Winnebago Scout Reservation
Historic Trail East Tour
A 10-mile Historic Hike for Scouts BSA

BOY SCOUTS OF AMERICA®
PATRIOTS' PATH COUNCIL

Cedar Knolls, New Jersey
www.ppcbsa.org

The Winnebago Boy Scout Historic Trail, (Eastern Tour) is a 10-mile roundtrip hike. The hike begins in camp, follows the Four Birds (WHITE TRAIL) to the Split Rock furnaces, around Split Rock Reservoir on the BLUE TRAIL to Indian Cliffs, continues to Charlotteburg Reservoir, follows the old Wharton & Northern Railroad bed to Four Corners, and returns to the entrance of Camp Winnebago at Timberbrook Road.

All units taking these hikes are required to check in with the campmaster or ranger for instructions before starting on the trail. Guidebook and map are to be used by the hike leader, but Scouts may record their own answers.

Split Rock Reservoir from Indian Cliffs

The Winnebago Scout Reservation BSA Historic Trail Eastern Tour

DESCRIPTION: The Scouts BSA Historic Trails offer a walk back in time to an era when this area of New Jersey opened its natural wealth and beauty to early settlers. This hike embraces much of the natural beauty of the area. Following the Four Birds Trail **(WHITE TRAIL)** along the western side of Split Rock Reservoir, you will pass the oldest trees living in these woods. After crossing Spilt Rock Dam, you will visit the Civil War era furnaces. The **BLUE TRAIL** follows the eastern side of Split Rock Reservoir near the remnants of the Cobb iron mine. This challenging trail brings you to Indian Cliffs with its breathtaking views of Split Rock Reservoir. Hiking the old Charlotteburg Road will bring you to the south end of Charlotteburg Reservoir and the spur for the historic Wharton & Northern Railroad. At Four Corners, where the spur meets the old main line, you will follow an old logging road back to Timberbrook Road and the entrance to camp.

QUALIFICATIONS: This trail has been designed for the Scouts BSA program and may be hiked by similar community groups. A group can hike the trail in one or two days. Minimum suggested age for hiking the trail is 11 years of age.

SCOUT REQUIREMENTS: All Scouts BSA MUST conform to all normal requirements set by the Boy Scouts of America governing hiking activities. Wearing a uniform is not required. Pencils and a compass are needed to fill out the questionnaire. A bag lunch, water canteens and waterproof boots are recommended.

TRAIL REQUIREMENTS: A donation of $2 per booklet is suggested at the start of the hike to cover the cost of the trail package. For the Trail Award, there is a questionnaire with 22 informative fill-in questions. These are to be turned in to the group leader at the end of the trail in order to receive the award. Starting time is between 8 and 11 a.m. Units can select their own starting time but must report to the campmaster 30 minutes prior to this time. Scouts units from councils outside of Patriots' Path Council are required to

have a valid Certificate of Accident Insurance coverage provided by their home council. Hikers should wear shoes and clothing appropriate to a backwoods trail running through the Farny Highlands Trail Network. A marshy trail and several streams must be crossed. "Be Prepared"-waterproof boots or plastic bags to cover footwear are encouraged.

TIME REQUIREMENTS: The trail can be hiked year-round depending on weather and trail conditions. Depending on skill level, the hike is three to five hours each way.

TRAIL AWARDS: The Camp Winnebago, Boy Scout Historic Trail Award patch can be purchased at the Camp Winnebago Trading Post at the end of the hike.

REGISTRATION: Prior to hiking or camping, a day or weekend reservation for Camp Winnebago must be made with the Patriots' Path Council Service Center.

OVERNIGHT CAMPING: Tent sites, lean-tos and cabins are available for overnight camping at Winnebago Scout Reservation. Information regarding fees and reservations may be obtained from the Patriots' Path Council Service Center, 973-765-9322, ext. 225.

BOY SCOUTS OF AMERICA®
PATRIOTS' PATH COUNCIL

TRAIL GUIDE

The Winnebago Scout Reservation Scouts BSA Historic Trail begins on the parade field opposite the "A" (Administration) building. When your group is ready, begin your hike by walking south on the camp road.

QUESTION 1. Name the four buildings you pass on the west side of the road.

