At Corn Creek Ranch, according to Bob Worts, there was a shed located just out of the picture, behind the engine. He did not recollect if that shed was the one still standing near the Tie Building, now known as the Skull House. This shed, now called the "blacksmith shop," is made of Ponderosa pine puncheons (vertically set lumber) with the bark left on (Figure 6.22).

The entrance to the ranch was on the east, from the wagon road that originally linked Corn Creek to Las Vegas to the south and Indian Springs to the north. By the time Worts bought the property, a rough road had been broken through that connected the old Corn Creek Station on the LV&T and Corn Creek Springs, and another to US 95, the Tonopah Highway. The Richardsons had built a ditch to carry the water from the springs to a reservoir built up slope to the east, and an irrigation ditch to water an orchard and pasture (Figures 6.23 and 6.24).

Cottonwoods and willows shaded the lane leading to the ranch house (Figure 6.25), and along the south side of the drive there were three crude buildings, still in use when the ranch changed hands in 1936 (Figure 6.17). The center one of these was "habitable," according to Bob Worts, but the others were too shaky and eventually were torn down. The structure located to the west of the cabin shown in Figure 6.17 was the blacksmith shop, and the one to the east was a tack shed. The cabin was remodeled and upgraded in 1936 to become the "cook's house" (Figure 6.26). The plastering was done by Ted Munson, a friend of Tom Allen, who worked for Worts on the ranch (Worts 2002).

Figure 6.22. The "Blacksmith Shop" in 2002 (HRA photo).

Figure 6.23. Reservoir above the Corn Creek Ranch. Fed from the Corn Creek Spring located at the right, 1936 (Worts Collection).

Figure 6.24. Tom Allen harvesting peaches at the Corn Creek Ranch, 1938 (Worts Collection).

Figure 6.25. Tree-lined lane leading to the Ranch House at the end and to the right, 1936 (Worts Collection).

Figure 6.26. Cook's living quarters, 1937 (Courtesy of Worts Collection, Special Collections, Lied Library, UNLV).

Because Worts was a writer, he required a place to work, and the small ranch house had no suitable space. To fill this need, in 1937 he built a "study" out of the railroad ties so conveniently stacked along the west side of the pasture (Figure 6.27). This building underwent a series of transformations in later years, when it was remodeled to become a refuge residence; eventually it was demolished. A new and relatively capacious workshop, bunkhouse, and tack room (rooms identified in order, from east to west) also was constructed to the south of the old ranch buildings. Skip Worts and some fellow students from Stanford erected this building in 1938 (see Figure 6.18). Skip is captured in a photo taken in 1938 next to the east end of the newly finished structure, posing with a surveying instrument he made himself (Figure 6.28).

The Richardson ranch house, previously damaged by fire and patched, was repaired, enlarged, and modernized. The Richardson period house evidently had two bedrooms, a kitchen, and a living room, and no indoor plumbing or electric lighting. To the crude four-room house, described as "old and worn, poorly built and patched" the Worts family added a bedroom, dining room, and bath room "fitted with shower, toilet, and lavoratory." The kitchen was fitted with a sink, hot water tank and heater. Plumbing consisted of a combination of 3/4" and 1/2" pipes, supplying water from a hot water system and artesian well to taps at the sink, lavoratory, shower and toilet." This was an up-to-date residence, with electricity provided by a Kohler light plant located behind the house (G. Worts, Jr., 1972). The toilet was plumbed to a cesspool, but household gray water drained into a ditch at the rear of the house (Letter, Allen to Hundley, July 30, 1939, USFWS Corn Creek file 611.01).

Figure 6.27. George F. Worts' new study that he built at the Corn Creek Ranch, 1937 (Courtesy of Worts Collection, Special Collections, Lied Library, UNLV).

Figure 6.28. Skip Worts surveying at the east end of the workshop, ca. 1938 (Worts Collection).

On January 17, 1938, Worts filed to use .5 second-feet of water from Corn Creek Springs for irrigation and domestic purposes. He intended to irrigate fifty acres west of the ranch complex, but still in the N ½, Section 34, T17S, R59E (Nevada, Water Resources, App. 10198). The map (Figure 6.29), compiled from various sources and State Water Right Surveyor C. D. Baker, is the first professionally drawn map of the ranch dated later than 1907 found during the course of this research. It clearly shows the ranch house at the end of the ranch lane, the reservoir to the east, and the relationship of the Study (labeled only "House") and the Tie House to the other buildings. It depicts the existing plowed field and the ditches that carried water from the springs to the reservoir, and from it, past the house, to the field. Worts was given until November, 1940 to complete the proposed works, and a year longer to prove application of the water to beneficial use. He planned to develop springs 1, 2, and 3, with a main ditch and approximately one mile of laterals via pipelines to bring water to the house and cabins.

The State Engineer approved the permit, subject to all prior rights. He also stipulated that "a substantial weir must be installed and maintained to facilitate the measurement of water," which the State reserved the right to regulate.

This was apparently the first filing on the springs since the LV&TRR application of 1907. The artesian well that provided the water to the Worts household did not require a permit. The Richardsons may have drilled it in 1919, but if they brought water from the well to the house, it was used only in the kitchen, as there was no bathroom. Culinary water was reportedly dipped from the irrigation ditch running past the back of the house.

Skip Worts related that the irrigation ditches required continual cleaning out. The growth was so dense that finally the sides and bottom of these ditches were shored up with solid walls of railroad ties. The pond (reservoir) supported such dense vegetation that every year the pond was drained and dried out enough to use a Fresno scraper to clear the plants, and then the sides would be re-formed.

