

Juragua Iron Company Mine Photographs 1912-1914

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Abstract:

The Juragua Iron Company was the first American company to become interested in iron mining in Cuba. The mines were located in the province of Santiago at the eastern end of Cuba. The Santiago province climate is hot, but not affected by fevers or malaria. The company first went to Cuba in the early 1880s to begin iron ore mining. Its capital stock was controlled by the Bethlehem Iron Company of Bethlehem, Pennsylvania and the Pennsylvania Steel Company of Harrisburg, Pennsylvania. It shipped its first iron ore from Cuba in 1884. The company was the most successful of the American iron mining companies operating in Cuba in the late Nineteenth and early Twentieth centuries. This collection of photographs illustrates in detail the mining operation as an open pit quarry process in the Sierra Maestre Mountains of southeastern Cuba. Three Lehigh University alumni, Albert Wesley Gaumer (1906), Archibald Johnston (1889) and Charles Austin Buck (1887) are known to have been affiliated with the Juragua Iron Company.

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Juragua Iron Company, Limited.

Title:
Juragua Iron Company Mine Photographs, 1913

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Historical Note:
The Juragua Iron Company was the first American company to become interested in mining iron ore in Cuba. Originally the company's capital stock was controlled by the Bethlehem Iron Company, Bethlehem, Pennsylvania and the Pennsylvania Steel Company of Harrisburg, Pennsylvania. The company's business office was in Philadelphia, Pennsylvania and a manufacturing plant was located in Titusville, Pennsylvania. In Cuba, the company's mines were all located in the Province of Santiago de Cuba, the most healthful section of the island of Cuba with excellent access to the sea coast. Although the climate is hot, there are no areas of tropical fevers or malaria. The mines were located at altitudes of 200 to 1,500 feet above sea level. In the early 1880s the company began building a mine complex including a railroad from the iron mines in the Sierra Maestre Mountains in southeast Cuba to the harbor at Santiago, approximately 15 miles apart. In 1884 the company began shipping high grade hematite iron ore from its Firmeza mine in Cuba to the Bethlehem Iron Company. The company had a total of 17 mines in

Cuba. Juragua was the most productive of the three American iron mining companies operating in Cuba. The mining operation was quarry open pit style. Around 1894, Juragua Iron Company became a subsidiary of the Bethlehem Steel Company. Juragua continued mining operations during the Spanish-American War. During the war the company buildings in the village of Siboney were burned by U.S. army officers on the pretext of combating yellow fever. As a result of this destruction of its property, Juragua sued the United States in 1909 to recover damages. A. W. Gaumer, for whom this presentation copy was prepared, graduated from Lehigh University in 1906 in with a degree in civil engineering. He began working for the Juragua Iron Company in 1907 as an assistant engineer in charge of construction and design. He married Sara M. Stadon in 1909 who accompanied him to Cuba. From 1910 to 1918 he advanced to the position of chief engineer and general superintendent of mines. Other Lehigh alumni involved with the Juragua Iron Company were Charles Austin Buck (1887) as president and Archibald Johnston (1889) (see SC M0137) as second vice president.

References:

Industrial Cuba, by Robert P. Porter, G.P. Putnam's Sons, New York, 1899, p. 319 – 325, reprinted by Arno Press, New York Times Company, 1976.

“Interests near Santiago,” editorial, *New York Times*, July 18, 1898, p. 6.

Iron Ores, by Edwin C. Eckel, McGraw-Hill Book Co., 1914, p. 292-293.

Who's Who in Engineering, 1922-23, Volume 1, by John William Leonard, editor; John W. Leonard Corporation, Brooklyn, N.Y., 1922, p. 484.

Scope and Content Note:

This collection covers at least a two year period beginning with the title date of the album January 1, 1913 to August 1914 as noted on notations on some of the photographs. The collection is composed of 130 black and white or sepia photographs. Shown in the photos are many aspects of an iron ore mining operation and the landscape of the mining district in the Sierra Maestre Mountains in eastern Cuba. There is one personal postcard mailed from Panama addressed to Mrs. A. W. Gaumer, Firmeza, Santiago de Cuba, Cuba c/o Juragua Iron Co. dated May 6, 1912.