Walk south to the Searing Site, then southwest past the Corwin Training Center following the road to the old south entrance. This is Durham Road. Walk east on the road to Split Rock Reservoir. You will pass the **WHITE TRAIL** before you reach the reservoir. Take note because you will hike this next.

QUESTION 2. What is the maximum capacity of Split Rock Reservoir?

QUESTION 3. Where is the landmark for which the reservoir is named?

Follow the road back to the **WHITE TRAIL** and hike south. In a hollow between two low hills stands the "Sentinel Oaks." These trees are significantly larger and older than those in the surrounding forests. In the center of the hollow is a solitary oak and further on the trail, on an upgrade is a twin oak.

QUESTION 4. Using Scout skills, estimate the age of the single sentinel oak.

QUESTION 5. Using Scout skills, estimate the age of the twin oak.

Hints to measure the diameter of the tree: Lay two long branches on the ground at the base of the tree parallel to each other. Check that the space between the branches is equal on both sides of the tree. Measure this space; this is the diameter. The best way to count the age of a tree is to count the rings, however this is not possible. For this technique, calculate that the average year's growth is 1/16 of an inch.

QUESTION 6. What is the group of trees that oak trees belong to called?

Continue on the **WHITE TRAIL** until you reach Spilt Rock Road. Walk south on the road to Split Rock Dam. A single lane road crosses the dam.

CAUTION: This is an active road. Cross single file, leaders front and rear, do not climb fence. Look for the furnaces at the base of the dam. After crossing the dam, walk 25 yards to a path leading to the furnaces at the bottom of the spillway.

QUESTION 7. Measure the height of the dam using Scout techniques.

QUESTION 8. Measure the base of the large furnace.

QUESTION 9. Name the rock containing iron ore used by the furnaces.

QUESTION 10. In what year was iron mining begun in Rockaway?

QUESTION 11. What is the compass reading for NJ Iron Belts?

Return to Split Rock Road and hike 4/10 mile until you pass the power line tower on the north side of the road. The **BLUE TRAIL** on the reservoir side of the road is 100 feet past the tower. Hike the **BLUE TRAIL**. This parallels the old Charlotteburg Road.

QUESTION 12. How was the Charlotteburg road used before the Civil War?

The Charlotteburg Road has parking and a gate across the road about a ½ mile from its intersection with Split Rock Road. This is also a short distance from the last private home on Charlotteburg Road. About 1500 feet east of the reservoir, across the road and up and over the hill, is the iron mine connected with Split Rock Furnace. Today it appears as a long trench, the bottom of it filled in with forest debris. **USE CAUTION** if you choose to view the mine and please respect homeowners in the area.

QUESTION 13. What was the original name for the mine?

QUESTION 14. Name the mine on the Big Island on Split Rock reservoir.

Continue on the **BLUE TRAIL** traveling northeast until you climb to Indian Cliffs. There are several overlooks as you travel the trail, however from Indian Cliffs you will have a spectacular view of the entire length of Split Rock Reservoir.

QUESTION 15. Who is credited with naming the promontory that is Indian Cliffs?

Descend the cliffs following the **BLUE TRAIL** to the Charlotteburg Road. Pace from the end of Split Rock Reservoir 1 ½ miles northeast on the road. You will pass a pond on the north side of the road.

QUESTION 16. What is the name of this pond?

Before the 1½-mile point, there will be a road to the southwest that you will pass, and then a turnout road to the north. Walk a short distance north on the turnout and then look downhill into the woods. Here are foundations from an old mine.

QUESTION 17. What is the name of the mine?

Return to the Charlotteburg Road and continue to travel northeast until you reach the road around Charlotteburg Reservoir. The reservoir is in front of you. Walk 100 feet northeast and look for two pits, one above the other on the hillside to the east.

QUESTION 18. What is the name of the mine?

QUESTION 19. In what year was the Charlotteburg Reservoir completed?

QUESTION 20. Who was the Charlotteburg Mine named after?

Walk northwest for ¼ mile to the old railroad spur passing the section of the road that brought you to this point. Hike the spur southwest. At about 250 feet, look for foundations along the north side of the stream. At Beaver Pond there is evidence of other workings between the railroad line and the pond.

QUESTION 21. What were the workings used for?

Look across the pond. You can see the main line railroad bed above the north shore. Continue northwest along the spur to the intersection with the main line. Evidence of the switch track can be seen. Walk north following the main line. The next intersection will have an east/west road and the foundations of the Timberbrook Road bridge over the stream.