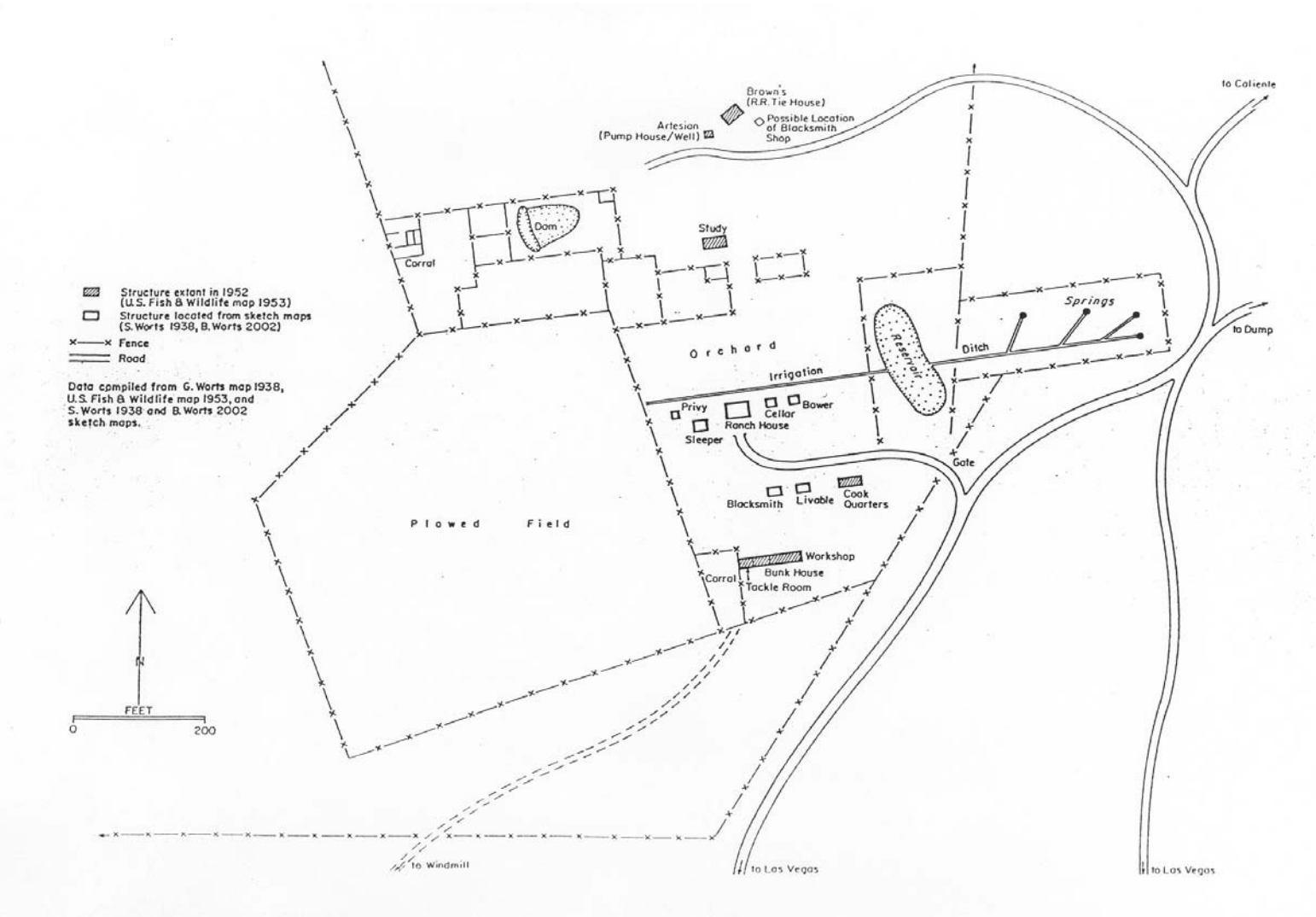

Figure 6.29. Layout of the Corn Creek Ranch in 1938, compiled from S. Worts sketches (1937), R. Worts sketch (2002), and Nevada Water Rights Surveyor C.D. Baker map to accompany Worts filing on Corn Creek Springs (Nevada Water Resources, App. 10198, 1938).

The Worts family tenure at Corn Creek was very short, lasting only until 1939. Then Janet and George Worts agreed to sell the ranch to "the government," in the form of the U.S. Department of Agriculture, the Bureau of Biological Survey. How and why the Biological Survey Bureau became interested in this property is an interesting story which is not ended; the present-day FWS is its lineal descendant, and still operates the field station it created out of the ranch.

REFUGE PERIOD, 1939 - 1953

While the Worts family was doing well enough financially in 1936 to buy the Richardson Ranch, the world as a whole was not doing so well. The 1930s was a decade of severe drought and of the worldwide Great Depression. In the United States, unemployment and poverty were widespread and deep; President Franklin D. Roosevelt took the lead in efforts to alleviate the situation by reducing the numbers of unemployed through federal work programs. In 1933, as part of his administration's first effort to relieve unemployment and poverty, Congress passed the Emergency Conservation Work Act (USS 24 Stat.). This legislation combined the proposal to provide jobs to out-of-work young men and the nation's need to rehabilitate its forests and grasslands, restore depleted farmlands, and perform numerous other kinds of work to repair erosion, prevent flooding, and build facilities to serve the increasing number of recreationists using the nation's public lands (Lacy 1976: 139-176). Conservation of natural resources was a separate, also strong push in the 1930s, from people concerned that valuable wild lands and their flora and fauna would disappear, that the natural wealth of the nation would vanish unless selected parcels were designated as parks, wildlife refuges, and recreation lands. In 1933, these two major streams of national concern converged in Clark County, Nevada, but not yet at Corn Creek Springs.

Civilian Conservation Corps at Corn Creek, 1939-1941

Outgoing President Herbert Hoover established the Boulder Canyon Wildlife Refuge in 1933, encompassing the area surrounding the Boulder Dam site, to be managed by the Biological Survey of the U. S. Department of Agriculture (USDA) for wildlife conservation (LV *Evening Review-Journal*, March 13, 1933: 2). In 1933, President Roosevelt initiated the program that soon became known as the Civilian Conservation Corps, and it, too, would immediately get to work in Clark County. Three years later, Roosevelt issued Executive Order 7373 to set aside the Desert Game Range (DGR), a 2.5 million acre parcel of public land in Clark and Lincoln counties, Nevada, to be reserved for use by the desert bighorn sheep in its native habitat. The USDA was charged with managing the DGR, an enormous slice of the Mojave Desert that originally encompassed whole mountain ranges and major portions of others. The Bureau of Biological Survey (BBS) was assigned to operate a field station somewhere in this vast area. The problem was, where?

Three years passed before a suitable location was identified and purchased. The BBS conducted a "long search" for a good location, first settling on a site in Hidden Forest (Memorandum, Rush to Salyer, April 23, 1938; Map, "Hidden Forest Headquarters Site" Nov. 1938). The place selected already featured three old cabins constructed by "moonshiners during prohibition." Rush authorized the DGR Manager J. Clarke Allen [who usually signed his letters as Joseph or Joe Allen] to fix up the buildings for him to camp in this year, and discussed other facilities that would be necessary to install, such as telephone line, fencing, and roads.

In the spring of 1939, before the Biological Survey began construction of the headquarters of the Refuge at Hidden Forest, Corn Creek Ranch surfaced as a "satisfactory site" (USFWS Tract 5 file, Memorandum No. 8). It was not available for the Desert Game Range during its first few years. The DGR was established the same year that the Worts family bought Corn Creek from the Richardsons, and several years passed before George and Tommy Worts were ready to sell the place. They had worked hard to develop their remote retreat, but eventually the lure of California proved irresistible. In March of 1939, Worts offered to sell the ranch to the Biological Survey for $20 per acre, later reduced to $17.50. The tract was valued by the

Bureau's appraiser at $6,570, but Worts accepted $5,600, including improvements worth $3,950. On June 2, 1939, George and Janet Worts, by then residing in Hollywood, California, signed an Agreement for the Purchase of Lands by the USDA, and received $1 against the finalization of the transaction. The Worts family was unaware that many months would elapse before they would receive full payment for the ranch. The sale had to wend its way through numerous levels of bureaucracy, including the Migratory Bird Conservation Commission, which approved the purchase on July 31, 1939 (USFWS, DGR Tract 5 file).

In the months intervening between signing the agreement to sell and receiving the government's check, the Worts family allowed Desert Game Range personnel to occupy the ranch at no charge (USFWS, DNWR file 611.01). The Biological Survey considered that this permit allowed possession on July 1, 1939, to continue until title was vested in the United States. Worts thought it would take 90 days. At the end of August, George and Janet Worts signed an extension of the option to 120 days, and in October, conveyed the property to the United States by Warranty Deed. This deed was recorded on October 17, 1939 (Clark County Records, Deeds 26: 112).

The government did not issue a check for this purchase for many months longer. A week after providing the Warranty Deed, George Worts acquiesced to a request from Mr. [T. B.] Murray [Acting Regional Director, Bureau of Biological Survey, Portland, Oregon) that the DGR be permitted to make alterations to the buildings on the ranch. In the same letter, he expressed his frustration that payment was not yet received, that he understood that payment would be made in less than thirty days, not in sixty, and he asked that the check be expedited (USFWS, DGR, file 611.01). Apparently there was no action, for on December 14, George Worts notified the BBS office in Denver that he wished to "withdraw Corn Creek Ranch from the market." He asked that the present tenants vacate the property by January 1, 1940, indicating that he and Mrs. Worts expected to move back to the ranch shortly after that date. This got a quick response from the Bureau, which notified Worts by telegram on December 15 that he had a "binding contract" with the United States, that he should make no definite arrangements to return to the ranch, and that the matter was being referred to Washington. On Dec. 19, Acting Regional Director Murray, in Portland, wrote to the Chief of the Bureau in Washington, D.C. about the matter, asking that the deal be closed at the earliest possible date. The files, both at Portland and at Corn Creek, lack any information about when the check was finally issued to Worts. In 2002, the family well remembered how long they waited for the government to make good on its promises.