Organization of the Content:

The collection is composed of 130 black and white or sepia photographs, many with brown stains on the photos. The first 41 photos are mounted in an album of black pebble textured leather (possibly sharkskin) 7 inches by 12 inches (17.5 cm

by 30 cm) with dark grey heavy paper pages. The album title page is lettered in white ink: Juragua Iron Company Mine Photographs, Jan 1st, 1913, Mr. A. W. Gaumer. The black and white photos mounted in the album measure 4 ¾" x 6 ¾" (12cm x 17cm) unless otherwise noted. The remaining photographs of assorted sizes were found loose with the album. Their size and condition is noted in each entry. These loose photos were sorted to reflect an order based on name of mine and photo size and placed in Mylar sleeves filed in a three ring binder box

Indexing Terms:

Personal Subject:

Gaumer, Albert Wesley, (1882 - 1945)

Corporate Subject:

Juragua Iron Company, Limited.

Bethlehem Steel Corporation.

Topical Subject:

Iron mines and mining – Cuba

Iron ores – Cuba

Related Material:

Ruff, John Dougherty. *Design for an ore pocket and shute for the Juragua West mine (of the Juragua Iron Co. Limited) at Santiago de Cuba-Island of Cuba : to which is added a detailed bill of materials.* Mining engineering bachelor's thesis. Lehigh University, 1882.

Miller, Emory Thompson. *The iron ore deposits near Santiago Cuba : their geology and method of working.* Mining engineering bachelor's thesis. Lehigh University, 1903.

Detailed Description of Collection:

SC0011.01 Office. Black and White Photo, 4 ¾" x 6 ¾" (12 cm x 17cm), Album (12 men, one woman, one dog standing in front of two-story building with tile roof, palm trees).

SC0011.02 Recreation Club – Club House. Black and White Photo, 4 ¾" x 6 ¾" (12cm x 17 cm). Album (Three one-story buildings at base of hill).

SC0011.03 Hospital. Same as previous. (Low two-story building, seven men, one doctor, one nurse on veranda, picket fence across front yard, trees in background).

SC0011.04 Sulphur Ore Roasting Plant. Same as previous. (Seven men in photo around two conical smoke stacks above a large hopper structure, three railroad cars: J.I.C. 2185, J.I.C. 2115, J.I.C. 2061 car numbers).

SC0011.05 Ocaña Compressor Chicago Pneumatic Tool Co. Same as previous. (Man with mustache standing by a large machine inside a building).

SC0011.06 East Mine. Same as previous. (Open pit mine: Level 1, Level 2 inked onto photo showing exposed rock and hillside with leafy trees).

SC0011.07 East Mine. Same as previous. (Open pit mine/quarry: Level 0, Level 1, Level 2, Level 3 inked onto photo, exposed rock face, railroad track in foreground).

SC0011.08 East Mine. (Open pit deep quarry: Level 0, Level 1, Level 2 inked onto photo, huge rock pile in foreground, trees on hillside).

SC0011.09 East Mine. (Deep quarry, railroad ore cars in middle of photo, standing man at lower left side above man is inked: Level 1, Level 2 inked beneath railroad cars; Level 3 inked above light colored rock face at base of rubble; Level 4 inked upper center of photo beneath sparsely foliaged hilltop trees)

SC0011.10 West 5 Mine. (Deep quarry, foreground is inked Level 0 and railroad track, another railroad track inked in is Level 1; lower middle of photo Level 2, halfway up hillside is inked Level 3; diagonal cut is inked "Power Plane 1" connecting Level 4 and a building marked Carpenter, to next level is a diagonal trestle marked "Gravity Incline 22" up to Level 6, Barracon building, Fonza building at top of wooded hill is inked Level 8).

SC0011.11 West 5 Mine. (Deep cut in hillside with levels inked: Level 0 to Level 6 at hilltop, several railroad tracks and open railway cars, upper right is inked "Shovel 14").

SC0011.12 Loma Alta. (Rough cuts in hillside Levels 15 – 18, railroad track on Level 15, uprooted tree trunk laying on Level 16, leafy trees on hilltop).

