

**EAST MOUNTAIN and RILDA CANYON
SURFACE DRILLING APPLICATION
FEDERAL COAL LEASES
U-084923, U-084924, U-06039
FEBRUARY 1997**



**C/O Interwest Mining Company
(Managing Agent)**



**Energy West Mining Company
(Mine Operator)**



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INTRODUCTION:

PacifiCorp proposes to conduct a 2-phase minor coal exploration surface drilling program on the top of East Mountain and in the right fork of Rilda Canyon. Each phase of drilling has a different objective. Phase 1 consists of 5 proposed surface rotary holes drilled from the top of East Mountain to explore a potentially troublesome area of reserves west of the Deer Creek Mine. Phase 2 will consist of a row of 6 shallow core holes drilled from the road in the bottom of the right fork of Rilda Canyon to locate and determine the offset of the "Mill Fork" fault zone which crosses the canyon in this area.

A helicopter on-site field investigation was conducted with United States Department of Agriculture: Forest Service representative Jeff Defreest on October 22, 1997. The objective of each phase was presented along with potential environmental concerns. Both phase 1 and 2 are located in areas having existing roads and where archaeological clearance have previously been conducted.

Phase 1 - East Mountain: is within the existing Deer Creek Mine permit boundary in Federal Coal Leases U-084923 and U-084924.

Phase 2 - Right Fork of Rilda Canyon: is within the Deer Creek Mine - North Rilda Area permit extension submitted to Department of Oil, Gas & Mining on January 31, 1997 (approval pending) in Federal Coal Lease U-06039

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SURFACE DRILLING APPLICATION
FEDERAL COAL LEASES
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FEBRUARY 1997**

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EAST MOUNTAIN 1997 SURFACE DRILLING PLAN

INTRODUCTION:

Phase 1 consists of 5 proposed surface rotary holes drilled from the top of East Mountain to explore potential thin coal reserves west of the Deer Creek Mine. This drilling project may span 2 drilling seasons, 1997 and 1998. The permit should be valid for this 2-year period.

LOCATION AND DEPTH OF PROPOSED DRILL HOLES:

Five (5) proposed drill locations are indicated on the accompanying drawings and photos. The approximate locations, depths and elevations of the holes are as follows:

HOLE NUMBER	LOCATION	ELEVATION	DEPTH, FEET	SURFACE OWNERSHIP	COAL OWNERSHIP
1997-1	2540' North, 1100' East of the SW Corner of Sec. 6, T. 17S, R. 7E.	9910	2565	USDA-FS	BLM LEASE U-084923
1997-2	810' North, 1320' West of the SW Corner of Sec. 1, T. 17S, R. 6E.	9975	2645	USDA-FS	BLM LEASE U-084924
1997-3	1780' South, 1890' West of the NE Corner of Sec. 1, T. 17S, R. 6E.	10115	2680	USDA-FS	BLM LEASE U-084924
1997-4	780' South, 2900' West of the NE Corner of Sec. 12, T. 17S, R. 6E.	9960	2670	USDA-FS	BLM LEASE U-084924
1997-5	1300' North, 440' East of the SW Corner of Sec. 6, T. 17S, R. 7E.	9895	2575	USDA-FS	BLM LEASE U-084923

In accordance with Federal Regulations 43 CFR 3482.1 (a), 30 CFR 772.11 and State of Utah R645 Coal Mining Rules, the following is submitted:

APPLICANT:

PacifiCorp
One Utah Center
201 South Main, Suite 2100
Salt Lake City, Utah 84140-0021
(801)220-2000

OPERATOR:

Energy West Mining Company
15 North Main Street
Huntington, Utah 84528
(801) 687-9821

RESPONSIBLE REPRESENTATIVE:

Charles Semborski or Ken Fleck
Energy West Mining Company
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Huntington, Utah 84528
(801)687-9821

Drilling company not yet selected

PROJECT STARTUP DATE: July 30, 1997

PROJECT COMPLETION DATE: October 15, 1997

PROPOSED PHASE 1 EXPLORATION AREA:

The proposed drilling for Phase 1 is located in Sections 1 and 12, Township 17 South, Range 6 East, and Section 6, Township 17 South, Range 7 East, Salt Lake Base and Meridian. The drilling will occur on federal land with the surface administered the United States Department of Agriculture - Forest Service (USDAFS) and the subsurface by the Bureau of Land Management (BLM). The East Mountain drilling area is within PacifiCorp's Lease and Permit boundaries for Deer Creek Mine. (Refer to the accompanying maps entitled East Mountain Surface Drilling - 1997 [Surface Ownership Map, Coal Ownership Map, Topography Map]).

The purpose for drilling these holes is to further explore an area of remaining reserves for Deer Creek Mine which is known to contain areas of thin coal. As a stipulation to approval of the Deer Creek Resource Protection and Recovery Plan (R2P2) for mining on the west side of 3rd North Mains, BLM states:

"The lessee is required to complete a BLM-approved exploration program of the area southwest of the powerline corridor and north of the Roans Canyon Fault, within Federal coal leases U-084923 and U-084924, to further define the coal reserve. The results of such program must be submitted to the Authorized Officer by January 1, 1999."

A geological study of existing drilling data was conducted for the area including the generation of a series of "percent sandstone" maps (attached) of the roof above the Blind Canyon seam to aid in drill site selection. In the exploration area, a large area of the Blind Canyon reserve has been thinned by channel scouring, and these maps aid in determining the extent and nature of the scouring. Drill hole placement is based on the results of this mapping as well as filling in gaps between existing drill holes. A meeting with BLM personnel (Jim Kohler and Barry Grosely), was held on June 26, 1996 during which these drilling plans were discussed and approved by BLM personnel.

The proposed holes will be drilled on top of the main ridge of East Mountain at the head of Meetinghouse Canyon, in Emery County, Utah. The proposed sites are situated on a large, relatively flat open area on top of the Flagstaff limestone, which "caps" the top of the mountain. The holes are located on the Flagstaff limestone at elevations ranging from 9,800' to 10,200'.

A on-site inspection with USDAFS personnel was conducted by helicopter in October 22, 1996, to observe drill sites and site access.

VEGETATION and WILDLIFE:

Vegetation:

The dominant vegetation types in the project area are characteristic of the central Utah plateaus. Spruce-fir Douglas fir forest covers the ravines, ridge tops, and north-facing slopes at these elevations. On flat plateau tops and south-facing slopes, the predominant vegetation type is Salina

Wildrye / Sagebrush, usually occupying large open flats, interspersed with Aspen groves. All 5 of the projected drill sites are in a large open sagebrush flat area, with occasional small Aspen groves.

Specific vegetation types in these areas are as follows:

White fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), and Engelmann spruce (*Picea engelmannii*), are the characteristic overstory species in the spruce-fir and Douglas fir forest vegetation areas. Stands of aspen (*Populus tremuloides*) are scattered throughout these conifer forest areas, as well as the sagebrush flat areas. The understory species in the forest areas include snowberry (*Symphoricarpos oreophilus*), buffaloberry (*Shepherdia canadensis*), twinflower (*Linnaea borealis*), blueberry (*Vaccinium caespitosum*), and miterwort (*Mitella stenopetala*). Annuals make up a very minor part of this cover.

In the sagebrush flat areas, Mountain Big Sagebrush (*Artemisia tridentata vaseyana*), is interspersed with various grass species.

Wildlife:

Open stands of spruce-fir and Douglas fir forest with Douglas fir as the predominant species occur on the sheltered north-facing slopes at these elevations. Aspen groves within the spruce-fir and Douglas fir communities offer excellent calving areas for elk. Mule deer, snowshoe hare, and blue grouse are important game species in forested areas. Non-game mammals which inhabit forest areas include bobcat, beaver, porcupine, red fox, coyote, mountain vole, deer mouse, hoary bat, and silver-haired bat.

Many bird species frequent the forested portions of East Mountain. Conspicuous breeding birds include band-tailed pigeon, plain titmouse, Clark's nutcracker, raven, turkey vulture, great horned owl, red-tailed hawk, and golden eagle.