Murray's letter to the head office in D.C. bolstered his argument for closing the purchase with the information that the Grazing Service had assured the Bureau in Portland that the 25 men assigned to the Desert Game Range at the time could be stationed there on a year-round basis, if the Biological Survey made provision to provide projects for the men. To take advantage of this windfall, Murray urged that efforts be made to complete acquisition of the Corn Creek Ranch and to plan improvements. He suggested that Refuge headquarters facilities probably could be constructed, as well as roads, water development, and other projects. He ended his letter with the opinion that they should not pass up this "good opportunity" to make "advantageous use" of the men <u>already located</u> at the Corn Creek Ranch to develop the Desert Range (Letter, Murray to Chief, BBS, Corn Creek file 611.01, emphasis added).

Who were these 25 men, and why were they at the Corn Creek Ranch? Who sent them there? How could their labor be promised year-round? The answer lies in the second stream of national concern, federal unemployment relief, which finally reached Corn Creek Springs in 1939: the Civilian Conservation Corps. The earlier absence of this important government program at Corn Creek is related to timing. Although one of Nevada's earliest "CCC" camps was built in the Spring Mountains in 1933 [Camp Charleston Mt., No. F-4, Co. 2537], it was actually established under the early Roosevelt relief effort known as the Emergency Conservation Work Act. It was not, administratively speaking, a CCC camp.

Although the Desert Game Range was established in 1936, there were no headquarters on the ground until 1939. By 1939, several important changes had occurred in the structure and administration of the CCC and other government agencies, which were reorganized during Roosevelt's second term. The CCC camps

were affected by numerous changes in leadership and re-assignment to different agencies as a consequence of the new alignments ordered by Washington.

The Grazing Service was created in 1935 to accomplish the goals of the Taylor Grazing Act of 1934, itself a conservation measure intended to improve the nation's forest and range management (Lacy 1976: 159-61). The Grazing Service was comprised of 58 districts; southern Nevada was located in Region 3, Grazing District 5. Wildlife protection was already housed in the Bureau of Biological Survey of the USDA. On July 1, 1939, the Grazing Service and the Biological Survey were combined to form the US Fish and Wildlife Service (USFWS), in the Department of Interior (Lacy 1976: 163-5). These changes are reflected in the CCC camp identification system, a combination of initials which represented the agency overseeing the work, and the order of establishment of each camp, e.g. F-4, the fourth camp managed by the Forest Service.

In southern Nevada, camps were established at Mt. Charleston, along the upper Muddy River, at Logandale, at Lake Mead and Boulder City, before one was authorized for Las Vegas. Camps were managed by different agencies of the departments of Agriculture and Interior, including Grazing, Forest, and National Park services, sometimes in cooperation with a particular entity, which had identified conservation work needed in its jurisdiction. The camp would be identified by the initials of the agency that set the work program and supervised its implementation.

In December, 1939, when Murray wrote to his superiors in Washington, D.C., urging that a work plan be drawn up, and that the agency not waste the opportunity to use the 25 men to develop the Desert Game Range, he was referring to a detachment assigned as a "side camp" to Corn Creek from DG-122 in Las Vegas. The parent camp itself was only established in 1938, and its story is important to understanding the purpose and identification of the camp at Corn Creek.

Civilian Conservation Corps camps were organized into main or "parent" camps, with "side" camps established from the parent work force wherever the work to be done was too far from the main body to be accomplished efficiently by transporting men to and fro on the same day. Las Vegas was chosen for a main camp for the Grazing Service in 1938. The camp, DG-122, situated on a "flat, arid and dust covered site, about one half mile from the city, " was under construction on September 24, 1938, when it was visited by A. W. Stockman, Special Investigator for the CCC (Letter, Stockman to McEntee, Inspection Reports, DG-122, NARA RG 22). In charge of construction was First Lt. Robert J. Moore, Company Commander at Camp Charleston Mountain F-4, Co. 5441. The construction detachment, which arrived in Las Vegas on August 4, 1938, consisted of 40 enrollees from Camp DG-45, St. George, Utah. An "eastern company" was expected to move into DG-122 on October 12, 1938. When next inspected, on December 6, 1938, the camp was occupied by Co. 3542, and the camp was designated DG-122-W (Winter). Inspector Reddoch reported that no field work had been done because no projects had been approved. That situation would be rectified as of December 8, when the Regional Grazier in Reno would telegraph his approval of certain projects so work could begin.

Reddoch's report to Assistant Director McEntee (December 8, 1938 in Camp Inspection Reports, NARA RG 35) includes a detailed letter describing his casual interviews with "natives" of Las Vegas and the Chamber of Commerce, who stated there was no suitable grazing land within a radius of thirty to forty miles of camp, although water could be obtained at relatively shallow depths. The Regional Grazier indicated that "he did not ask for a camp at Las Vegas," and in fact advised against it. He "intimated that politics" had something to do with bringing it into existence. It would be able to do much valuable work, but "most of it would have to be done from side camps," and he would recommend discontinuing it in the 13th period [of CCC re-authorization]. Reddoch enclosed a rough sketch, "Proposed Projects, Camp DG-122, Las Vegas, Nevada" drawn by Camp Engineer C. J. Dodson on December 6, 1938 (Fig. 6.30), and 19 individual work project sheets (Form 1-372) describing proposed projects. Reddoch noted that all but two spring and one well projects, and rodent control, were 25 to 60 miles from Las Vegas. Reddoch thought poor judgment certainly was evident in the selection of Las Vegas for a grazing camp. Robert Fechner, Director of the CCC, agreed strongly in his letter of December 19, 1938 to Conrad Wirth, CCC Advisory Council Representative: "While I understand the nature of the work necessary on the public domain requires probably more than the average