SC0011.13 West 4 Mine. (Open cut, Level 6 ½ and railroad track at bottom of photo, rock slide into track on Level 7, on Level 8 is ore chute).

SC0011.14 West 4 Mine. (Rough rock surface in hillside, lower right corner of photo railroad track Level 6, across deep cut is Level 6 ½ with debris slide, above

sharp ragged ridge is Level 7 above which are sharp ridges to top of hill with trees, mountains in distance).

SC0011.15 Concordia Mine (Old Company Cut). (Two parallel railroad tracks in lower part of photo ending at rough cut rock face: Level 3 is inked between tracks, two men standing at end of track, above is inked Level 4 a cut on a hillside, other hills in background).

SC0011.16 Concordia River Cut. (Three railroad cars on a track at lower right, rough rock wall face with tunnel marked as "Tun 186," high above is Level 2 inked on rock face).

SC0011.17 Ocaña Villa. (Railroad trestle on right side of photo with steam locomotive in center of photo, white building marked "Store" is to right of locomotive, rolling hills in background with group of buildings on left with trees, farther right of Store is a smoke stack and inked note "Crusher" far left is inked note "Hoist Lev. 9, Lev. 8, Lev. 7, Lev. 6").

SC0011.18 Ocaña Mine. (Railroad track across bottom of photo at base of mine wall face, upper third of photo Level 7 inked beneath a low building, Level 8 and Level 9 near top of wall face, at left is wooden building noted as "Hoist").

SC0011.19 Ocaña Mine. (Rock face strata rounded hill, inked notation: Level 9 – 11, loose rock and brush on hill top).

SC0011.20 Ocaña Mine. (Rough rock face with two men and a machine standing on a cut inked as Level 10. Behind men are trees, at base of rock face is a railroad track is a railroad track on Level 9).

SC0011.21 No Caption. Black and White, 2 ¾ x 4 ½" (7 cm x 11 cm) (Curved railroad trestle over ravine and trees, bottom view).

SC0011.22 No Caption. Same as previous. (Curved railroad track with section on trestle, a top view).

SC0011.23 Same as previous. (Close up of trestle support built in ravine among leafy trees).

SC0011.24 No Caption. Black and White, 3" x 4 ¾" (7.5cm x 12 cm). (Straight through view of railroad tract through a steel railroad bridge on a high embankment, men are working on embankment, two men walking on track).

SC0011.25 Same as previous. (Long view of a double steel railroad bridge on embankment and trestle. In distance are buildings, palm trees and railroad tracks).

SC0011.26 Same as previous. (Left side long view of wooden trestle from the steel railroad bridge, palm tree in left foreground, buildings and railroad track at left in distance).

SC0011.27 Same as previous. (Right side overall view of double steel railroad bridge and trestle from embankment across ravine, palm tree at base of embankment, buildings and railroads in distance).

SC0011.28 Same as previous (Upward view from base of embankment of steel railroad bridge, scrubby shrubs at embankment base)

SC0011.29 Same as previous. (Face on view in front of embankment with steel railroad through bridge and beginnings of trestle building).

SC0011.30 No Caption. Black and White, 2 ¾" x 4 ½" (7 cm x 11 cm). (Upward view from base of embankment beneath steel railroad bridge and beginning of trestle support).

SC0011.31 Same as previous. (Landscape view of embankment, double railroad bridge, trestle, smoke coming out of machine behind piles of rock).

SC0011.32 No Caption. Black and White, 3 ¼" x 5 ½" (8 cm x 13.75 cm). (Through view of railroad tracks toward steel bridge supporting switching track, railroad ties and spikes holding ties, barrels at right side of track).

SC0011.33 No Caption. Black and White, 2 ½" x 4 ½" (5.5 cm x 11.25 cm). (Overall view of a railroad yard with ore cars and embankment and bridge).

SC0011.34 Same as previous. (Bottom of embankment, man wearing white shirt standing on embankment, railroad bridge on top).

SC0011.35 Same as previous. (End of railroad bridge suspended over embankment, leafy shrub in foreground).

SC0011.36 Same as previous. (Foreground track ballast and ties, embankment and bridge end suspended over embankment).