QUESTION 22. Name this intersection**.**

Walk west on the road for one mile to Timberbrook Road and the entrance to Winnebago Scout Reservation.

TRAIL GUIDE HISTORIC INFORMATION

SPLIT ROCK RESERVOIR – (1sq. mi./2.6 sq. km.), Morris County, NJ, on Beaver Brook, 5 mi./8km. West of Pompton Lakes, 40*58'N 74*28'W. **Maximum capacity 9,517 acre-ft.** Formed by **Split Rock Dam (39ft./12m**), built (1948) for water supply; owned by Jersey City Department of Water. Durham Road, which begins at Timberbrook Road, travels east and presently ends at Camp Marcella. The continuation of Durham Road is the dirt road passing the old south entrance to Winnebago Scout Reservation and ending at Split Rock Reservoir. Before the dam was built, the road continued north of Beaverbrook Pond and crossed what is now Big Island and connected with the old Charlotteburg Road on the east shore of the reservoir. **The "split rock" after which the reservoir is named lies underwater at the south end of the island.**

SENTINAL OAKS – Located on the **WHITE TRAIL** between Winnebago Scout Reservation and Split Rock Road are the oldest remaining trees from the virgin forest that once covered all of the northeastern United States. These trees may have acted as boundary markers, which may explain them being spared from the ax. As a result of 17th and 18th century building and mining, the forests of Rockaway were almost completely clear-cut. Most of the oldest trees you see around you only began to grow when the mines and the settlements were abandoned.

Oak trees, a member of the hardwood family of trees, are ***deciduous***, which means they drop their leaves every autumn and grow new ones in the spring. Pine, hemlock, spruce, fir and cedar, trees that produce needles instead of leaves and cones instead of flowers are called ***conifers.***

SPLIT ROCK FURNACE – *(from National Register of Historic places Inventory – Nomination Form, Nov. 6, 1974).* The furnace was probably originally 32 feet high as indicated by Historic American Buildings Survey (NJ-553) in 1943. The exterior is random stone and was originally held together at the top by two iron tie rods; one of which is presently gone, along with about 3 feet of top stone. The **base of the furnace is nearly 22 square feet.** The furnace throat, now filled in by crumbling stone, was 3 feet in diameter, and the bosh about 4½ feet in diameter. The inner wall has a brick lining. There are remnants of a pier bridge foundation and retaining wall that provided support for the loading platform built across to the top of the furnace stack.

Charcoal fuel-ore broken up into fist-sized chunks by the crushing mill and limestone for flux-was carried to the throat of the furnace by the bridge and emptied down the stack (additional information can be found in the Scouts BSA Winnebago Scout Reservation

Historic Trail Guide Southern Trail). The shoreline of Beaver Brook contains slag discarded iron bearing rock; use a magnet for evidence of iron ore deposits.

MINING HISTORY – *(from Abandoned Iron Mines of Jefferson & Rockaway Townships, Morris County, NJ, 1992).* At Tinton Falls Lewis Morris first mined iron ore in New Jersey as early as 1682. Forges for working magnetic ores into bar iron were not built until the early 1700's by John Ford and John Budd on the bank of the Whippany River. **Iron mining is reputed to have begun** at both the Dickerson Mine in Mine Hill and at the Mount Hope Mine **in Rockaway Township as early as 1710.** This established the Rockaway region as one of the oldest iron mining areas in the early 13 colonies. Between 1700 and 1900, approximately 400 known iron mines were opened in the state. Up to 1900, New Jersey was an important national producer of iron ore, ranking second in the United States and exceeded only by Michigan.

MAGNETIC ORE – *(from Abandoned Iron Mines).* Geographically, the deposits of magnetic ore occur in a series of parallel belts crossing the highlands in a northeasterly-southwesterly direction**. The general direction of the belts crosses the state at North 54 degrees East.** Ore beds do not appear continuous but are usually more or less widely separated along the line of strike. As a general rule, each deposit is exposed at the surface only to a very limited extent, with its pitch or plunge toward the northeast. The magnetite ore beds throughout the highlands vary from 15 to 60 degrees pitch, with an average plunge of 30 degrees.