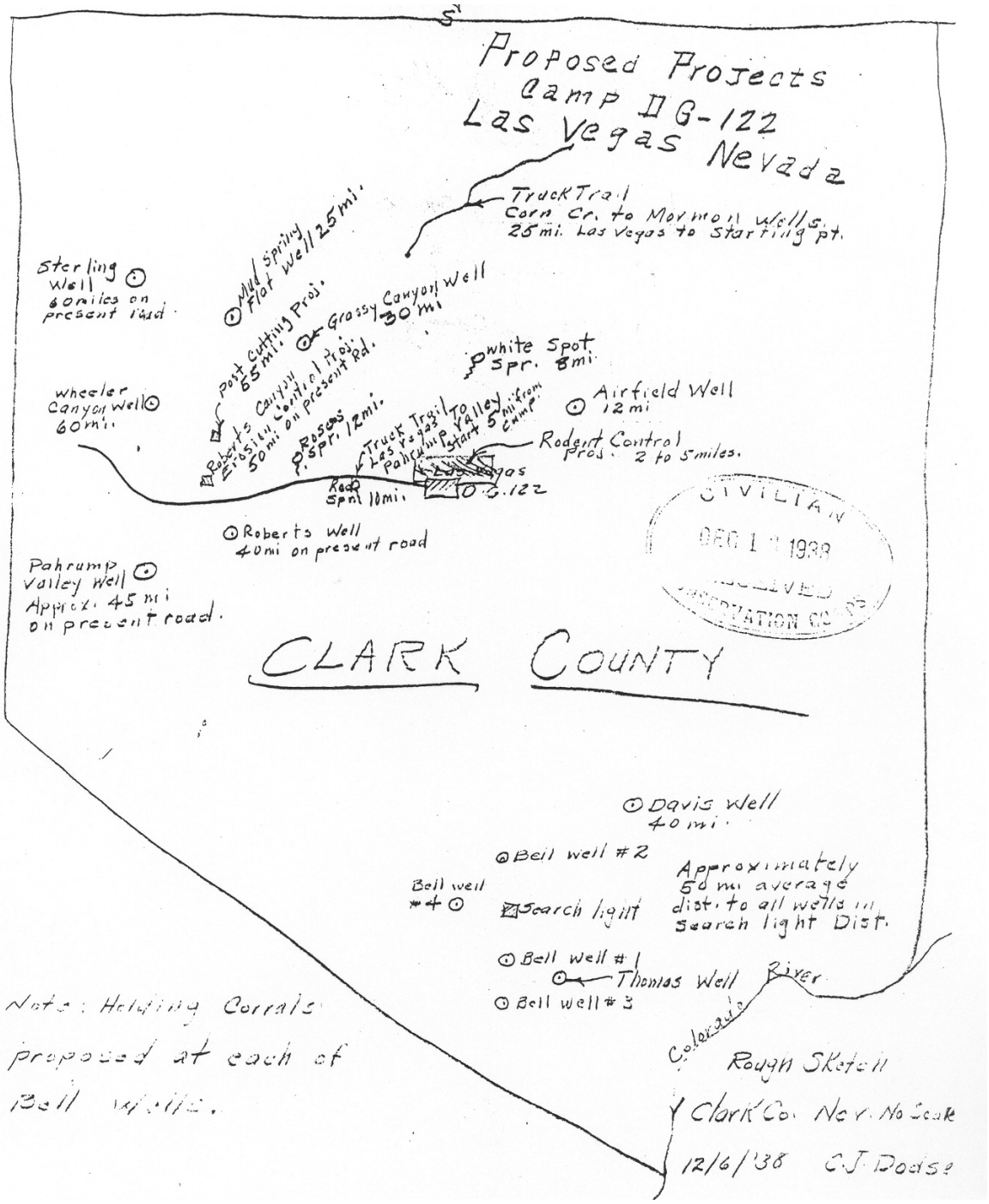

Figure 6.30. Map of the proposed CCC projects, Camp DG-122, Las Vegas, Nevada, 1938 Inspection Reports, DG-122-W, NARA RG 35.

number of side camps nevertheless it seems to me that base camps could and should be located so that a substantial work program can be carried on from it." His objections bore no fruit while the camps were run by the independent CCC; Nevada's Senator Pat McCarran saw to it that his state got its fair share of federal largesse, and that included Camp DG-122.

The forms 1-371 list 19 separate projects in Clark County, two of which pertained to the Desert Game Range: construction of 25 miles of Truck Trail from Corn Creek to Mormon Wells, and development of White Spot Spring at the southern end of the Sheep Range. These were legitimate grazing projects, since the District Grazier required the truck trails to administer grazing allotments in the area. They would also be used for fire suppression in case of timber fires, and for patrol by the Refuge Manager of the Desert Game Range. Improvements at White Spot Springs involved laying pipe from a cistern at the spring to a water trough. This work made available grazing land which is "otherwise too arid for use" by livestock now ranging from "other waters previously developed." The goal was to "attain more uniform grazing over the area."

The inspection report for the week of December 11, 1939, noted that Company 2557, numbering 109 men, was now in residence at Camp G-122 [the "D" had been dropped, conforming to change in designation for Grazing Division camps in operation on October 1, 1939 or established after that date] (Hobarth, n.d.: 10). We also learn that two side camps, accounting for nearly half the company, have been established: a side camp at Corn Creek (25 men) and one at Searchlight (21 men) (A. W. Stockman, CCC Form 10). The camp at Corn Creek was established on November 15, 1939, and Stockman reviewed the work projects in his report for January 8, 1940. He noted that "practically all work at present is road construction and water development," and that one of the side camps [Corn Creek] was for the Biological Survey. Morale was high in the Las Vegas camp, judged to be "a good and practical one," despite its shaky start politically. The inspector noted that the buildings at Las Vegas, originally from Florida, were in good shape but was concerned about their non-standard foundations, made of wood rather than rock or concrete.

When M. J. Bowen inspected Camp G-122 Company 2557, on March 21, 1941, his entries on the form reflected the move of the CCC to the Federal Security Agency. The Las Vegas camp was now named an "All year" camp, not the winter camp of previous years. Bowen included a summary of projects completed by this camp since its inception in October 1938:

Springs developed - 9

Storage tanks (concrete) - 11,000

Excavated reservoirs - 1,800,000 gal.

Road construction - 165 miles

Wells drilled - 5

Corrals built - 10

Rodent control - 10,000 acres

Drift fences - 4 miles

Posts - 350

and many other projects. Current year projects, still uncompleted, included spring development, fencing, cutting posts, road construction, and concrete stock tanks. Work on the projects was retarded because of lag time between loss of enrollees to other projects and arrival of their replacements. This file closed with a note

from Bowen to the Director of the CCC, dated March 31, 1941 that he was seeking to learn the desires of the Grazing Service in Reno regarding future projects. Upon receipt of their reply, Bowen would apply for the "necessary funds" to implement the work.

Nothing further about the Corn Creek side camp is found in the files in RG 35. Information about one of the wells drilled comes from the files of the State Engineer of Nevada. In 1947, the Bureau of Land Management in San Francisco filed a well log for the "Corn Creek Well," located in Section 20, T17S R59E. This well was drilled for Grazing District No. 5, to use for stock watering. Using cable tools, drilling commenced on January 15, 1940, and was completed on April 17, 1940. This well most certainly was one of the five cited above, and it appears today on the USGS Corn Creek Springs NW 7 ½ minute map. In later years it was re-developed by Robert Owens, under Permit No. 23501 (Nevada Water Resources). Owens held a grazing allotment on that land.

Plans for a side camp to be established at Corn Creek for the USFWS, instead of a side camp of the Grazing Service, are found in the National Archives in RG 22, file "FW-S4 Corncreek Ranch." The idea of a FWS-sponsored camp at Corn Creek certainly predates (Figure 6.31) the correspondence in this file, which commences with a letter (Pederson, Assist. Chief, Div. of Construction & CCC Operations, FWS, Washington, DC to Laythe, Regional Director, FWS, Portland, November 5, 1940, re a CCC Boulder Side Camp, Nevada) discussing cement stored at the DGR "for future use in construction at that point." Pederson noted that the FWS hoped to get a camp "for this location" before long, but expected it would be several months before the cement would be needed. It is not clear if the proposed DGR CCC camp would be a side camp of Boulder Side Camp, or exactly how the DGR camp would fit within the CCC camp structure in place in southern Nevada since 1935 at Lake Mead, and earlier at Mt. Charleston. At Lake Mead, the National Park Service (NPS) supervised two camps, located in Boulder City. Since these were main camps, it is possible that the proposed Desert Game Range CCC camp would be a side camp of one of these "Twin Camps" (McBride 1995: 6-7). It is more likely, however, that Desert Game Range was planned to be a side camp of the Boulder Canyon Wildlife Refuge, established in 1933 and administered by the Bureau of Biological Survey.

Supplies continued to be assembled at the DGR for use in construction once the camp was established there, although equipment was not sent on. In November, 1940, it was requested that the lumber purchased for the DGR projects (Refuge Manager's dwelling, service building, and barn at Corn Creek headquarters, per Letter, Elmer to Laythe, September 6, 1941, be protected by a suitable structure that should be made from materials previously salvaged when the Bunkerville CCC camp was closed. These materials were already stored at the DGR (Hackenberg to Director, FWS, Washington, DC, November 2, 1940). By mid December of 1940, the camp was routinely referred to as the Desert Game Range CCC Camp without reference to it as a Boulder Side Camp, although some correspondents continued the earlier practice.