SC0011.37 Same as previous. (Upward view from base of embankment of railroad bridge, left side view).

SC0011.38 Same as previous. (Upward view from base of embankment, right side view, foreground rough stone and path).

SC0011.39 No Caption. Black and White, 4" x 4 3/4" (10 cm x 12 cm). (View of track beneath trestle across ravine, cut timbers scattered in foreground).

SC0011.40 No Caption, Sepia, same as previous. (View of three men standing on track next to rough cut wall).

SC0011.41 Same as previous. (Landscape of railroad track on piers across a dry stream bed framed by leafy tree and rocks). This photo is the last one mounted in the album. Subsequent photos were found loose with album. The loose photos are mounted in mylar sleeves gathered together in a three ring binder box.

SC0011.42 East Mine No. 1. Map 860. Black and White 8" x 10" (20cm x 25cm). (Landscape of open pit quarry, leafy trees on hillside, trestle, railroad and sheds in center, some inked identifying notes: Hoist, R.R. Main Line, Plane 12, Level 9, Shovel "10", shed on left hilltop).

SC0011.43 East Mine No. 2. Map 860. Same as previous. (Landscape of open mine rock face, some leafy trees in foreground, inked notes: Shovel "10", Lev. 2, R.R. Main Line, Tun. 1 (tunnel), Lev. 3, Lev. 4, Shovel "2", Lev. 5, next to Shovel 10 is a string of ten ore cars, on same track another four ore cars and below on Lev 1, four ore cars, at right is Hoist and Plane, leafy shrubs on hilltop).

SC0011.44 East Mine No. 3. Map 860. Same as previous. (Landscape of several levels of cut rock face. In foreground are trees, a shed and a steer along R. R. Main Line, above on Level 2 is Shovel 3 and two ore cars, above is Level 3, on Level 4 is a locomotive and trees on hilltops).

SC0011.45 East Mine No. 4. Map 860. Same as previous. (Landscape of deep open pit with four levels of track: Lev. "0" is above Lev. 1, above Level 0 is track with eight ore cars, above is Level 2 with Shovel "10", six ore cars and three men standing on rock face and track, Lev. 3 is on horizon with a hump of trees).

SC0011.46 East Mine. No. 5. Map 860. Same as previous. (Landscape of deep open pit mine various exposed rock faces, in center train of three ore cars beneath hoist and plane between Lev. 1, above is Shovel "10", ore cars and four hilltops).

SC0011.47 East Mine. No. 6. Map 860. Same as previous. (Landscape of exposed rock walls, three R.R. tracks with ore cars, Level 1 inked over track, above another level of track with Shovel 3 inked on object beneath a rock face above is inked Lev. 3, Lev 4, trees on hilltops).

SC0011.48 East Mine. No. 8. Map 860. Same as previous. (Landscape of quarry, right foreground railroad track going into two tunnels, above is inked Level 1 with four ore cars, above is Level 2 with Shovel 3, two ore cars and five men standing on track, steep inclines, trees on hilltop).

SC0011.49 West Mine. No. 2. Map 861. Same as previous. (Landscape overall view of open pit among half cut away hillsides, railroad track, surviving inked notes: Lev. 3, Shovel 14, Lev. 4, Lev. 6, Shovel 1, chute, carpenter shop. Photo badly damaged by large hole).

SC0011.50 West "5" Mine. No. 1 – Map 861. Same as previous. (Broad panorama of various exposed levels of open pit mine, diagonal tracks obvious, in foreground man standing on railroad track. Inked notes: Lev. 1, Shovel 7, Lev. 2, Lev. 3, Lev. 4, Shovel 14, Lev. 6. Large spot (mildew?) in center of photo).

SC0011.51 West "5" Mine. No. 3. Map 861. Same as previous. (Panorama of pit, man standing at left foreground by double set of railroad tracks, a railroad car on track. Inked notes: Lev. 0, Lev. 1, Lev. 2, Lev. 3, Lev. 4, Shovel 14, Lev 6 on hilltop. Two holes in photo).