LOCATING MAGNETIC ORE – *(from Abandoned Iron Mines).* The usual way of using the pocket compass in exploring for ore was as follows: The miner, holding the compass near the ground and being careful to keep it level so the needle could swing freely, crossed the locality under examination in a northwesterly or southeasterly direction, at right angles to the general direction of the deposit. If magnetic iron ore was present, the magnetic pole of the deposit that was nearest would begin to attract the opposite pole of the needle, and this attraction would continue to grow stronger until a position was reached directly over the ore. Most high-grade ore is black and hard and is composed of magnetite. Pure magnetite is 72.4% iron and 27.6% oxygen. The availability of highly concentrated veins of **magnetite ore** was the principal reason for the growth of the mining industry in this region.

CHARLOTTEBURG ROAD – *(from Thoughts on Split Rock Reservoir, Jean Ricker, Aug. 23, 2000)* In 1856, 14-year-old Charlie Hopkins, with a good gray mare hitched to a sulky road cart, drove many times from Boonton to Split Rock, and from the head of Split Rock Pond on the Charlottenburg Road over what he described in later years as a very

lonesome and very rough road. Hidden in his two-wheeled conveyance were runaway slaves on their way to Canistear or Stockholm. This 200-year-old narrow lane, hard surfaced for only a few hundred feet, was part of the famous **Underground Railroad.**

COBB MINE – *(from Abandoned Iron Mines).* Also known as the Split Rock Mine, it consisted of a series of openings located about 1,500 feet east of Split Rock Pond. It was worked down to water level, and for a horizontal distance of 1,700 feet. The surface workings extend from the edge of the valley on the south slope and northeast over the crest of the hill. The mine opened sometime before 1868, and the workings at the foot of the mine were at two places; the largest near the foot of the hill, the other near its summit. The mine was inactive in 1873. It reopened in 1878 producing at a rate of from 35 to 400 tons per month, and operated until 1881, when it was abandoned.

SPLIT ROCK POND MINE – The Split Rock Pond Mine was located at the north end of Split Rock Pond. The mine is an old one, and its history is rather sketchy. It was reopened in 1873 and worked in 1874 and early 1875, during which time a shaft 100 feet deep was sunk. (Text indicates the mine lies under the reservoir; however **maps indicate the mine to be on the large island** half way down the reservoir).

INDIAN CLIFFS – **Named by Scouts BSA** in honor of the early inhabitants, it is a traditional destination of Winnebago Scout Reservation summer hikers. Below the cliffs is a natural sheltered area that may have been used by Native Americans as they traveled through the area. From the cliffs you view Split Rock Reservoir at its length to the south. To the southwest is Winnebago Scout Reservation. To the west is the microwave tower on the horizon. To the north, over the hill is Charlotteburg Reservoir and, to the east is the town of Kinnelon.

WOOD MINE – The Wood Mine consisted of a series of small openings on the west side of Charlotteburg-Lyonsville Road, approximately one and one-half miles north of Split Rock Pond. The principal workings, according to records, were two inclined shafts about 1,000 feet apart. Reportedly, only a small amount of ore was shipped from the mine, and overall production was minimal.

CHARLOTTEBURG MINE AND PROSPECT 79 – The Charlotteburg Mine is on the south side of the Charlotteburg Reservoir. The workings consisted of a series of open pits and shafts on both sides of Charlotteburg-Lyonsville Road. The mine was probably opened sometime before 1765, as it supplied ore to the Charlotteburg furnace and forge that was erected in 1765. The first openings were made near the road. Later openings were made on the north slope of the hill east of the road. In 1874, explorations were made to

the east of the old mine holes that revealed two new veins. These were worked until 1884, reopened in 1886 and worked intermittently until 1888.

CHARLOTTEBURG RESERVOIR – *(from History of Newark Water Supply).* Part of Newark's Pequannock Watershed which is located 35 miles northwest of the City of Newark in portions of Morris, Passaic, and Sussex counties. **Built from 1958 to 1960,** the addition of Charlotteburg Reservoir to the Pequannock storage system increased the capacity by 9.5 million gallons daily to about 58.7 and also increased the total storage capacity of the Pequannock Reservoirs to approximately 14.4 billion gallons of water.