Early in January of 1941, Refuge Inspector Kreager wrote to the Director, FWS, re Desert Game Range Projects, indicating some determination had already been made respecting work assignments for the proposed DGR camp enrollees (Kreager to Director, FWS, January 3, 1941). Telephone poles were being sent from Sand Point Refuge in Idaho to the Desert Game Range, to use in constructing a telephone line. On April 10, Assistant Chief of Construction and CCC Operations notified the Regional Director in Portland that it would be late summer or early fall before a camp could be established at DGR. He advised that the cement stored there should be shipped to Boulder, Charles Sheldon, or Ruby Lake (refuges) so that it could be used before it deteriorated.

The news that the seventeenth period CCC camp program was approved by the Director of the CCC was conveyed to the Regional Director by memorandum on March 29, 1941, referenced by Regional CCC Inspector Hackenberg in his letter to Director, FWS, April 15, 1941. This action included approval of the camp proposed for the Desert Game Range, to be identified as FWS-4. Things moved quickly after that, with

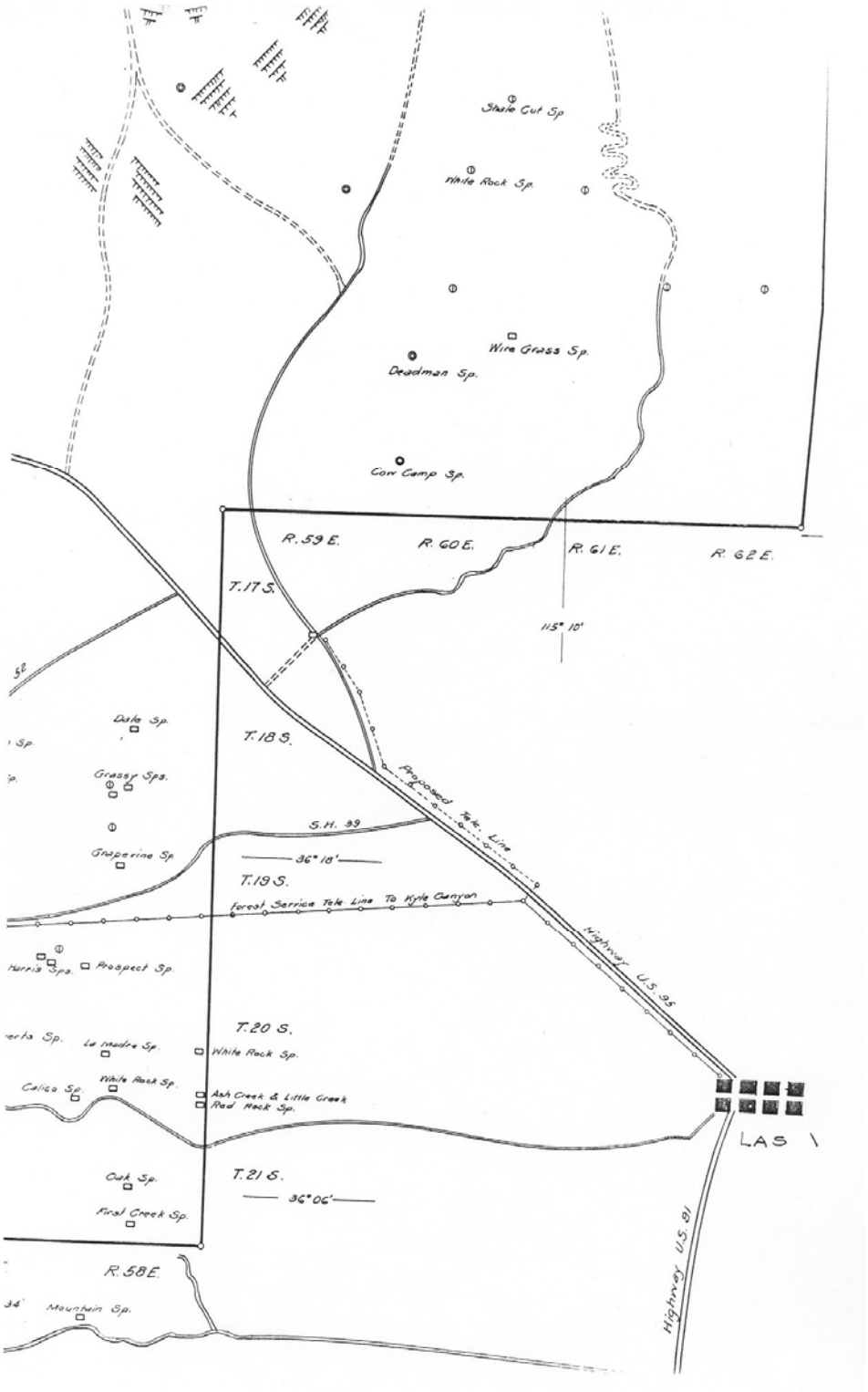

Figure 6.31. General Map, Desert Game Range, Clark and Lincoln Counties, Nevada, October 2, 1940. [Corn Creek is located at the northern end of the proposed Telephone Line.] (USFWS, District Engineer, Salt Lake City, M-Nev. 6-4.0, in map files, Corn Creek).

an inquiry about the status of construction of the camp itself, and when it would be ready for occupancy (Terhune to Regional Director, Portland, April 30, 1941). He was notified by telegram (collect) that a request for buildings had been forwarded to the War Department on April 11, but that the camp would not be ready until July at the earliest (Hackenberg to FWS DOI, May 3, 1941).

Early in June, the Chief of Construction and CCC Operations advised Elmer that "Recent advice from the field" indicated that the DGR CCC camp will probably be ready for work by July 15. Also, there would be a surplus of manpower to be used at the DGR, and Terhune requested that engineering plans for the entrance road and trails be expedited so that the men could be put to work promptly (Terhune to Elmer, June 5, 1941). This request was forwarded by Wm. V. Taylor, In Charge, Section of Structures, Division of Wildlife Refuges, to L. M. Winsor, District Engineer, Salt Lake City, June 11, 1941. The plans were quickly drawn up and sent to FWS in D.C. for approval on July 10, 1941. The packet of maps included a Sketch map of Desert Game Range (M-Nev. 6-4.0, Fig. 6.31, above), Plan & Profile for entrance road to Corn Creek Ranch, 2 sheets (M-Nev. 6-3.1, 6-3.2); and plan for construction details for entrance road to Corn Creek Ranch (M-Nev. 6-3.3).

Winsor explained in his cover letter that the entrance road plan represented a new approach that he was "pleased to take responsibility for designing." The construction employed a series of dikes above the road and parallel to it, a new concept in deflecting floodwaters that was both more effective and cheaper than existing designs. He noted that the entrance road was the "work of first priority for the CCC at Corn Creek Ranch." These maps are still on file at the DNWR field station at Corn Creek (M-Nev. 6-3.1 and 6-3.2).

In the interim, Hackenberg advised FWS in DC that the L. A. District Headquarters of the CCC was transferring 65 enrollees of Company 6425 from San Clemente to Camp FWS-4, Corn Creek, Nevada, to arrive on July 1 (Hackenberg to FWS, June 27, 1941). On June 30, however, Hackenberg wired again to Terhune, this time notifying of the cancellation of Company 6425 but the assignment of Las Vegas Company 2557 to the DGR effective July 5.