SC0011.52 West "5" Mine. No. 4. Map 861. Same as previous. (Broad view of open rock face, center of photo damaged. Inked notes still visible: Level 1, Lev. 2, Lev. 3, Lev. 4, Shovel 14, Lev. 6, Lev. 8. Level 3 has four ore cars; Level 4 has Shovel 14 and three ore cars).

SC0011.53 West "5" Mine. No. 5. Map 861. Same as previous. (Broad view of various levels of open mine being cut on hillside with trees still on inclines. Mine buildings visible on various levels identified as: Power Plane 1, Carpenter Shop, Blacksmith, Hoist, Office, Barracks, Level 4, Chute, Lev. 6, Shovel 4, Lev. 8. Photo badly stained).

SC0011.54 East Mine. No. 7. Map 861. Same as previous. (Wide view of rock face. Inked notes: Level 1 with railroad track and one car, Lev. 2 with Shovel 3, Level 3, Lev. 4 with Shovel 2, Lev. 5).

SC0011.55 West "5" Mine. No. 6. Map 861-A- Same as previous. (Broad panorama of open pit cut into mountainsides. Inked note: Barracks (lower left corner), Lev), Shovel 7, Lev. 1, Lev. 2, Lev. 3, Lev. 4, Shovel 14, Lev. 6 at tree line, distant range of hills. Bad brown stains on photo).

SC0011.56 West "5" Mine. No. 7 – Map 861-A- Same as previous. (Close up view of hill half cut away. At base are railroad tracks, three dumper cars. Brown stain).

SC0011.57 West "4" Mine. No. 1. Map 862. Same as previous. (Broad view of shrubby hillside with levels inked: Plane W, Tun 48, Lev. 8, Boiler, Plane 18, Lev. 9, Lev. 9 ½, Lev. 10).

SC0011.58 West "4" Mine. No. 2. Map 862. Same as previous. (Broad landscape view of gravel slides, inked on photo: Lev. 7, Lev. 8, Lev. 9, Lev. 10, Shovel 9, Sierra Maestre mountain range in distance. Photo damaged).

SC0011.59 West "4" Mine. No. 2/3. Map 862. Same as previous. (Face on view of rock face in quarry, inked notes: Tun 100 (with railroad track going into tunnel), Lev. 6 (along track), Tun 416, above is Lev. 6 ½, Lev. 7, Lev. 8, Tun. 92, Lev. 9, Lev. 10. Left side of photo upper third is a chute; right side of photo lower corner railroad track curved and track loosened on ties, on top of rock face is inked Shovel 9. Photo spotted).

SC0011.60 West "4" Mine. No. 4 – Map 862. Same as previous. (Landscape view of huge pile of rubble rising above tree covered hillside, inked notes: Tun. 467, Plane #18, Chute, Lev. 12, Lev. 13, Lev. 14. Large black spot upper center of photo).

SC0011.61 West "4" Mine. No. 5 – Map 862. Same as previous. (Landscape view of huge mound surrounded by railroad track and levels cut into hillside, inked on photo: Level 12, Lev. 13, Lev. 14, Tun. 129. Mildew smudge upper center of photo).

SC0011.62 Concordia Mine. No. 2 – Map 864. Same as previous. (Landscape view of quarry operation. Five men at bottom of pit working along railroad tracks, inked on photo: Level "1", Lev. 2, Lev. 3, Lev. 4, ore chute and ore car at center left. Photo has brown spots).

SC0011.63 Concordia Mine. No. 3. Map 864. Same as previous. (Landscape view of quarry cut into hillside, double set of railroad tracks at left below an opening in hillside with shrubs, inked notes: Level 3, Lev. 4. Brown spots).

SC0011.64 Concordia Mine. No. 4. Map 864. Same as previous. (Landscape view of several levels of quarry and Sierra Maestre mountains beyond, inked notes: Lev. 2, Lev. 3, Lev. 4. Brown spots upper center of photo).

SC0011.65 Concordia Mine. No. 1. Map 864-A- Same as previous. (Landscape view of various levels cut into hillside, foreground a fence of wire and branches, inked notes: Store, Office, Lev. 3, Shovel 12, Lev. 3, Lev. 4, leafy trees and shrubs on hillside. Brown smudges).