Amphibian species such as the chorus frog and western toad inhabit mesic areas of the site. Reptiles are probably not abundant, but the short-horned lizard, sagebrush lizard, gopher snake, and western terrestrial garter snake inhabit sagebrush and forest-sagebrush ecotones in the East Mountain area.

Sagebrush and grassland habitat, and some mesic vegetation types occur on the relatively flat upper benches of East Mountain. Meadow habitat is limited to small drainage areas and a few springs. These habitats, combined with the forest edge ecotonal areas, are suitable for elk, mule deer, sage grouse, ruffed grouse, blue grouse, and snowshoe hare.

Important Wildlife Species:

Important wildlife species are defined as those which are of recreational or economic value, and are essential to the structure and function of the ecosystems in which they occur, or have special status (e.g. endangered, declining, protected, etc.) within the region.

Several important species occur on or near East Mountain. The status, known distribution in the region, and general habitat preference of each are discussed below.

Mule Deer: (Odocoileus hemionus) - Mule deer range throughout all habitats on East Mountain. Pinion - juniper on the lower slopes of East Mountain are used as winter range. Deer occupy winter range from about 12/1 to 4/15. South-facing slopes are critical for winter food availability. During other seasons, deer concentrations are greater at high elevations.

Elk: (Cervus elaphus) - Elk inhabit all elevations in this area. Forest edges and aspen groves are critical for calving from about 5/15 to 7/15. Altitudinal migration is displayed by this game animal and elk occupy winter range from about 12/1 to 4/15.

Mountain Lion (Felis concolor) - This species inhabits rugged mountain and forest areas in this region and may be found at all elevations on the Wasatch Plateau. Mountain lions are in relative abundance in this area. Deer make up about 75% of their winter diet.

Snowshoe Hare (Lepus americanus) - This species is common in montane and submontane areas of the Wasatch Plateau. Nests are shallow depressions in dead leaves under trees. Young are born from April to August. It inhabits higher elevations on East Mountain.

Mountain Cottontail (Sylvilagus nuttalli) - Mountain cottontails inhabit brushy areas and forests, particularly on rocky slopes throughout the region. They are common in the submontane and montane elevations of the Wasatch Plateau. Their population trend is stable.

Blue Grouse (Dendragapus obscurus) - Open conifer stands with brushy understory in the submontane and montane zones provide suitable habitat for this species. Blue grouse are common on East Mountain, and their population trend is stable.

Ruffed Grouse (Bonasa umbellus) - Brushy woodlands (aspens, willows, and conifers) near streams and springs are suitable habitat. This species occurs at submontane and montane elevations on East Mountain. Breeding usually occurs from March through May and is centered around a "drumming" log.

Chukar Partridge (Alectoris chukar) - This species prefers steep, rocky, grassy, or brushy slopes in arid mountains and canyons of desert and submontane zones. This species was introduced to Utah from 1951 to 1968. The species is now widely distributed throughout the state. Their population trend is stable.

Mourning Dove (Zenaidura macroura) - This is an important game bird in many parts of North America. Mourning doves prefer open field and forest edge habitat, but occur over a

broad range of vegetation types throughout the lower 48 states. The species occurs in pinion - juniper and forest edge habitat on East Mountain.

SPECIAL STATUS SPECIES:

No Threatened, Endangered, or Sensitive species are known to exist within the project area.

ARCHAEOLOGICAL INFORMATION:

A considerable number of roads and tracks exist in the project area. The project will utilize existing roads or tracks for almost all access routes. Drillhole 1997-3 will be drilled on the previously permitted site for EM-75 (not drilled). Due to the small amount of new road access necessary and limited area of drill pads (all located on sagebrush flats), the potential for archaeological impacts is very small.

The U. S. D. A. - Manti-LaSal National Forest was contacted regarding the need for a cultural resource survey associated with the drilling project. Previous archaeological surveys have been conducted to cover this area. A prescribed sagebrush area burn has been proposed for most of the project area during the spring or summer of 1997.

EXPLORATION METHODS:

Pre-Work Meeting:

A pre-work meeting including responsible company representatives, drilling contractors, Bureau of Land Management, and Forest Service personnel will be conducted at the project location prior to commencement of operations.

Road Use Permit:

The Forest Service will be notified 48 hours in advance that heavy equipment will be moved onto National Forest System lands and that surface disturbing activities will commence. Road Use Permits will be obtained for the following Forest Development Roads:

Cottonwood Canyon Road (USDAFS Road FDR #50040): Prior to mobilization, Energy West will obtain a Road Use Permit from the Manti-LaSal National Forest for the use of the Cottonwood Canyon Road from the Trail Mountain Mine up to the Mill Canyon Road. This road will be used primarily for mobilization and demobilization, and day to day transport of drill crews and company personnel.

Mill Canyon Road (USDAFS Road FDR #50060): Energy West will obtain a Road Use Permit from the Manti-LaSal National Forest for the use of FDR #50060 before equipment is transported onto National Forest Lands. The Mill Canyon road will be utilized from

Cottonwood Canyon to FDR #50145 on top of East Mountain to access the immediate exploration area. Individual drill sites accessed from this road will be 1997-2 and 1997-4.

East Mountain Road (USDAFS Road FDR #50145): Energy West will obtain a Road Use Permit from the Manti-LaSal National Forest for the use of FDR #50145 before equipment is transported onto National Forest Lands. This road enters the immediate drilling area. This road will be used to access drill sites 1997-1 and 1997-5.

East Mountain Road (USDAFS Road FDR #503188): Energy West will obtain a Road Use Permit from the Manti-LaSal National Forest for the use of FDR #503188 before equipment is transported onto National Forest Lands. This road will be used to access drill site 1997-3.

Fire Suppression Equipment:

All gasoline and diesel powered equipment will be equipped with effective mufflers or spark arresters which meet applicable Forest Service specifications. Fire suppression equipment will be available to all personnel working at the project site. Equipment will include at least one hand tool per crew member consisting of shovels and pulaskis and one properly rated fire extinguisher per vehicle and/or combustion engine.

Drill Hole Access, Pad Construction, and Drilling Activities:

A drill site inspection with Forest Service personnel was conducted in October 22, 1996. Due to the flat, open areas chosen for drill sites, little or no cut and fill type construction will be needed. Existing roads lead directly to sites 1997-2, 1997-3, and 1997-4. Where access beyond existing roads and tracks is needed, access will be achieved by driving on top of the existing ground surface without cutting new road with a blade. Drill site 1997-1 is about 800 feet WSW from the power line access road in the west 1/2 of section 6, and site 1997-5 is about 300 feet east from the end of an existing track in the southwest corner of section 6.

Drill pads will be constructed by back-blading the surface to remove vegetation and topsoil. Topsoil will first be removed and stockpiled at one end of the drill site for reclamation. Mud pits will then be excavated. The drill pads will be approximately 150 feet long and 100 feet wide (0.35 acre). Total disturbed area for drill pads and drill pad access will be approximately 2.1 acres.

When the drill pad is completed, rubber-tired drilling equipment will be moved onto the pad and positioned for drilling activities.

Drilling Equipment:

Drilling Rig:

1 Gardner-Denver 2000 rotary drill rig or equivalent

Drilling Support Equipment:

- 2 Water truck, approx. 3,000 gallon capacity
- 1 Semi tractor/trailer for carrying drill pipe and casing
- 1 Drilling equipment van / doghouse truck
- 2 700 cfm air compressors
- 2 air boosters
- 4 Pickup trucks for crew & company personnel
- 1 Geophysical logging truck
- 1 Service and welding truck
- 1 D-8 bulldozer or equivalent
- 1 Backhoe
- 1 Road grader

Water Requirements & Rights:

Water to be used for drilling will be delivered the drill sites by the following method:

A Temporary Exchange Application will be filed for and approved with the State of Utah Division of Water Rights for permitted water source prior to commencement of drilling operations. Water will be trucked to the drilling sites from the permitted water source, and stored on site. About 6 trips per 24 hour day from spring to rig will be necessary to supply adequate water for drilling.