All of these components of the camp were being marshaled on the strength of the notification "from the field" that the camp would be ready for occupancy by mid July. Imagine the astonishment registered by Regional Inspector Hackenberg, then, when he arrived at the camp late on the night of July 14, to discover that the camp had not actually been occupied, nor had the buildings been completed to the point where they could be! The enrollees transferred to the DGR on July 2 were quartered in tents rather than in the barracks, and were being used to construct the camp, not just occupy it. The Construction Foreman thought the majority of the buildings would be complete in approximately ten days, but the camp would still lack some structures. FWS-4 camp, at the end of July, 1941, would include five barracks, a mess hall, army office, technical quarters, water and sewer system, and "one or two other buildings included in the complement of the army camp buildings." The technical office building and warehouse would not be ready "for some time" because it was to be new construction and bids had not yet been received. Garages would not be available until about August 15. He noted that the army was having a lot of trouble getting any kind of materials, but they had 25 carpenters working and in addition, approximately 50 enrollees (Hackenberg to Director, FWS, Washington, DC, July 15, 1941). Earlier, ten men had earlier been detached [from Las Vegas, Company 2557) to Corn Creek to help build the camp; forty more arrived on the night of June 30 and were present on July 1, 1941 (Hackenberg to Director, FWS, July 22, 1941), comprising the fifty counted by Hackenberg on July 15.

Hackenberg relayed ominous signals by wire that "Higher Authority" had issued a stop construction order immediately at Corn Creek to Terhune on July 20, 1941. Hackenberg clarified the situation on July 22, repeating a message from the Los Angeles District Headquarters that "funds were not allocated to complete work at Corncreek Camp Corps Area." Further, the need for garages and technical buildings was now urgent, to store equipment and supplies safely and properly (Hackenberg to FWS, DC, July 22, 1941). Despite the threat of closure of the camp, the company strength reached 126 by the end of the month; 29 were held at the Las Vegas camp "pending completion of the barracks buildings at the Corn Creek camp," and 53 replacement

enrollees arrived at Las Vegas camp for conditioning and inoculations (Hackenberg to Director, FWS, July 22, 1941).

Terhune advised Hackenberg by return wire that the proposed camp reduction program was "still unsettled,' but indications were still strong that the two camps proposed for the region would close. Since all equipment must be transferred, there was "no object in urging completion at this time." Terhune, Chief, Division of Construction and CCC Operations in Washington, made one more attempt to keep the DGR camp alive. On July 24, 1941, he sent a memorandum to "the Coordinator, CCC," notifying him that Camp FWS-4, Desert Game, Nevada, was officially occupied by Company 2557 on July 2, 1941, and asking for operating funds beginning as of that date.

Hackenberg wired Terhune on July 24 that the Army was offering about 40 enrollees for field work, but indicated he was planning on the closure of the DGR by the middle of August. The next day, Terhune wired Hackenberg that FWS expected the CCC directors to approve the proposed camp closures by July 31, effective between August 1 and 15. Hackenberg was warned not to publicize the closure nor issue termination notices until the directors had acted.

He suggested the Army's enrollees be used to secure the building materials at "Desertgame headquarters" and for available minor improvements. Boulder side camp would be continued "as in past," if financially possible (Terhune to Hackenberg, July 25, 1941). On July 30, Terhune telegraphed Hackenberg that funding for operation of Boulder side camp would be provided for the current year, but that "Desertgame" and Sheldon camps would close as of July 31. For FWS-4, Desert Game Range CCC Camp, it was all over but the paper work. It closed almost before it was open.

The FWS advised its Departmental Representative on the Advisory Council of the CCC that no plans could be made for future occupancy of Camp FWS-4. The mandatory camp terminations and uncertainty regarding future availability of an enrollee company for Corn Creek rendered the project unfeasible. Coupled with these problems was the fact that Camp FWS-4 was "approximately 50% incomplete," lacking ten buildings still not shipped by the manufacturer. Accordingly, Assistant Departmental Representative H. E. Weatherwax wrote to Colonel Miller, War Department Representative, CCC on August 27, 1941, that it would be "satisfactory" for the Army to terminate arrangements to construct Camp FWS-4, and to divert the camp buildings to another site consistent with CCC program requirements.

By then, changing times had caught up with the CCC. The Emergency Conservation Work Act of 1933, a Depression-era program re-authorized in 1937 as the Civilian Conservation Corps, was mainly a relief agency. Government reorganization brought reform to this popular program, and its independence ended when, on July 1, 1939, the CCC became part of the Federal Security Agency. The tangle of administrative changes and shifting responsibilities became ever more complex, with consequent confusion and demoralization in the ranks. With the outbreak of war with Japan in 1941, a federal relief agency was deemed superfluous, and the CCC was abolished on June 30, 1942. Wherever the DGR buildings were sent, the CCC would not use them for long.

Back at Corn Creek, one of the five CCC barracks slated for completion in July 1941 blew down in a windstorm (Figure 6.32). Over a period of several years, materials such as electrical wire and lumber were recycled for use at the ranch, and the underground reservoir built by the CCC was converted to septic tank use for the ranch residences (DGR Annual Narrative 1951). The camp's latrine was bulldozed (Zeller, personal communication, 2003), and one foundation was converted to a loading dock. This structure appears to be built on the same kind of foundation as described for the Las Vegas camp; it was made of wood rather than concrete. The structure had a wooden floor, which is still visible at the edges of the dock, under the present covering.

Other than the occasional notes made by the Refuge Manager about materials collected from the old CCC camp after it was closed, there is no information about CCC activity in the Corn Creek Headquarters records. There is nothing to indicate any contact between the Refuge personnel and the CCC men, although

the camp was located at the western boundary of the developed ranch core. The abandoned buildings show up in distant background of later photographs of ranch buildings. Further search of FWS files in Las Vegas might produce some information, but only the Quarterly and Annual Narratives from 1938 to 1953 were examined for this project.

The source of water for the CCC camp was not identified in the documents, but it most likely was the windmill-equipped well found in Locus 4 or a well drilled between the main ranch house and the CCC camp. The Locus 4 well may have been drilled as early as 1906, perhaps it was used by the bootleggers during Prohibition and restored in 1941 by the CCC, but as of this date, no definite picture can be drawn. The DGR Manager occasionally mentioned the "Sand Dune Windmill," a description that fits the locality of the Locus 4 site, but no one today knows for certain if that provided the CCC camp with water. In a January, 1942 photograph in the Corn Creek Field Station archives, a water tower appears to be located just east of the CCC camp, in a ranch pasture (Figure 6.33). This tower may have been served directly by a well, evidenced by a large diameter water pipe that apparently extends from the ground to the tank, but no record of any such well has been found in the State Engineer's files.

The only visible remains of the CCC camp are an artifact scatter and a set of building pads, all but one of which is made of concrete (Figure 6.34). One foundation, made into a loading dock in the early 1950s, is constructed of wood. Foundations of this type at the Las Vegas CCC camp, DG-122, were cause for concern to CCC inspectors, who feared they were not durable enough. The wooden foundation is elevated above the ground, and tongue-and-groove flooring is visible under its current surface. The type of flooring would indicate a building use as barracks, mess hall, or for classroom. Without a specific camp plot plan, it is not possible precisely to identify its purpose.

Figure 6.32. Collapsed CCC barracks building, 1941 (USFWS DNWR photo archives).

Figure 6.33. CCC Camp at Corn Creek, January 1942. Viewed from the main ranch compound, the old ranch house is at the right, and the basement excavation for the new Refuge Manager's residence is in the center. The water tank in the right background, located between the CCC camp and the old ranch house, probably served the CCC camp (USFWS DNWR photo archives).