CHARLOTTENBURG IRON WORKS – *(from Echo Lake Recreation Area)* The third iron works site to be operated successfully by Peter Hasenclever and his successors (Cortlandt and Cedar Pond in New York State were shut down due to unacceptable ore) was located on the Pequannock River just below present-day Newfoundland. **Named Charlotteburg in honor of George II's wife, Charlotte,** the iron works, at its peak, was to include one blast furnace down river and two forges a mile apart (middle and lower forges). Charlotteburg seems to have suffered greatly from the shortage of manpower during those years of the American Revolution. Robert Erskin, then manager of the American company's holdings, appealed to Gen. George Washington himself for an exemption for the workers in his iron works, but without success. Today nearly every trace of the once flourishing mini empire has been obliterated or lies buried underneath the reservoir.

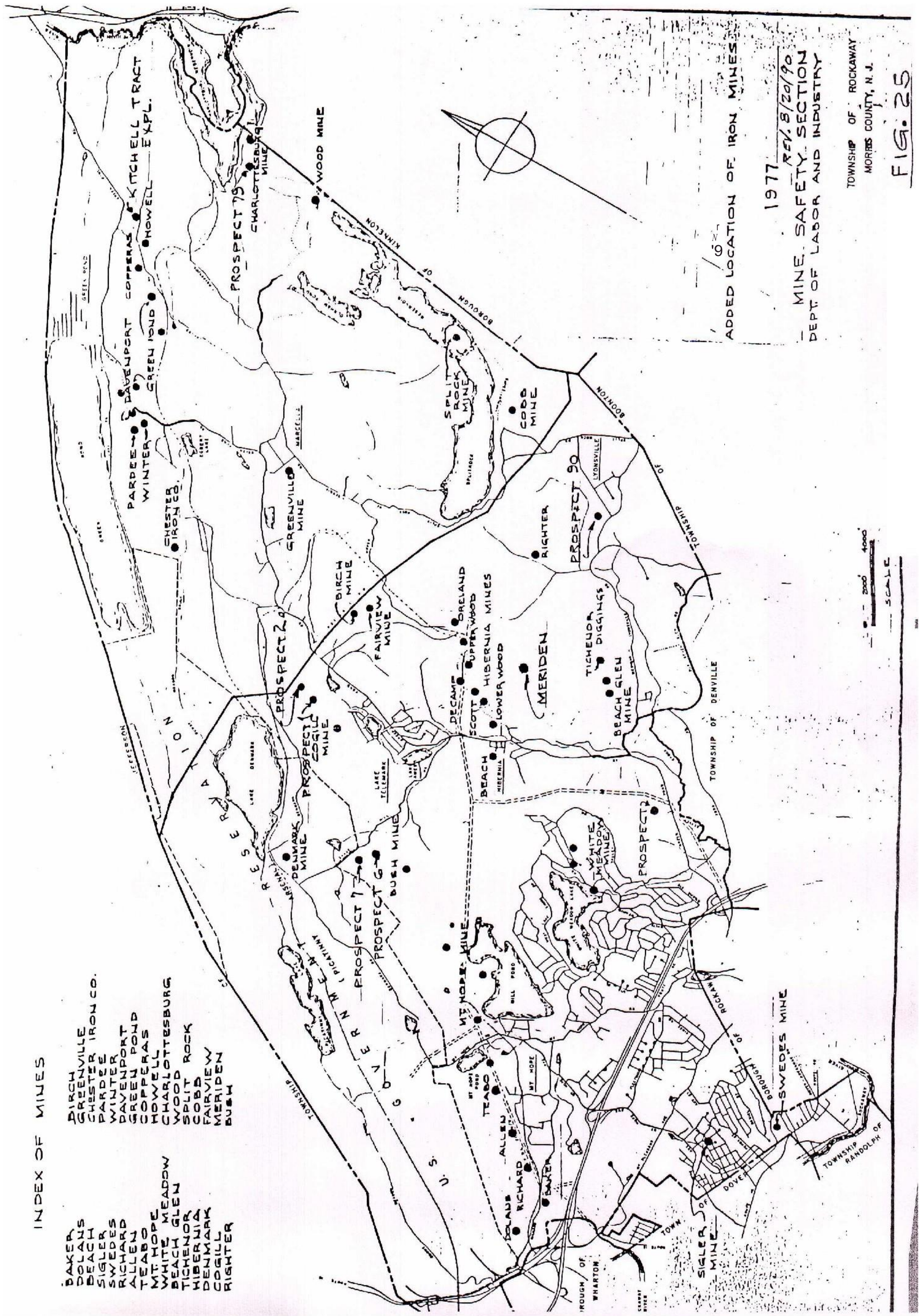
WHARTON & NORTHERN RAILROAD – (*from Railroads of New Jersey)* When the New Jersey Midland RR (now the New York, Susquehanna & Western) built its line along the Morris- Passaic boundary in 1872, it dramatically improved the prospects of the mines in the Charlotteburg-Green Pond area. Passenger service followed freight service, and between Oreland (Upper Hibernia) and Wharton there were stops from north to south at Green Pond Junction, Green Lake (Green Pond), Oreland Junction, Lake Denmark, Navy Depot, Factory, Picatinny Arsenal, Mt. Pleasant, Wharton Junction, and Wharton. On June 11, 1972, the last train ran to Green Pond Junction to collect equipment, after which the track was broken near Egbert's Lake. North of that, the track was taken up by trucks, grunting and rumbling indifferently as they worked amid the wooded hills and upland meadows through which the Green Pond RR had struggled a century before. **The spur off the main line to Charlotteburg Reservoir** probably serviced the Prospect 79 Mine and the Charlotteburg Mine and **allowed for a water stop at Beaver Pond for the steam engines.**