SC0011.66 Ocaña Mine. No. 1. Map 867. Same as previous. (Landscape view of a hillside of leafy trees and shrubs, inked notes: Lev. 1, Lev. 2, Lev. 3, Hoist, Lev. 4, Lev. 5, Lev. 6, Shop, Office, Lev. 7, Lev. 8, Lev. 9, Hoist. Brown smudges on photo).

SC0011.67 Ocaña Mine. No. 2. Map. 867. Same as previous. (Close up view of quarry, man in white standing at bottom along railroad track at Level 1, two other men crouched at a cleft in rock, inked notes: Level 1, Lev. 2 (two ore cars and a man standing), Tun. 238, Lev. 3, Lev. 4, Lev. 5, Lev. 6, Lev. 7, Lev. 8, Lev. 9, Hoist. Brown smudges).

SC0011.68 Ocaña Mine. No. 3, Map 867. Same as previous. (Broad view of rock face. At left top is wooden building identified as Hoist. Across lower third is railroad track with ore cars. Inked notes: Lev. 2, Tun. 238, Lev. 3, Lev. 4, Lev. 5, Lev. 6, Lev. 7, Lev. 8, Lev. 9, Hoist).

SC0011.69 Ocaña Mine. No. 4 Map 867. Same as previous. (Close up view of quarry, man in white standing at edge of pit, two cans next to man, inked notes: Level 1, Lev. 2, Lev. 3).

SC0011.70 Ocaña Mine. No. 5 – Map 867. Same as previous. (Landscape close up of open pit, in center foreground two ore cars, man bent over into rock face at Lev. 2, above on Lev. 3 are three men and four wheeled carts, inked notes: Tun. 260, Tun. 211, above the two tunnels is Lev 4, Lev. 5, Lev. 6, Lev 7 at level with a grove of palm trees. Brown stain in center).

SC0011.71 Ocaña Mine. No. 6. Map 867. Same as previous (Portrait view of quarry pit, four men on Lev 3 looking into pit, one man at rock face on Lev. 2 (pit), Lev. 4 cut into rough rock face, Lev. 5 barely beneath palm trees on hillside – some tree roots visible, mountains behind trees).

SC0011.72 Cuba on the Road from Firmeza to Santiago. Same as previous. (Landscape view of railroad along shoreline with breaking waves, caption written in pencil on back of photo).

SC0011.73 No Caption. Same as previous. (Landscape view of hilly countryside, trees in foreground in middle are rock ledges cut into hillside. Some brown spots).

SC0011.74 No Caption. Same as previous. (Landscape of quarry, leafy tree in center of photo next to low rock terrace, railroad at lower left of photo, rock ledges with ore cars, shovel, buildings, bank of clouds over mountains).

SC0011.75 Same as previous. (Landscape of hillside with quarry cut into rock, leafy trees on hillside, shovel on upper level).

SC0011.76 Same as previous. (Landscape view of iron quarry of multiple levels, railroad track with car in foreground, five levels of rock ledges each with railroad cars or steam shovel. Brown stain).

SC0011.77 Same as previous. (Landscape view of iron mine, right corner of photo are leafy trees and shrubs, center of photo huge ore pile, left side a chute, distant mountain range).

SC0011.78 No Caption. Sepia colored photo. Same dimensions. (Landscape view of hill with exposed rock face. Brown stain).

SC0011.79 No Caption. Black and White. Same dimensions. (Landscape view of railroad track with three ore cars at bottom of quarry pit, monolith rock at left, scattered trees at top. Few brown spots).

SC0011.80 Same as previous. (High landscape view of open pit quarry, double set of railroad tracks in foreground, right pair of track extends toward center with five ore cars on third level. Brown stain).

SC0011.81 Same as previous. (Overhead landscape view of quarry pit, five sets of tracks on bottom of pit, railroad track in foreground has loaded ore car, other railroad tracks have total of three ore cars, in upper right is ore car and shovel digging into rock face, at left is man standing by railroad track above a tunnel entrance. Brown stain).