The CCC originally built the existing septic tank for the core of the Field Station as an underground reservoir (Narrative Report, Jan-April, 1949: 6). Its relationship to the water tower and to the well in Locus 4 should be investigated. Before it became a septic tank in 1958 (see photographs, "Corn Creek Pasture & Sewer," 1958), it had been converted to store powder and tires. In 1958, its plank cover was replaced with a concrete lid, and a leach field installed. While other uses of this structure are no longer feasible, its presence and place in the story of the CCC at Corn Creek should be recognized.

The area around the camp has been graded, probably before the camp was built. Artifacts are sparsely distributed across this bladed area and because the area has been used since the CCC period, it is difficult to determine which artifacts are associated with the camp. Artifacts include nails, asbestos shingles, rebar, window glass, and other building materials. Domestic items include glass, cans, a whistle, and many other small items. No attempt was made during the present survey to prepare a comprehensive list of the associated artifacts.

Concrete Slab # 1 is rectangular, measures 25 ft 11 inches by 10 ft 1 inch, and is oriented roughly north-south. A portion of the wood fame outside the foundation is present on the east edge of the slab. Concrete Slab # 2 measures 36 ft 11 inches by 30 ft 9 inches and is also oriented north-south (Figure 6.34). Bolts have been placed in the concrete approximately 5 inches apart along the top surface of the walls. The north wall has been removed and a 5 ft ramp installed. The foundation is currently being used as a storage area for gravel. Concrete Slab #3 appears to have functioned as a garage since a ramp leads into the structure from the south wall. The dimensions of the foundation are 37 ft 7 inches in length and 30 ft 10 inches in width and it is oriented north-south. The foundation is in good condition and imprints of burro tracks are visible in the surface of the concrete. Concrete Slab # 4 is the smallest slab of the six measuring 20 ft 7 inches by 10 ft

1½ inches. Two raised and sloped concrete platforms (4 ft long, 1 ft 10 inches wide, and 9 inches high), which a positioned in the center of the slab, suggest that a large piece of equipment was mounted on the platform, possibly a generator (Figure 6.35). Concrete Slab # 5, which is the largest of the foundations, probably represents what is left of the CCC structure pictured in Chapter 3. The slab is raised on concrete pillars that vary in height from 2 ft to 6 inches. The feature measures 49 ft 10 inches long by 29 ft 6 inches wide and it is oriented approximately east-west. Tongue and groove wooden floorboards protrude from under the slab along the edges of the foundation. It is possible that the original flooring was tongue and groove and then concrete was later poured over the flooring (Figure 6.36). This building probably functioned as some type of residence or bunkhouse. The northernmost slab, Concrete Slab # 6, measures 40 ft 11 inches by 20 ft 2½ inches. This slab is oriented northeast or southwest.

Figure 6.34. Looking north at CCC Concrete Slab # 2.

Figure 6.35. Looking north at CCC Concrete Slab # 4.

Figure 6.36. CCC Concrete Slab # 5.

FWS Occupies Corn Creek Ranch

With the permit to occupy in hand, Refuge Manager Clarke J. (Joseph or Joe) Allen moved into the Richardson/Worts house at Corn Creek Ranch on July 1, 1939 (Letter, Murray to Allen, July 26, 1939). The Bureau of Biological Survey (precursor to the FWS) filed an Acquisition Examination Report on the purchase that provides a detailed picture of the ranch and its valuation at the time of purchase. The Worts family was in California by then, and the ranch was managed by a caretaker (not named). Unimproved land was valued at $8.19 per acre, and improved acreage at $12.35. Ten acres were under irrigation and were valued at $200 per acre, and 310 acres were classified as "3rd Class" Grazing Land, at $2 per acre. The sale price agreed upon was only $17.50 per acre; the Biological Survey paid $5600 for a tract it valued at $6570. The appraisal did not evaluate the property's domestic or recreational value.

The Valuation of Improvements attached to the report lists structures and equipment acquired as part of the purchase. The description of the items in this inventory names the buildings by type of use, and includes dimensions, building fabric, type of roof, type of foundation, condition and value. Comparing this list with the Worts brothers' sketches, plus their written and oral information about the ranch when it was acquired by their father in 1936 and as it was developed by the Worts family, provides a fairly complete picture of the changes to the ranch since the Richardsons sold it. This inventory forms the base line for FWS ownership and management of this historic property.

The inventory was made in February of 1939. The form lists eight buildings: a barn, five cottages, a shed, and a storage cellar, and it assigns to each an alphabetical designation. However, the list includes only eight entries, although the letters used extend from (A) to (L); letters (B), (H), and (I) are missing. These gaps may reflect other structures included in the February inventory that were removed from the final report. There is no map accompanying this document.

The "barn" (A) is described as a frame building in good condition, measuring 18 × 100 × 8 [feet], with concrete foundation and shingle roof. There were two rooms, one 32 x 17 and the other 8 × 17, with new wallboard ceilings. It was wired for electricity, and plastered. Most importantly, for purposes of identifying the building, the walls were constructed of railroad ties. The "barn," valued at $1150, is the shop, bunkhouse, and tack room built by Worts along the southern boundary of the ranch core in 1937 (Figure 6.37).

Of the five "cottages," the main ranch house is the one identified as building (F). This was described as a frame building in poor condition, measuring 38 × 33 × 8, with a shingle roof. Its foundation was made of railroad ties. The exterior of this six-room house was partly stuccoed, and the interior walls were of wall board with plastered ceilings and "soft [wood] flooring." The house was wired and had an indoor shower bath, toilet, and washbasin. The examiner also noted the presence of personal property not figured in the $600 valuation of the cottage. He listed an Electrolux Refrigerator, a gas stove, hot water tank, and Superfex oil heater (Figure 6.38).

Identification of the remaining "cottages" and shed is problematic, since the form lacks some of the detail gleaned from the Worts brothers that enables one structure to be distinguished from another. Comparison of the descriptions on the form with information from the Worts family does make it possible to give some tentative identification. Cottage C, a frame building in good condition, measuring 30 × 14 × 8, with a concrete foundation, consisted of two rooms. Its walls were covered with a plaster finish, ceilings were wall-board, and it was wired for electricity. The building exterior was covered with white stucco, which points to its probable use during the Worts' tenure as the Cook's House, a structure that they improved and stuccoed. Evidently it lacked an indoor bathroom. It was worth $500 (see Figure 6.26).

Figure 6.37 Equipment shed in 1942 (USFWS DNWR photo archives).

Figure 6.38. Main Ranch House in January 1942 (USFWS DNWR photo archives).

Cottage (D) was a 23 × 14 × 8 frame building with shingle roof and concrete floor, and was also in good condition. It consisted of two rooms with plaster finish, wallboard ceilings and electrical wiring. One of the rooms was an indoor bath, with toilet, washbasin, and shower. This building must have been a residence, but whose is not known. It was valued at $400.

Cottage (K) measured 16 × 19 × 8, a shingle-roofed frame building with no foundation, but still listed in fair condition. It was a one-room structure with "stained soft floors" and was wired. Its value was $250. This building probably was the "Study" built by George Worts in 1937 (see Figure 6.27).

Cottage (L), 16 × 26 × 8, was a frame building with shingle roof. It also had no foundation, but was in good condition. It consisted of two rooms with "plaster board" interior (celotex?), soft floors, and electrical wiring. The measurements and description of this building closely match those of the "Tie House" or "Skull House" located at the northern edge of the ranch core. This building was valued at $350 (see Figure 6.21).

The shed (E) measured 16 × 14 × 7, was made of railroad ties and had a board roof and no foundation. It was in poor condition, and valued at $25. This is probably the structure visible in some of the 1937 and 1940s vintage photographs that depict the main ranch house, a shed, and the storage cellar (see Figure 6.14).

The Storage Cellar (G) was a frame [underground] structure that measured 13 × 11× 6. The floor and foundation were of concrete, the roof of railroad ties. It was in good condition, and valued at $100.