The amount of water required for the project is estimated at 90,000 gallons per hole. Therefore, the maximum total quantity of water to be used is estimated at approximately 450,000 gallons (1.0 acre feet).

Drill Methods & Procedures:

Due to the depth of these holes and anticipated poor hole conditions in the upper portions of the holes, several stages of steel drill casing may be necessary to keep the holes open long enough for proper geophysical logging to take place. Holes will probably be completed in the following manner:

Surface hole and casing - 12.75" diameter hole, 9" steel casing	0 to 200 feet
2nd Stage - 8.75" diameter hole, 7" steel casing	200 to 1500 feet
Final Stage - 6.00" diameter hole, no casing	1500 to 2600 feet

Holes will be rotary drilled to 6" maximum diameter through the coal zone. The holes will penetrate through both the Blind Canyon and Hiawatha coal seams. This will result in approximately a maximum of 150 pounds of coal being removed per hole. Drilling will utilize water and, as necessary, drilling foam, and biodegradable polymer drilling additive such as MINEX 1330. If

drilling conditions become extremely difficult, a bentonite-based drilling mud may need to be utilized to stabilize the hole.

Hole Abandonment:

Groundwater is not anticipated to be encountered in any of the drill holes; therefore, they are not proposed to be retained as water monitoring wells. However, if significant groundwater is present in any of the holes, this will be reported to the appropriate agencies (BLM, USDAFS, DOGM) and a determination will be made regarding the transfer and modification of the drill holes to monitoring wells.

Upon completion of down-hole procedures, all drill holes will be properly sealed by emplacing cement from the bottom of the hole to ground level if possible. The cement slurry mixture used to plug and seal the holes will be mixed in compliance with standard cement mixing tables (e.g. Halliburton). Any variance from this procedure will be approved in advance by the Chief of the BLM Price Office.

Drill Site Reclamation:

Following completion of drilling and plugging activities and removal of all materials and equipment from the drill site, the site will be reclaimed. All trash and contaminated soil will be removed from the site. If water and or mud remains in the mud pits, and it is determined that the mudpits are too wet to fill and reclaim, the mudpits will be allowed to dry to the point where they can be reclaimed safely. If topsoil disturbance has occurred, topsoil will be redistributed over the stripped areas and the areas will be reclaimed and recontoured using using the construction equipment listed above.

The areas will then be reseeded using the following certified seed mixture or a mixture stipulated by the Forest Service.

<u>Species</u>	<u>lbs/acre (PLS)</u>
Intermediate Wheatgrass - <i>Agropyron intermedium</i>	3
Slender Wheatgrass - <i>A. trachycaulum</i>	3
Orchard Grass - <i>Dactylis glomerata</i>	2
Crested Wheat Grass - <i>A. smithii</i>	2
Smooth Brome - <i>Bromus inermus</i>	3
Ladak Alfalfa - <i>Medicago sativa ladak</i>	1
Yellow Sweet Clover - <i>Melilotus officinalis</i>	1
Small Burnett - <i>Sanguisorba minor</i>	1
Perennial Ryegrass - <i>Lolium perenne</i>	1

The seed mixture will be hand broadcast using a hurricane spreader and the area will be raked with mechanical equipment following seeding to cover the seed. Following seeding, any dead-fall that was removed from the drill site will be replaced.

Following completion of drilling of the final hole, the drill rig and all associated equipment and materials will be removed. All trash and extraneous materials will be removed from the US Forest Service property and disposed of at an approved location.

It is anticipated that all drilling and reclamation activities associated with this project will be completed within 45 days following the date of implementation.

RILDA CANYON

1997 SURFACE DRILLING PLAN

INTRODUCTION:

PacifiCorp proposes to conduct the second phase of a 2-phase coal exploration surface drilling program in the right fork of Rilda Canyon. Phase 1 has already been discussed in the first part of this document. Phase 2 will consist of a row of 6 shallow core holes drilled from the road in the bottom of the right fork of Rilda Canyon to locate and determine the offset of the "Mill Fork" fault zone which crosses the canyon in this area.

PHASE 2 - RIGHT FORK OF RILDA CANYON CORE DRILLING: LOCATION AND DEPTH OF PROPOSED DRILL HOLES:

Six (6) proposed drill sites are indicated on the accompanying drawings. The approximate locations, depths and elevations of the holes are as follows:

HOLE NUMBER	LOCATION	ELEVATION	DEPTH, FEET	SURFACE OWNERSHIP	COAL OWNERSHIP
1997-A	155' South, 680' West of the NE Corner of Sec. 30, T. 16S, R. 7E.	8160	250	USDAFS	BLM LEASE U-06039
1997-B	50' South, 900' West of the NE Corner of Sec. 30, T. 16S, R. 7E.	8185	280	USDAFS	BLM LEASE U-06039
1997-C	30' North, 1120' West of the NE Corner of Sec. 30, T. 16S, R. 7E.	8210	310	USDAFS	BLM LEASE U-06039
1997-D	110' North, 1320' West of the NE Corner of Sec.30, T. 16S, R. 7E.	8240	340	USDAFS	BLM LEASE U-06039
1997-E	200' North, 1580' West of the SE Corner of Sec. 19, T. 16S, R. 7E.	8270	370	USDAFS	BLM LEASE U-06039
1997-F	265' North, 1820' West of the SE Corner of Sec. 19, T. 16S, R. 7E.	8300	400	USDAFS	BLM LEASE U-06039

In accordance with Federal Regulations 43 CFR 3482.1 (a), 30 CFR 772.11 and State of Utah R645 Coal Mining Rules, the following is submitted:

APPLICANT:

PacifiCorp
One Utah Center
201 South Main, Suite 2100
Salt Lake City, Utah 84140-0021
(801)220-2000

OPERATOR:

Energy West Mining Company
15 North Main Street
Huntington, Utah 84528
(801)687-9821

RESPONSIBLE REPRESENTATIVE:

Charles Semborski or Ken Fleck
Energy West Mining Company
15 North Main Street
Huntington, Utah 84528
(801)687-9821

Drilling company not yet selected

PROJECT STARTUP DATE: July 30, 1996

PROJECT COMPLETION DATE: October 15, 1996

PROPOSED PHASE 2 EXPLORATION AREA:

The proposed drilling is located in Sections 19 and 30, Township 16 South, Range 7 East, Salt Lake Base and Meridian. The drilling will occur on federal land with the surface administered the Forest Service (USDAFS) and the subsurface by the Bureau of Land Management (BLM). This portion of the right fork of Rilda Canyon is within PacifiCorp's lease boundary and admendment to expand the Deer Creek Mine to North Rilda was submitted to DOGM on January 31, 1997 (approval pending). See the accompanying maps titled Rilda Canyon Surface Drilling - 1997, (Surface Ownership Map, Coal Ownership Map, Topography Map).

The proposed holes will be drilled in the right (north) fork of Rilda Canyon, a tributary to Huntington Canyon in Emery County, Utah. The proposed sites are situated along the canyon bottom, along the partially reclaimed drill road that leads to Pacificorp's old drillhole EM-56c. The holes will be approximately evenly spaced between the recently completed drillhole EM-158 (10/96) and the old hole EM-56c (11/79). The holes are located in the upper Blackhawk Formation at elevations ranging from 8000 to 8275'.

VEGETATION and WILDLIFE:

The vegetation in the area consists of a Cottonwood/Aspen/Fir/Dogwood community in the bottom of the canyon and Spruce-Fir Coniferous Forest inter-mixed with Salina Wildrye/Mountain Mahogany on the south side slope and Salina Wildrye/Mountain Mahogany/Pinyon-Juniper on the north slope. The primary land uses associated with the area are wildlife habitat and livestock grazing and recreation. The area is presently classified for the following wildlife uses by the Utah Division of Wildlife Resources:

Mule Deer
Elk

High Priority Summer Range
Critical Winter Range and High Priority Summer Range

The proposed drilling is not expected to have a detrimental impact on any of these species, their habitat or other land uses associated with the area.