SC0011.82 Same as previous. (Landscape view of seven levels of quarry, right side of photo steep incline of track connecting three levels, lower right is a railroad switch engine, on third level at left steam shovel and train of ore cars, at right on same level three buildings and end of another incline extending up to fourth level, at top level another shovel. Some smudging).

SC0011.83 Same as previous. (Close up view of four men working at rock face near small ore car on a track, above men in distance another standing man beneath a stand of tall palm trees, a small building at right top. Some brown spots.)

SC0011.84 Same as previous. (Landscape of quarry, white building in center foreground along railroad tracks above on next level at right is steam shovel and ore cars, next level another shovel at left. Brown stains.)

SC0011.85 Same as previous. (Landscape of loose fallen rock slides among large outcroppings, ore car on track in center of photo).

SC0011.86 Same as previous. (Landscape of quarry bottom with two sets of railroad track, ore car on right track at base of rock face, pile of loose rock at left center. Some brown stains.)

SC0011.87 Same as previous. (Landscape of quarry levels, five ledges clearly visible, a chute at left between level four and three, on level five is shovel and four ore cars, hilltop has trees, clouds looming at left. Some brown stains.).

SC0011.88 Same a previous. (Panorama view of quarry bottom to hill top, at left is chute and hoist above ore car, foreground has three sets of tracks, center track has a loaded ore car, in lower foreground is tunnel opening with loaded ore car, in distance on third level is shovel and six ore cars, another eight ore cars, and another set of two cars. Some stains.).

SC0011.89 Same as previous. (Open pit with another deeper pit in center of photo; shovel is at edge of the center pit, railroad tracks circle this center pit. One level above is another shovel and train of ore cars, second level above is third shovel.).

SC0011.90 Same as previous. (Broad view of quarry, in foreground is railroad track on lower level are series of ore cars, next level above is shovel. Brown smudges at left side.).

SC0011.91 Same as previous. (Close up view of railroad tracks and palm trees with two standing men, three ore cars, a bridge over tracks and a white building, mountains in distance. Brown spots).

SC0011.92 Same as previous. (Medium range view of two hills, one in front partially cut away by quarrying, foreground leafy shrubs, beyond are various levels of mining machines, ore cars, shovels and building roof.).

SC0011.93 Same as previous. (Panorama view of quarry among tree covered hills. Four distinct levels cut into hillsides and a pit in lower center of photo surrounded by railroad track, ore cars, two levels above are shovels and rocky rubble, fourth level is a white building at extreme left of photo. Brown spots and smudge).

SC0011.94 Same as previous. (Panorama view of various quarry levels with railroad track and rock slides, trees and ore chute. Brown smudge).

SC0011.95 Same as previous. (Panorama view, three inclines visible among trees several quarry levels. Overall sepia color).

SC0011.96 Same as previous. (Panorama countryside, in foreground fence of branches, in distance several levels of quarry, photo is framed by leafy branches at left side and hillside of trees on right. Large brown spot top left, general sepia color).

SC0011.97 Same as previous. (Grove of palm trees, in foreground is a fence of branch poles. Brown spots).

SC0011.98 Same as previous. (Face on view of a quarry side, three ore cars and a stooped man among large rocks, small building on hill top. Two brown smudges).

SC0011.99 Same as previous. (Bottom view of shallow quarry, three men among three ore cars at bottom, level above has three men, small building on hilltop. Large brown smudges).

SC0011.100 Same as previous. (Overall view of quarried hillside, railroad tracks and small shelter with man on lower level with two men on track, levels above shovels and ore cars, trees in foreground. Brown smudge. Photos numbered SC0011.42 to .100 are all 8" x 10"/20cm x 25cm, black and white or sepia. Subsequent photos are 3 1/2" x 5 1/2"/8.75cm x 13cm black and white photos.)

SC0011.101 No caption. Black and white, 3 1/2" x 5 1/2"/8.75cm x 13cm. (Track level view of bridge and piers with piles of ore).

SC0011.102 Same as previous. (Slightly blurred view at track level of a bridge footing and ore dumps).

SC0011.103 Same as previous. (Rock pile with track at base, shadow of bridge visible on pile, palm tree at right of pile).