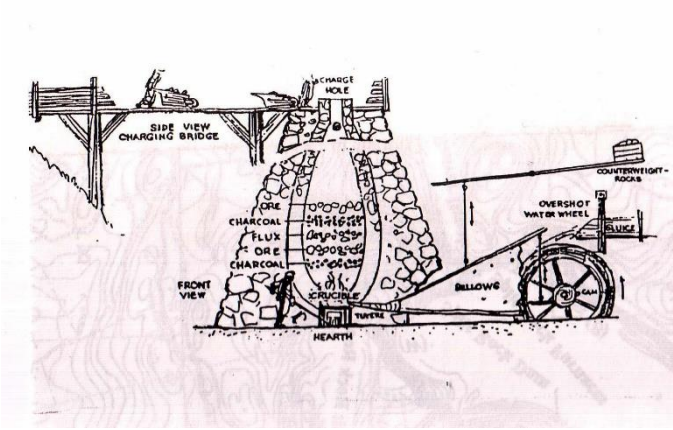
BOY SCOUTS OF AMERICA®
PATRIOTS' PATH COUNCIL

Winnebago Scout Reservation BSA Historic Trail Northern Tour Answer Sheet

The trail questions can be found in the trail guide. The trail guide must be followed closely, both to show you the trail and where to find the answers to the questions. YOU WILL NEED A COMPASS AND PENCIL. Fill in your answers in the following blank lines.

1. a _____ b. _____
   c _____ d. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____


INDEX OF MINES
BAKER
DOLANS
BEACH
SIGLER
SWEDES
RICHARD
ALLEN
TEABO
MT. HOPE
WHITE MEADOW
BEACH GLEN
TICHENOR
HIBERNIA
DENMARK
COGILL
RIGHTER
BIRCH
GREENVILLE
CHESTER IRON CO.
PARDEE
WINTER
DAVENPORT
GREEN POND
COPPERAS
HOWELL
CHARLOTTESBURG
WOOD
SPLIT ROCK
COBB
FAIRVIEW
MERIDEN
BUSH
1977
ADDED LOCATION OF IRON MINES
REV. 8/20/90
MINE SAFETY SECTION
DEPT. OF LABOR AND INDUSTRY
TOWNSHIP OF ROCKAWAY
MORRIS COUNTY, N.J.
FIG. 25