Surveys for Threatened, Endangered and Sensitive (TES) plant and animal species have been conducted in connection with various projects in this area of Rilda Canyon (Surface Facilities, Permit Extension and Power Line). Results of these surveys have been provided to the various regulatory agencies in the applications for the projects. No Threatened or Endangered Species of plants or animals have been found in the areas of the proposed drill holes.

ARCHEOLOGICAL INFORMATION:

The United States Forest Service - Manti-LaSal National Forest was contacted regarding the need for a cultural resource survey associated with the drilling project. A cultural resource survey is not recommended by that agency for any of the drillholes, as they will be drilled within the boundaries of the old road bed (previously disturbed area). Necessary cultural resource surveys have already been performed in this area for the construction of the drillholes EM-47 and EM-56c and the drillhole access road.

EXPLORATION METHODS:

Pre-Work Meeting:

A pre-work meeting including the responsible company representatives, contractors, Bureau of Land Management, and the Forest Service will be conducted at the project location prior to commencement of operations.

Road Use Permit:

The Forest Service will be notified 48 hours in advance that heavy equipment will be moved onto National Forest System lands and that surface disturbing activities will commence.

Rilda Canyon Road (Emery County Road #306): Prior to drilling, Energy West will obtain permission from Emery County to use this road for drill project access.

Fire Suppression Equipment:

All gasoline and diesel powered equipment will be equipped with effective mufflers or spark arresters which meet applicable Forest Service specifications. Fire suppression equipment will be available to all personnel working at the project site. Equipment will include at least one hand tool per crew member consisting of shovels and pulaskis and one properly rated fire extinguisher per vehicle and/or combustion engine.

Drill Hole Access and Pad Construction:

No access road or pad construction will be necessary for the proposed project. By utilizing the old access road to drillholes EM-47 and EM-56c, minimal construction work will be necessary, other than moving deadfall and rocks placed during original reclamation. Drilling equipment and materials will be transported to the drill sites by either a small all-terrain core drilling rig, small flatbed transport truck or by pickup truck. Personnel will access the sites by vehicle via existing roads and on foot. The drill sites are relatively level (20 percent or less slope); therefore, minimal site preparation will be necessary. Vegetation, in the form of trees, grasses, forbs and sparse, low shrubs, will not be removed. However, it may be necessary to remove dead-fall and some "taller" shrubs (mahogany, etc.). This will be minimized and accomplished using hand tools. The dead-fall will be replaced upon completion of drilling. An area no larger than approximately 40' by 40' will

be occupied at each drill site. Leveling of drilling equipment will be accomplished using hand tools and supports (wood blocks, etc.). All materials, tools and equipment will be removed upon completion of drilling and reclamation activities.

Drilling Equipment:

Drilling Rig:

Longyear 34 core rig or equivalent, all terrain type

Drilling Support Equipment:

Water tank, approx 500 gallons capacity

Water pump, Bean - type, skid mounted

2 Water tubs, Approx 200 gallons capacity, for fluid preparation and recirculation

4 Pickup trucks for crew & company personnel (use restricted to existing roads)

1 Flat bed truck for drill transport

1 Flat bed truck for drill accessory transport

Water Requirements & Rights:

Water to be used for drilling will be delivered the drill sites by the following method:

Water will pumped or siphoned directly from the creek in the right fork.

The amount of water required for the project is estimated at 20,000 gallons per hole. Therefore, the maximum total quantity of water to be used is estimated at approximately 120,000 gallons (0.37 acre feet). A *Temporary Exchange Application* will be filed and approved with the State of Utah, Division of Water Rights prior to commencement of operations.

Drill Methods & Procedures:

The drilling will be done by a drilling contractor experienced in small portable rig drilling. The drill is a diesel powered rotary drill rig mounted on large all terrain tires or track/crawler system. Drilling will utilize water and, as necessary, a biodegradable polymer drilling "mud" such as MINEX 1330 (see attached MSDS). The water will be obtained from the creek.

The drill rig components and associated materials, tools and equipment will be transported by truck to the drill sites indicated on the accompanying map. Minor digging, using hand tools, may be necessary at some locations to achieve effective setup and placement of the leveling support materials (wood blocks, etc.) for the drilling rig. Brattice or other similar material will be placed on the ground beneath the drill rig. The drill rig components will be assembled at the drill site, the rig will be leveled and other necessary materials will be brought to the site.

A 1" diameter high-pressure hose will be installed from the creek to the drill sites. The hose will be placed on the ground by hand. No clearing of vegetation will be necessary for placement of the water hose. Existing openings among the trees will be utilized. Additionally, no vegetation clearing will occur at the water intake sites. Activities will be confined to the existing roadbed in the right fork of Rilda Canyon. Impacts to vegetation will result from vehicle and personnel movement at the sites. The necessary approvals will be obtained from the Forest Service and Emery County for activities associated with the respective roads.

During the drilling operation, water and drilling fluids will be recirculated to the extent possible. Any returned cuttings and other materials will be captured in a container at the drill site. The cuttings will be transported from the drill site to the Deer Creek Waste Rock Site for disposal. Containment of possible fluid spills will be achieved through the use of brattice ground cover, and if necessary, silt fence and dirt berms. If spills occur, all affected materials will be removed from the site and disposed of at an approved location. If soil is removed during spill containment and clean-up, the site of removal will be recontoured and seeded with the approved seed mixture.

Fuel and/or lubricating oil containers not stored on a truck will be placed on brattice or other acceptable ground cover at a site located away from drainage channels and surrounded by silt fence, dirt berm or other acceptable containment structure. If spills occur, clean-up will be conducted as stated above.

Holes will be rotary or core drilled to 3" maximum diameter for the entire depth of the holes. The holes will penetrate through both the Blind Canyon and Hiawatha coal seams. This will result in approximately a maximum of 100 pounds of coal being removed per hole. Drilling is proposed to be completed first at site F (see the accompanying map). The need for, and location of, subsequent drilling will be determined following completion of each hole; however, no more than six (6) holes will be drilled.

Hole Abandonment:

Groundwater is not anticipated to be encountered in any of the drill holes; therefore, they are not proposed to be retained as water monitoring wells. However, if groundwater is present in any of the holes, this will be reported to the appropriate agencies (BLM, USFS, DOGM) and a determination will be made regarding the transfer and modification of the drill holes to monitoring wells.

Upon completion of down-hole procedures, all drill holes will be properly sealed by emplacing cement from the bottom of the hole to ground level. The cement slurry mixture used to plug and seal the holes will be mixed in compliance with standard cement mixing tables (e.g. Halliburton). Any variance from this procedure will be approved in advance by the Chief of the Price Office.

Drill Site Reclamation:

Following completion of drilling and plugging activities and removal of all materials and equipment from the drill site, the site will be reclaimed. If soil disturbance has occurred, the areas will be repaired and recontoured.

The areas will then be reseeded using the following certified seed mixture or a mixture stipulated by the Forest Service.

<u>Species</u>	<u>lbs/acre (PLS)</u>
Intermediate Wheatgrass - <i>Agropyron intermedium</i>	3
Slender Wheatgrass - <i>A. trachycaulum</i>	3
Orchard Grass - <i>Dactylis glomerata</i>	2
Western Wheat Grass - <i>A. smithii</i>	2
Smooth Brome - <i>Bromus inermus</i>	3
Ladak Alfalfa - <i>Medicago sativa ladak</i>	1
Yellow Sweet Clover - <i>Melilotus officinalis</i>	1
Small Burnett - <i>Sanguisorba minor</i>	1
Perennial Ryegrass - <i>Lolium perenne</i>	1

The seed mixture will be hand broadcast using a hurricane spreader and the area will be hand raked following seeding to cover the seed. Following seeding, any dead-fall or large rocks that were removed from the drill site or road will be replaced.