SC0011.104 Same as previous. (Rocky foreground surface at base of rock pile, four men standing near or on rock pile, building on hill next to pile).

SC0011.105 "*Spraying Oil on Grass and Swampy Places to Prevent Mosquitoes from Breeding.*" Postcard. 3 1/2" x 5 1/2"/8.75cm x 13cm. (Postcard mailed from Panama addressed to Mrs. A.W. Gaumer, Firmeza, Santiago de Cuba, Cuba c/o Juragua Iron Co. mailed May 7, 1912. Message reads: "How is everything? Have had a dandy time but so very short. Guess (handwriting not legible). O.W.G. May 6, 1912).

SC0011.106 No caption. Black and white photo. 3 1/2" x 5 1/2"/8.75cm x 13cm. (Group of four men standing at base of chute).

SC0011.107 Same as previous. (Close up view of railroad track on rough cut logs approaching chute, trees and hilltop, mountains in distance).

SC0011.108 Same as previous. (Man standing on side of crib frame for chute, rocks and scrub).

SC0011.109 Same as previous. (View of railroad track in foreground. Two men at side of track, village on hillside in distance).

SC0011.110 Same as previous. (View of railroad track curving around mountain rock face going through a pass).

SC0011.111 Same as previous. (Left side of photo shows railroad track, two men standing at side of track, village on hillside in distance).

SC0011.112 Same as previous. (Village on hillside, mine dump and trestle at right side).

SC0011.113 Same as previous. (Railroad track shown lower left toward trees and hills, saddled horse in lower right corner, man standing in distance, large rocks and rubble pile).

SC0011.114 Same as previous. (Same railroad track as previous, standing man on left and standing man on track in distance, rock piles, trees and hills).

SC0011.115 Same as previous. (Close up of track on large logs which end at a chute structure).

SC0011.116 Same as previous. (Huge pile of loose rock, trees in distance).

SC0011.117 Same as previous. (Railroad track along seashore on ledge cut into rock face).

SC0011.118 Cut on Level 4 West 5 August, 1914. Black and white. 4 ¾" x 6 ¾"/12cm x 17cm. (West = West Mine Vertical dark and light bands on a rock face).

SC0011.119 W.5 August, 1914. Same as previous. (W. = West Mine. Rock face of a quarry, three levels visible, bottom level has track and three ore cars, trees on hilltop).

SC0011.120 West 4 August, 1914. Same as previous. (Panorama view of quarry, five cut levels visible, trees in foreground, curved road in center of photo. Scattering of small black spots).

SC0011.121 West 5 August, 1914. Same as previous. (Panorama view of five levels in quarry, shovel in lower left corner on first level, third and fourth levels have ore trains, mountains in distance. Scattering of small black spots on photo).

SC0011.122 E.M. August, 1914. Same as previous. (E.M. = East Mine. Four levels cut into rock face, middle of right side of photo is a shovel, ore cars, three standing men visible).

SC0011.123 E.M. August,1914. Same as previous. (East Mine, two levels visible in middle of photo, shovel in center of photo below hilltop).

SC0011.124 E.M. August,1914. Same as previous. (East Mine view of pit from above, four sets of tracks, train on fourth set of tracks, steam shovel and ore cars upper center of photo. White spot in lower center of photo).

SC0011.125 No caption. Black and white, 4" x 6"/10cm x 15cm. (Interior view of machine shop, railroad track in center of photo, shaft of light bisects horizontally the photo).

SC0011.126 Same as previous. (Interior view of machine shop, railroad track in vertical center with pair of wheels and railroad car with three men, left side man standing by machine and angled beam in foreground).

SC0011.127 a & b No caption. Black and white, 4 ¾" x 6 ¾"/12cm x 17cm. (Duplicate copies of a ship loading crane gantry, 12 men visible on gantry, five ore cars visible).

SC0011.128 a & b Same as previous. (Duplicate copies of a vertical view of crane gantry, possibly 15 men visible standing, sitting or crouching on gantry).

SC 0011.129 (10 in x 19 in) panoramic photograph of the Juragua Mines and the miners' village. The condition of the image is fine but the photograph is broken and separated from the folded three places.