject property.

Northern Hardwoods - Largely composed of sugar maple, American beech, yellow birch, and hemlock. These species are generally long-lived and may adapt to uneven-aged management.

Oak Opening - a globally rare plant community, also known as an oak savannah. The community is composed of native prairie grasses and associated plants usually surrounded by oak/hickory forests. Oak Openings are maintained by periodic burning. Historically, fires were set by Native Americans or caused by lightning strikes. Oak Openings can be variable in size, from just an acre to several thousand acre complexes.

Off - Site - The species are growing (or at least have been planted) where these species would not ordinarily be found, due to unfavorable site conditions.

Pioneer Hardwood - Early Successional trees that are hardwood, such as black cherry, white birch, red maple and aspen.

Plantation - A forest established by planting.

Pole Sized - A young tree with a D.B.H. of 6 to 11 inches.

Pre-Commercial - To do a stand treatment when the trees are too small to sell for profit, requiring the payment of someone to do the work.

Prescribed Fire - The intentional setting of forest or grass land on fire under carefully controlled conditions to achieve a vegetative or wildlife management goal adhering to a written and approved prescribed fire burn plan.

Protection Management - An area which requires special management considerations. (Special cutting regimen, short rotation, long rotation, or no treatment.)

Public access roads - Are constructed and maintained to accommodate motor vehicle traffic, they are permanent, unpaved roads. They may be designed for all-weather use depending on their location and surfacing. These roads provide primary access within a Unit. The standards for these roads are those of the Class A and Class B access roads as provided for in the Forest Road Handbook.

Rare - Native plants that have from 20 to 35 extant sites or 3,000 to 5,000 individuals statewide. (NYCRR Title

Regeneration - To reestablish a forest stand.

Rotation - The length of time between the establishment and the harvest of a forest stand.

Sawtimber Sized - A tree with a D.B.H. of 12 inches or greater.

Seedling/Sapling Sized - A young tree with a D.B.H. of less than 6 inches.

Selective Harvesting - Removal of the mature timber, usually the oldest or largest trees.

Shade Intolerant - Tree species that require full sunlight to survive past the seedling stage.

Shade Tolerant - Tree species that can survive in the shade cast by older trees.

Sidetrack Well - An inclined well that is drilled from a predetermined depth within an existing well

Site - Site is defined as a group of features (such as slope, aspect, soil type, etc.) which characterize a given area of land.

Silviculture - The establishment, development, care, and reproduction of forest stands.

Softwoods - Needle bearing trees, conifers

Species Diversity - The occurrence of a variety of plants and animals.

Stand - A group of plants with similar characteristics that are treated as a single unit in a management plan.

Stand Analysis - A systematic method of evaluating stands to determine the need for treatment.

Stand Treatment - Work done in a stand which is directed towards the management of the stand.

State Forest - Lands owned by the State of New York and administered by the Department of Environmental Conservation which are managed for the establishment and maintenance of forests for watershed protection, the production of timber, and for recreation and kindred purposes.

Stratigraphic - The layering and sequence of mapable rock units.

Succession - The gradual supplanting of one community of plants and animals by another.

Surficial - Of, or relating to, the surface

Sustained Yield - The maintenance of a continuous flow of a particular product.

Synclinal - Rock layers that are folded so that the layers are inclined towards each other (like the letter V)

Till - Unstratified glacial deposits consisting of clay, sand, gravel, and boulders

Temporary Revocable Permit (TRP) - A permit to use State Forest land for a specific purpose for a prescribed length of time.

Top Lopping - The cutting of limbs from the tops of felled trees to reduce fire danger and improve visibility. On State Forests top lopping of conifers is required by law.

Trail Head - The intersection of a trail with a ro trail head ad.

Uneven Aged - A forest containing trees of two or more age classes.

Unique Area - A parcel of land owned by the State acquired do to its special natural beauty, wilderness character, geological, ecological or historical significance for the State nature and historic preserve, and may include lands within a forest preserve county outside the Adirondack and Catskill Parks.

Vegetative Stage - A description of a plant community based on the age of the component plants.

Vegetative Type - A description of a plant community based on species composition.

Vernal Pool - A small body of water that is present in the spring, but dries up by mid-summer.

Vertical Well - a well that is straight into the ground or is 90 degrees from horizontal.

Water Hole - A laid up stone cistern built by C.C.C. volunteers and originally used for water for fire protection purposes.

Watershed - The land area from which a stream receives its water.

Wetland - Land or area saturated and sometimes partially or intermittently covered with water.

Class I, II, III or IV - The designation placed upon a mapped wetland by NYS DEC as required by 6NYCRR. The four classes rank wetlands according to their ability to perform wetland functions and provide wetland benefits. Class I is the most critical.

Yield - The production of a commodity such as; forest products, water, or wildlife.