Following completion of drilling of the final hole, the drill rig and all associated equipment and materials will be removed and transported from the area by vehicle. The water hose, tanks and pumps and all associated materials and equipment will be removed. All trash and extraneous materials will be removed from the USDA Forest Service property and disposed of at an approved location.

Any impacts associated with the water tank sites or water hose placements will be repaired. If soil disturbance has occurred, the areas will be repaired and recontoured and seeded as described above. Vehicle tire tracks or other similarly impacted areas will be obliterated to the extent possible.

The access road will be returned to its state prior to this drilling project, i.e., with deadfall and rocks distributed to prohibit vehicular but not foot traffic.

It is anticipated that all drilling and reclamation activities associated with this project will be completed within 45 days following the date of implementation.

Trail Enhancement Project:

As discussed earlier, access to the drill sites will be accomplished utilizing existing road to EM-47 and reclaimed roadway to EM-56c. PacifiCorp recognizes the fact the USFS considers the existing road up the Right Fork of Rilda Canyon as closed and restricted to type A use (non-motorized use). PacifiCorp would commit to reclaiming the existing road to EM-47 to a single track trail with USFS guidance to enhance recreational opportunities (see accompany map).

Drill Site Selection Justification
East Mountain 1997 Exploration Drilling

February, 1997

INTRODUCTION:

The southwest reserves of Deer Creek Mine are a little-known and sparsely explored area. This area is receiving more attention lately due to its inclusion in the next phase of the Deer Creek R2P2. Plans are being made to conduct further exploration drilling in this area to further delineate troubling features that are shown in existing drillholes.

The southwest reserve area of Deer Creek is close to the western margin of the Blind Canyon coal swamp and exhibits coal thinning and roof scouring associated with this margin. This area does not contain any significant Hiawatha reserves.

Sections 1 and 12 (T.17 S., R.6 E.) and Section 6 (T.17 S., R.7 E.) contain within them 8 existing drillholes with 4 or 5 more close to the section boundaries. Estimated drillhole spacing in this area is on about 1/2 mile centers, which is less than ideal for underground mine planning purposes.

Thin coal in drillholes EM-19, EM-17, EM-74, and R-4 (5.4' to 6.1'), most apparently caused by roof scouring, indicate that this area will be troublesome to mine and produce high - ash r.o.m. coal. For this reason, the reserves in this area have already been earmarked in the Company mine plan and the R2P2 as high-ash reserves for transfer to the Cottonwood loadout and Preparation Plant.

Energy West Mining Co. has committed to further delineation of these reserves, in agreement with a stipulation of the B.L.M. to conduct this exploration by the end of 1998. This exploration will take the form of several surface exploration drillholes.

In choosing the locations of these drillholes, several factors must be considered:

- Depositional Trends
- Spacing & location of existing holes
- Surface accessibility

Depositional Trends:

Since these reserves are near the western edge of the coal swamp, coal thinning is the predominant factor affecting the mineability and quality of the reserves. Near the margin, thinning coal is more greatly impacted by the effects of scouring, and several holes in the area show thinning by scouring. The greatest impact on these reserves appears to be scouring of the coal, based on the limited number of drillholes. To aid in the characterization of coal scour and sandstone roof areas, "percent sand"

interval or "slice" maps were developed of this area showing the percentages of sand in the following intervals: 0'-10', 10'-20', 20'-30', and 0-30' of roof rock above the coal. Of course, the only sandstone that can scour the coal seam is in the first 10 feet of the roof, but higher intervals may show trends in the sandstone concentrations.

The first slice (0-10') map shows a large concentration of sandstone in the immediate roof in the center of the reserve area, and to the southeast toward the Roans Canyon fault. The second slice (10'-20') shows smaller concentrations of sandstone in the center of the area but still a large percentage to the south. The third slice (20'-30') shows similar concentrations in the areas in the center and to the south. The sandstone area to the south and east (under the Straight Canyon Syncline) proved to be extremely or saturated with water when mine workings (2nd, 3rd, and 4th Right) were driven under this sandstone from the east.

The slice maps show concentrations of sandstone roof and potential scour areas mostly in the center of the reserve area in question, and not as much to the west where the Blind Canyon seam is expected to become too thin to mine. A major portion of the exploration effort needs to be concentrated in this area, to further define these sandstone roof areas.

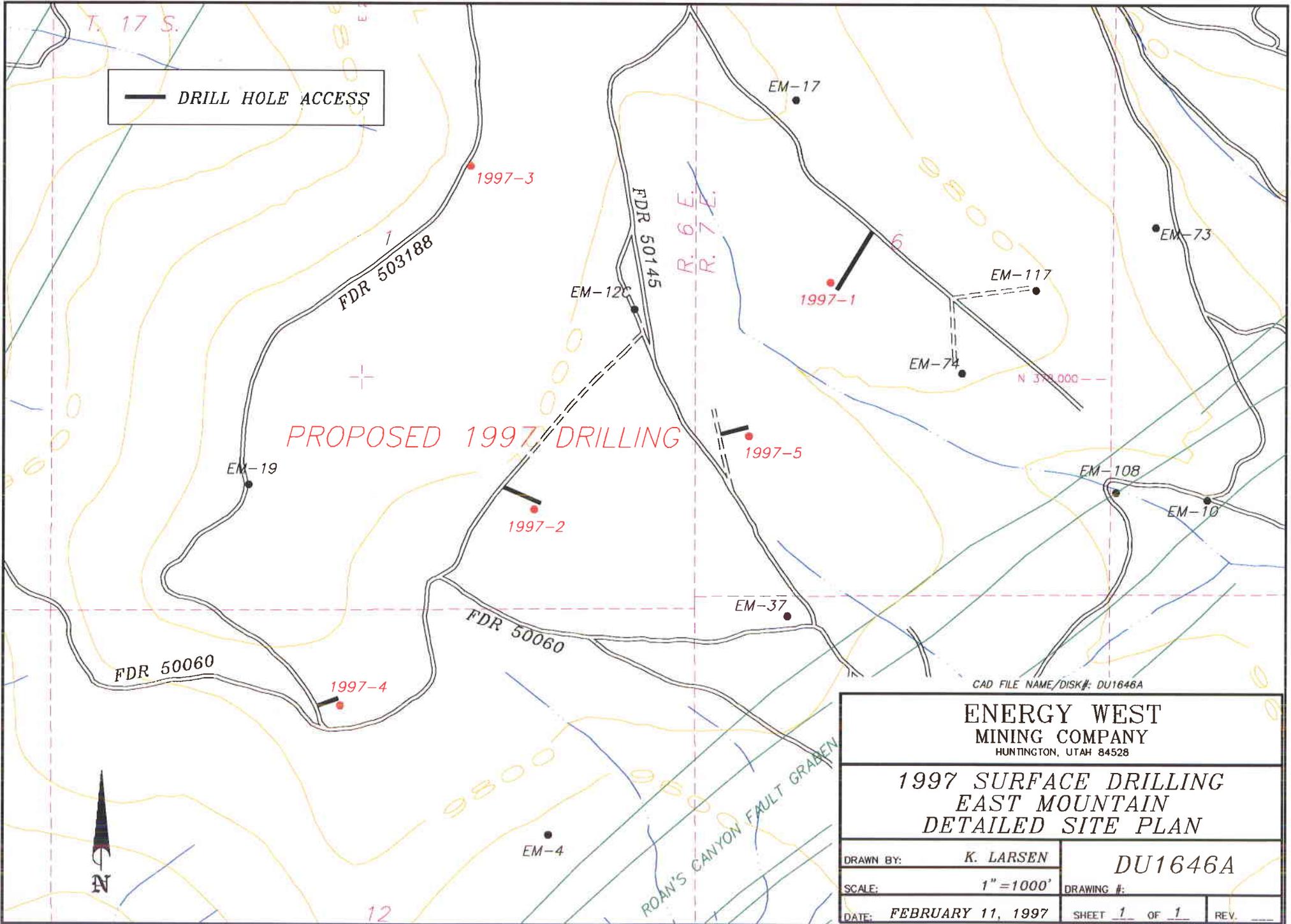
Spacing & Location of Existing Holes:

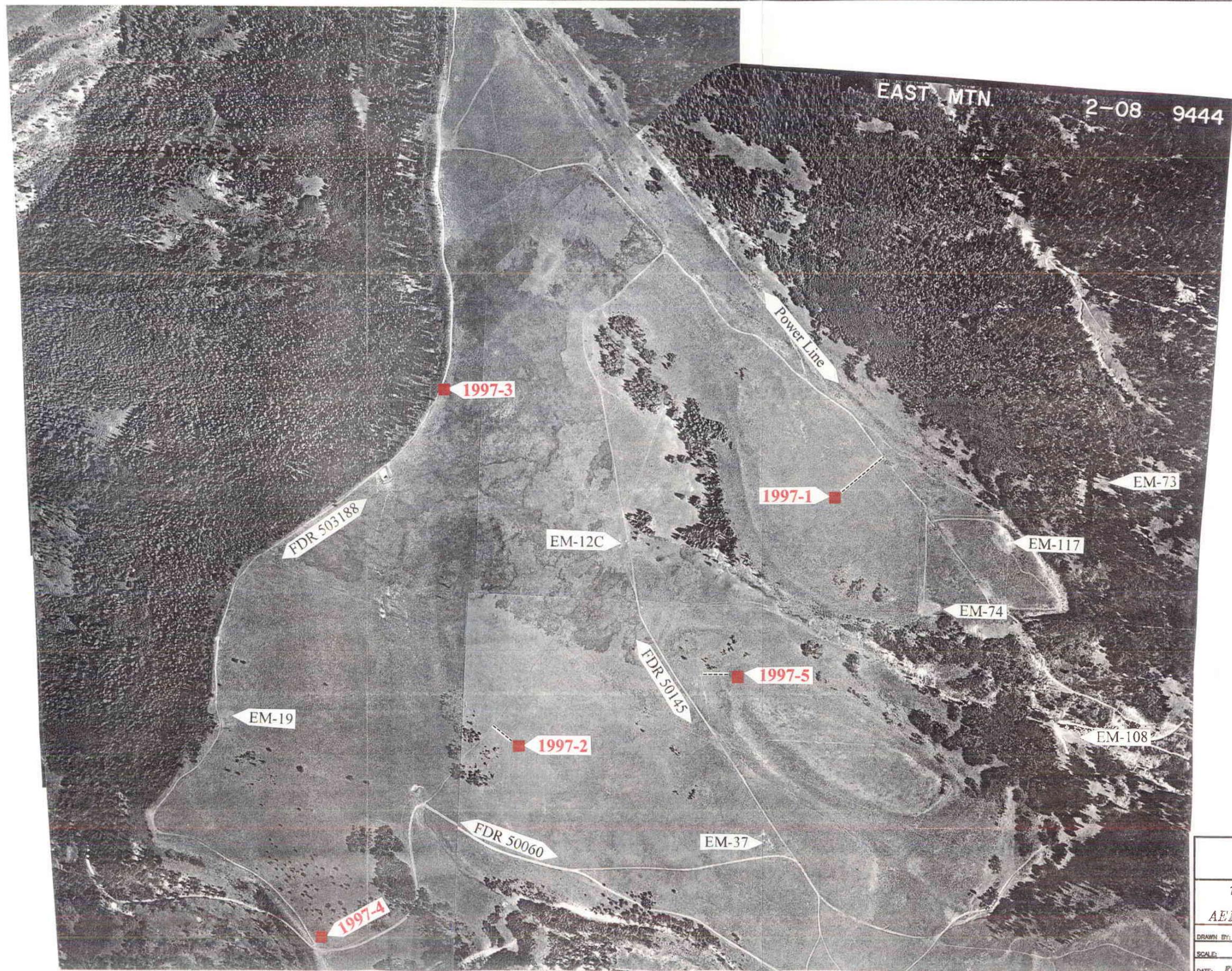
The spacing and location of existing drillholes in this area are similar to other drilled areas on the north end of East Mountain, where drilling is on about 1/2 mile centers. In an area where coal thickness problems are known to exist and scouring is known to exist, certainly more holes are desirable, as many as can be practicably drilled. Experience at Deer Creek and Cottonwood Mines has shown, however, that even very densely spaced drilling (< 500' centers) cannot always adequately define an area for mining in swamp margin and scouring conditions.

Surface Accessibility:

This reserve area is under a large portion of the Flagstaff Limestone cap that covers the uppermost parts of East Mountain. Drillsites for the central part of the reserve area in question should not be hard to access or disturb significant portions of the landscape. Other areas off the edge of the "cap" are too steep for drillsites. We propose to fill in some gaps in the middle and north portions of the reserve area to improve drill spacing and remain on the flat cap area. Drilling on top of the cap will be more difficult due to increased hole depth, increased possibility of poor drilling conditions below the cap and the altitude (over 10,000 feet). Deep drilling and potential hole condition problems will result in higher costs, and reduce the number of drillholes. Budgetary limitations will almost certainly keep the number of holes down to 3-5.

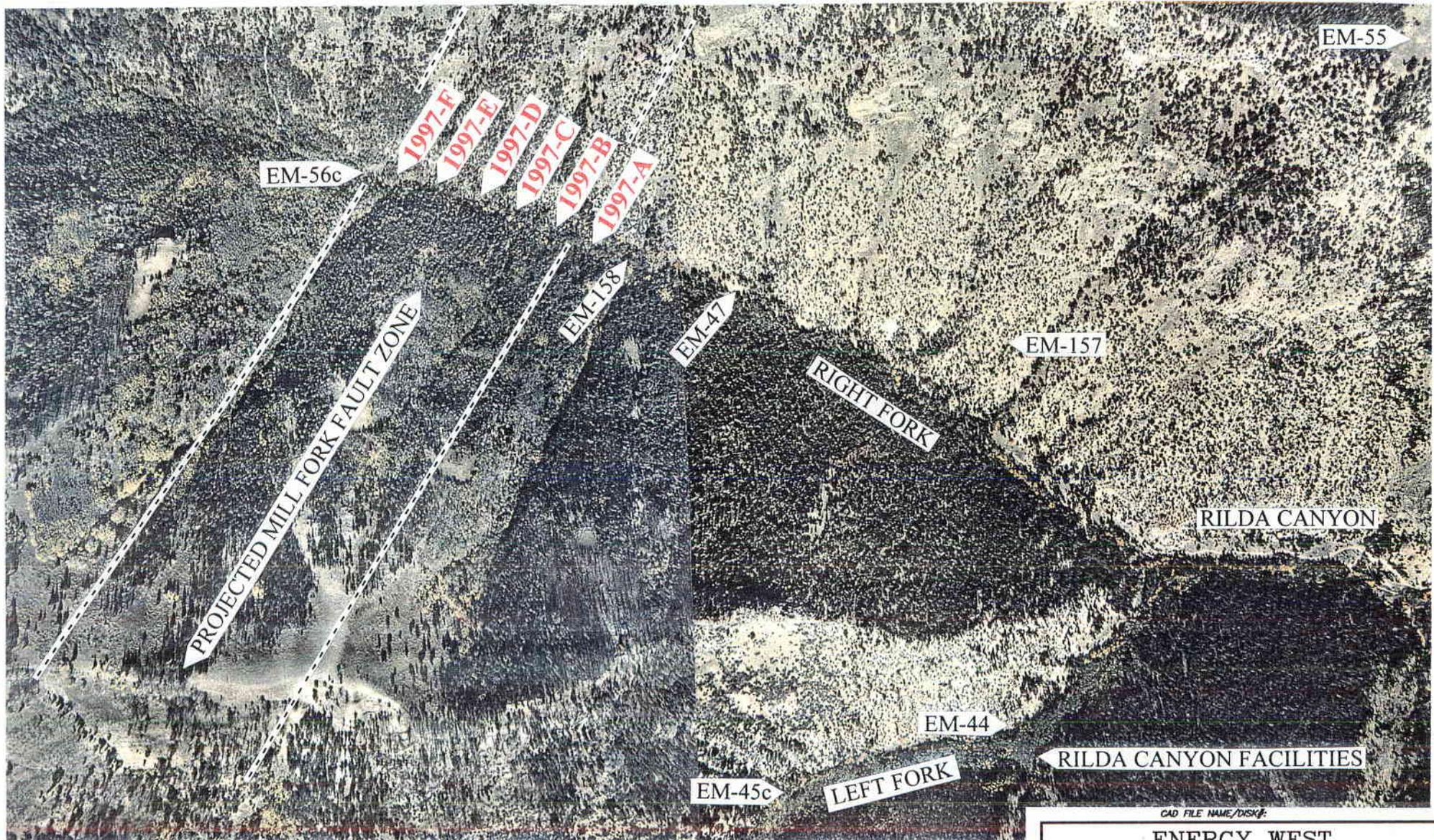
The proposed drill sites are shown on the attached map. The intent of the locations chosen is to fill in the large gaps in the drill spacing and to provide information in the especially troublesome low coal area in the vicinity of EM-12c, EM-17, and EM-74. A data point is also needed to fill in the large space between EM-12c, EM-19, and EM-27. The proposed holes are numbered in order of preference.