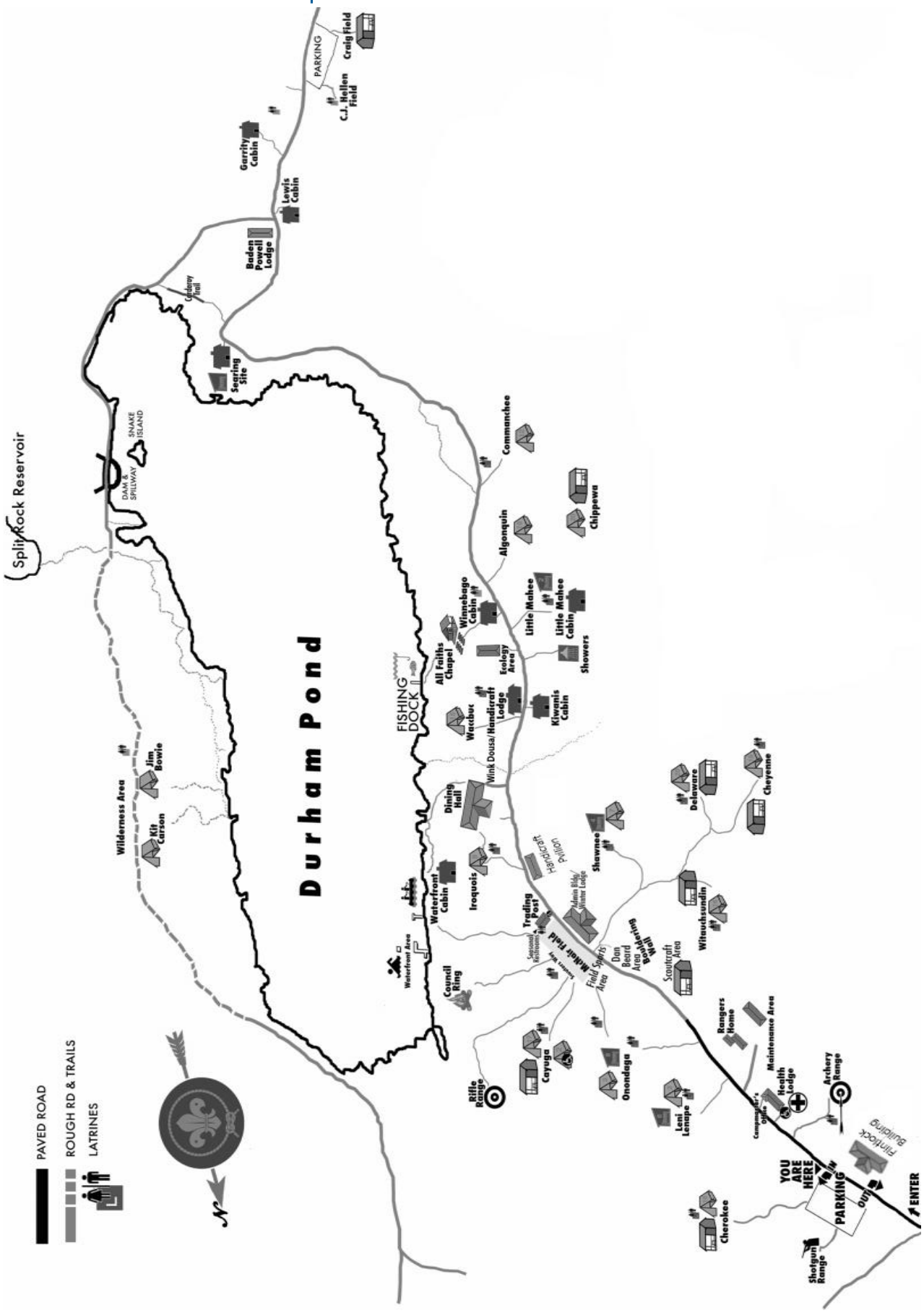
A BLAST FURNACE

At the upper left, men with wheelbarrows of raw materials across the charging bridge to load the furnace with layer upon layer of charcoal, ore, and flux. The fiery mass moved gradually downward as it burned. More layers were added to keep the furnace constantly filled, night and day, for periods of two to eight months. As the charcoal burned, the ore and flux melted, the ore's impurities dissolving in the flux to form a liquid called slag. The liquids filtered downward. The slag, which was lighter than the iron, floated on top of the iron when it reached the crucible, a receptacle at the bottom of the furnace. The slag was raked off, allowed to cool, and dumped outside. Once or twice in 24 hours the furnace was tapped to allow the liquid iron to flow out.


wood mine
four corners
(W)
(W)
misty pond
(B)
Camp Marcella
Camp lewis
Durham
Road
Goat hill
Split Rock Mine
(W)
(W)
Split Rock Dam
Split Rock Furnaces
(B)
(B)
cobb mine
Split Rock Road
Beaver Brook
ROCKAWAY

BOY SCOUTS OF AMERICA®

PATRIOTS' PATH COUNCIL



Prepared. For Life.™