EAST MTN 2-08 9444

CAD FILE NAME/DISK#:	
ENERGY WEST MINING COMPANY HUNTINGTON, UTAH 84526	
1997 SURFACE DRILLING EAST MOUNTAIN AERIAL PHOTO OF PLAN AREA	
DRAWN BY: K. LARSEN	DRAWING #:
SCALE: NONE	SHEET 1 OF 1
DATE: FEBRUARY 11, 1997	REV.:

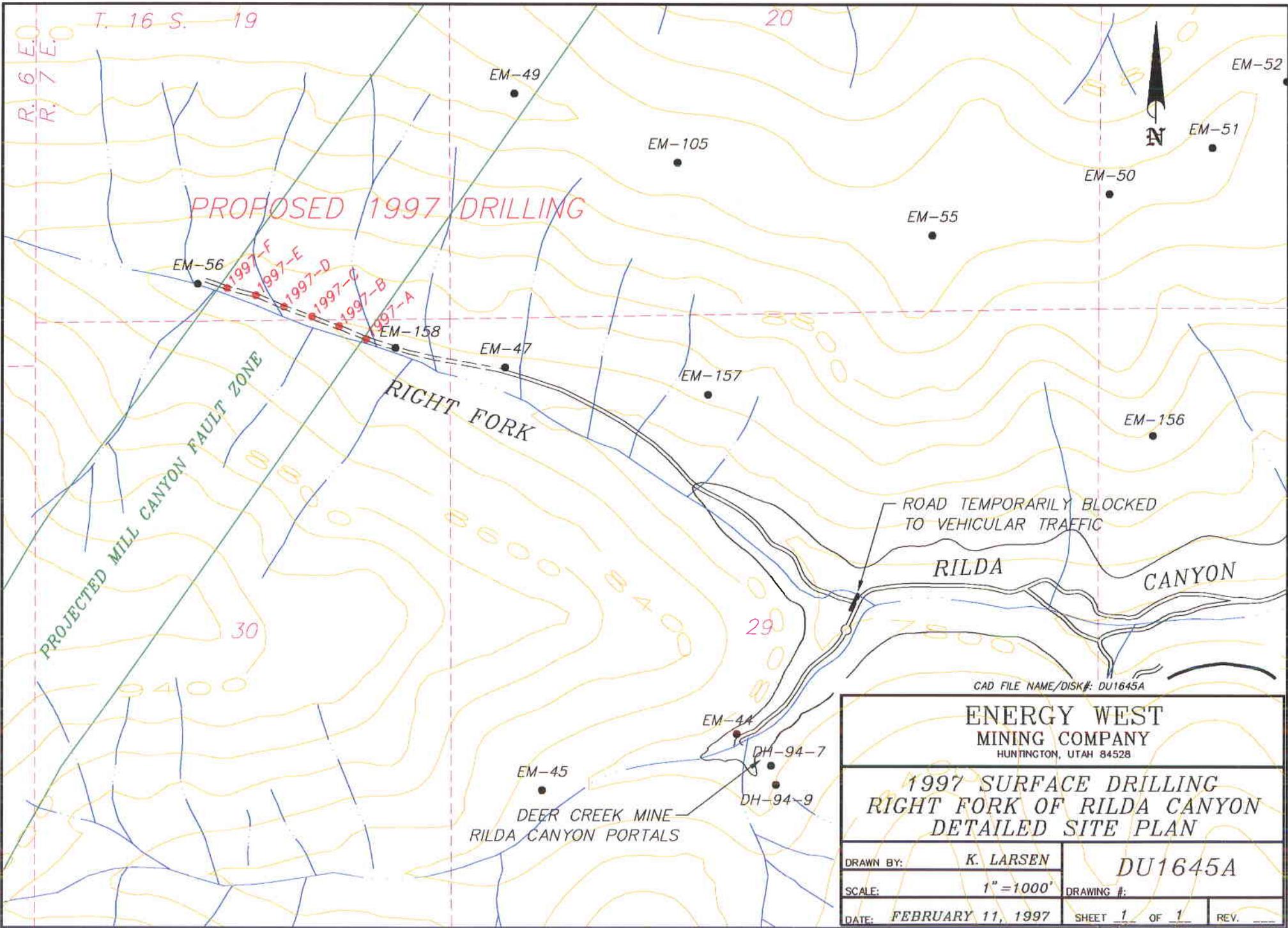


CAD FILE NAME/DISK#:

ENERGY WEST
 MINING COMPANY
 HUNTINGTON, UTAH 84528

1997 SURFACE DRILLING
 RIGHT FORK OF RILDA CANYON
 AERIAL PHOTO OF PLAN AREA

DRAWN BY:	K. LARSEN	...	
SCALE:	NONE	DRAWING #:	
DATE:	FEBRUARY 11, 1997	SHEET 1 OF 1	REV. _____



PROPOSED 1997 DRILLING

PROJECTED MILL CANYON FAULT ZONE

RIGHT FORK

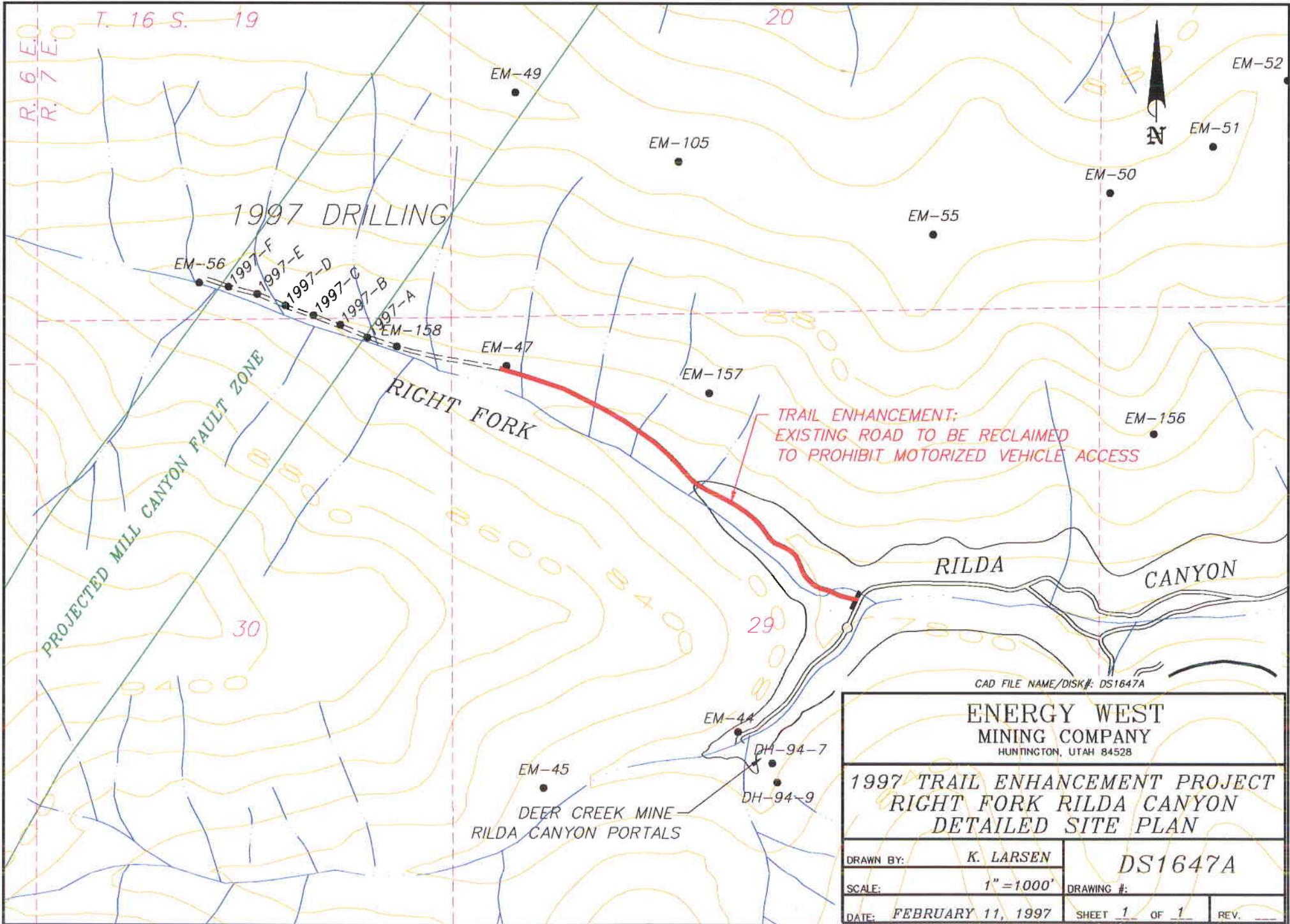
RILDA CANYON

ROAD TEMPORARILY BLOCKED TO VEHICULAR TRAFFIC

DEER CREEK MINE
RILDA CANYON PORTALS

CAD FILE NAME/DISK#: DU1645A

ENERGY WEST MINING COMPANY HUNTINGTON, UTAH 84528	
1997 SURFACE DRILLING RIGHT FORK OF RILDA CANYON DETAILED SITE PLAN	
DRAWN BY: K. LARSEN	DU1645A
SCALE: 1" = 1000'	DRAWING #:
DATE: FEBRUARY 11, 1997	SHEET 1 OF 1 REV.



R. 6 E.
R. 7 E.
T. 16 S. 19

1997 DRILLING

PROJECTED MILL CANYON FAULT ZONE

RIGHT FORK

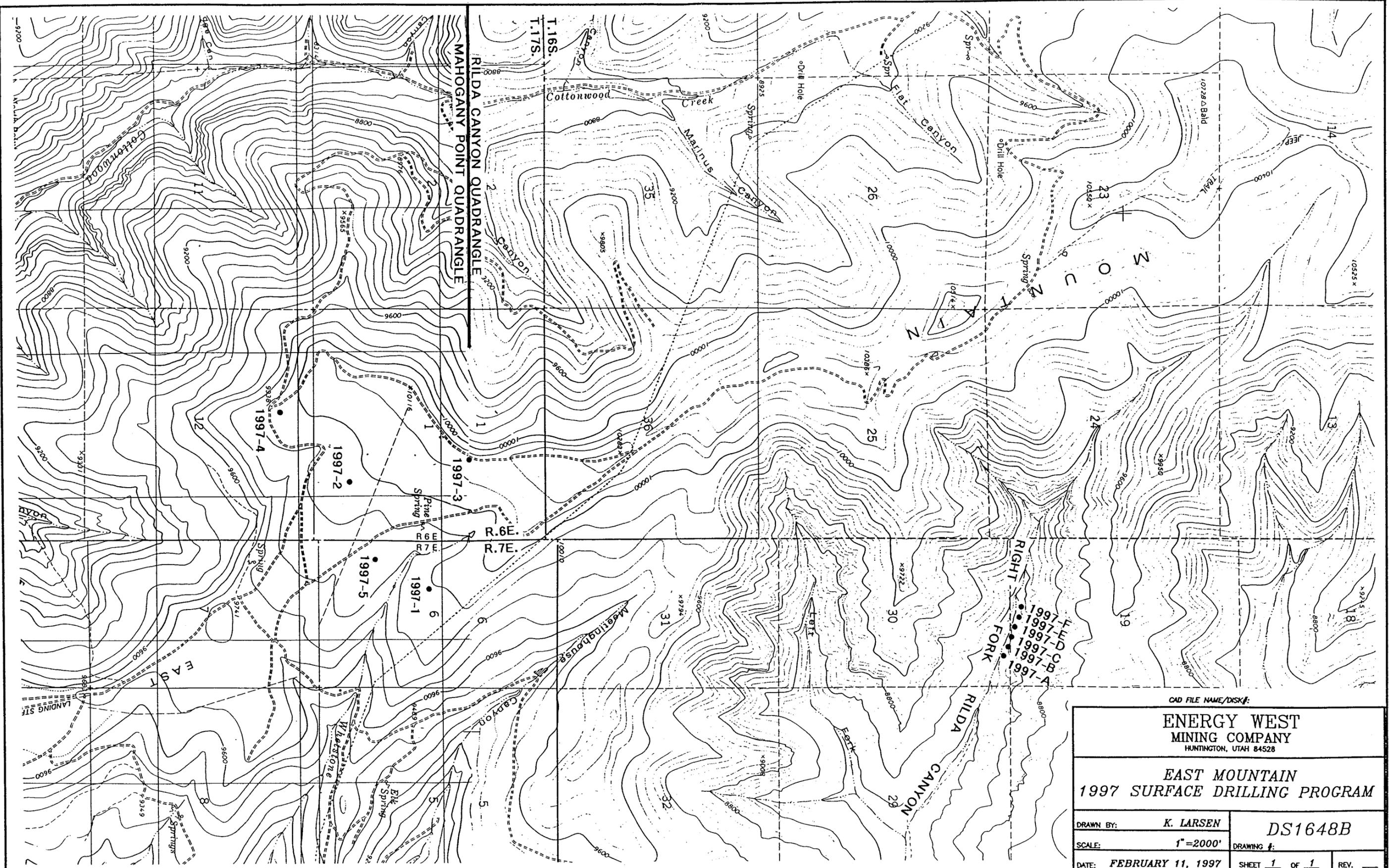
TRAIL ENHANCEMENT:
EXISTING ROAD TO BE RECLAIMED
TO PROHIBIT MOTORIZED VEHICLE ACCESS

RILDA CANYON

DEER CREEK MINE
RILDA CANYON PORTALS

CAD FILE NAME/DISK#: DS1647A

ENERGY WEST MINING COMPANY HUNTINGTON, UTAH 84528		
1997 TRAIL ENHANCEMENT PROJECT RIGHT FORK RILDA CANYON DETAILED SITE PLAN		
DRAWN BY:	K. LARSEN	DS1647A
SCALE:	1" = 1000'	DRAWING #:
DATE:	FEBRUARY 11, 1997	SHEET 1 OF 1
		REV.



CAD FILE NAME/DISK#:

**ENERGY WEST
MINING COMPANY**
HUNTINGTON, UTAH 84528

**EAST MOUNTAIN
1997 SURFACE DRILLING PROGRAM**

DRAWN BY:	K. LARSEN	DS1648B
SCALE:	1"=2000'	DRAWING #:
DATE:	FEBRUARY 11, 1997	SHEET 1 OF 1
		REV. _____