Two of the three buildings on the property, which were not included in this report but which may have been on the original evaluation and account for some of the missing alphabetical letters, include the privy (Figure 6.13) and the "sleeper" (Figure 6.16). The only structure not accounted for is the shed erected just south of the Tie House (today known as the "Skull House"). There is one more missing letter, which could have designated this building, but at this time, the letter cannot be assigned with any certainty. Indeed, the shed of today is a problematic building that may not have existed in 1939.

Equipment included a "Koelher" Electric Light Plant, 110V-1500V, Model #31560, with 50- gallon tank. Estimated cost installed was $700, but as it was 2 ½ years old, was depreciated 50% and worth only $350.

The list included a 3 ½ horsepower, Economy gasoline irrigation pump on a concrete base. Its estimated cost was $175, depreciated 50% to a value of $87.50. The pump was "reported in good shape." The ranch was also equipped with a 550-gallon gasoline tank, buried in the ground, with pump. Its estimated cost of $175 was depreciated 50% to $137.50.

The artesian well was detailed on the inventory. It was 300 foot deep, 6 inches in diameter, cased to 250 feet. Estimated value was$1400. The irrigation reservoir, used also for "swimming purposes," was valued at $250, and the ditches, including pipes and connections, $250. The latter figure included the cost of "15 outlets for domestic use around buildings." Finally, the ranch boasted 9/10 acre of apple, apricot, peach, and almond orchard worth $100. No separate value was assigned to the water system and orchard. Appraiser E. H. Putnam noted that the $200 per acre allowed for the ten acres of irrigated land included the value of the irrigation system and improvements. The value of all improvements and equipment totaled $3950.

Between 1939, when the Acquisition Examination Report for Corn Creek was made, and 1953, the last year for which this project inspected records relating to the field station, the historic landscape of Corn Creek Ranch was changed and expanded. These modifications were made to fulfill the mission of the Desert Game Range by enhancing the productivity of the staff as it worked to develop knowledge about the range and its biota. Although within the next several decades new federal legislation was enacted to promote conservation and preservation of other values, notably wilderness, cultural heritage, clean air and water, in 1953 these concerns were still in the future.

The staff of the DGR focused primarily on housing for its employees and domestic animals, on improving water supplies for the wildlife in the vast reserve set aside for the Desert Bighorn sheep, and on

protecting these endangered animals from poachers. In the course of pursuing these goals, those in charge of the physical plant at Corn Creek Ranch made numerous decisions, some large, some small, that dramatically changed the historic ranch core. These changes are reflected in the cards comprising the Real Property Inventory of the DNWR, on historic maps of the property, and in the Annual and Tri-annual Narrative Reports filed by the managers of the Desert Game Range between 1939 and 1953.

Comparison of the 1939 Acquisition Inventory and the Worts maps with a plot plan of the Corn Creek Ranch core made by FWS in January 1953 reveals the numerous changes fourteen years of FWS management made in the physical layout of the ranch. The main ranch house of the Richardson/Worts period is gone, replaced by a new "Manager's Residence, Quarters No. 2." The bedroom-bath-dining room addition made by Worts to the old ranch house was retained; it is Quarters No. 5 on the 1953 map (Figure 6.39). The Worts study was now a residence, Quarters No. 3. The Worts Period Cook House had become the office for the Field Station, and three new residences, scheduled to be obtained from surplus housing at Parker Dam, are planned for sites east and west of the Manager's Residence. The shed and underground cellar it protected were gone. The shop, bunkhouse and tack room built by Worts in 1938 was called the Equipment Shed in 1953, and there was a Service Building (Figure 6.40) now located northwest of it, along the west fence of the ranch compound. The Tie Cabin was still in its original place, but there is no indication of a shed nearby. A pump house now protected the artesian well (Figure 6.41), now fitted with a pump that produced water to be piped to an elevated water tank, thus increasing water pressure in the residences. There were various out buildings, including a light plant, an oil house, granary, and hay shed, and a garage was proposed to be built north of Quarters 3. A flagpole and a gas pump enhanced the courtyard. There were a sheep pen and two reservoirs, the Richardson impoundment and a newer, small pond located west of Quarters 3.

The plot plan depicted a network of irrigation ditches, including one that crossed the orchard to convey water from the larger reservoir to the smaller one. The original reservoir still stored water from the springs, collecting water via the system designed for Worts in water right application no.10198 filed with the State Engineer in 1938. A large cesspool served the residences, and two large pastures and fences demarcated several smaller corrals. The main entrance to the ranch was still located in the southeast quarter of the property, but a cattle guard kept out roving livestock. Access to the ranch continued to be made from the Alamo-Las Vegas Road and from the road to Indian Springs. By 1953, the highway constructed near the former LV&TRR roadway was paved and designated U.S. Highway 95, but this road is off the plot plan. It lies about four miles west of the ranch. The public reached Corn Creek mainly via this highway to the CCC-built road from the highway to Corn Creek Ranch. Only a cluster of foundations remained of the CCC camp, also located west of the area included on the 1953 plot plan.

Some of the old pieces of equipment were gone as well; the nationwide call to turn in old metal items for the war effort was heard at Corn Creek in December of 1942. The venerable steam traction engine, long since relegated to the junk heap, was hauled off to Las Vegas, where it, a Model T Ford chassis, and other items were sold for scrap at seven cents a pound. The Narrative Report for Sept-Dec., 1942 contains two photographs of this project. Picture No. 2, the steam traction engine, the Model T car body and other metal trash, bears the caption: "Potential bullets waiting for delivery to the Japs. Dec. 30, 1942." Picture No. 3) captures the refuge's caterpillar tractor hauling off the Model T: "Hauling scrap to beat the Jap. This model T Ford is going back into service, but this time in some other form. Dec. 30, 1942."

During the fifty years between the1953 ranch layout described above and 2003, the ranch core continued to change. By 2003, the Parker Dam houses acquired in 1954 were gone, and old Quarters 3, which had been expanded by adding Richardson/Young period ranch buildings to the Worts Study, has been demolished. Quarters 5, the Worts addition retained when the original Richardson house was removed in 1950, no longer stands in 2003. The Worts Period Shop, Bunk House and Tack Room, which had been adapted by FWS for use as a Carpentry Shop, Jeep Shed, and Tack Room, was remodeled drastically, and only the Carpentry Shop portion still stands. The historic horse barn and hay shed are gone, as is the Refuge period flagpole and gas pump. The FWS period "service building" has been replaced by a large, metal, Butler

building, and there is a new barn and hay shed. The Tie Building still stands, relatively unchanged. It is now known as the skull house, because it is used to store bighorn sheep skulls. Nearby, just south of the skull house, is a shed built of puncheons of Ponderosa pine with the bark left on. This shed is a problematic structure that was nominated to the National Register of Historic Places (1974) as a historic blacksmith shop, but not enough information is currently available to make a definitive determination about its age and original use.

The water tower no longer stands on the low-rise southeast of the Tie Cabin; there is no sheep pen, oil house, or granary. One auxiliary reservoir has come and gone since 1953, but various pastures are still under irrigation, and there is a new ranch entrance into the compound at the southwest corner of the developed property. Outside the ranch core at the southeast corner is a cluster of modern structures built to serve the public, including an outdoor display kiosk, a small reception building, and restrooms. The Field Station flagpole is now located here as well. The ranch core itself has been reconfigured by new fence alignments made of different fence materials than in 1953.

Figure 6.39. The Ranch House before it was torn down in 1950. The Worts' addition is on the right, and it was retained as Quarters 5 (USFWS DNWR photo archives).

Figure 6.40. The Service Building in April of 1943 (USFWS DNWR photo archives).

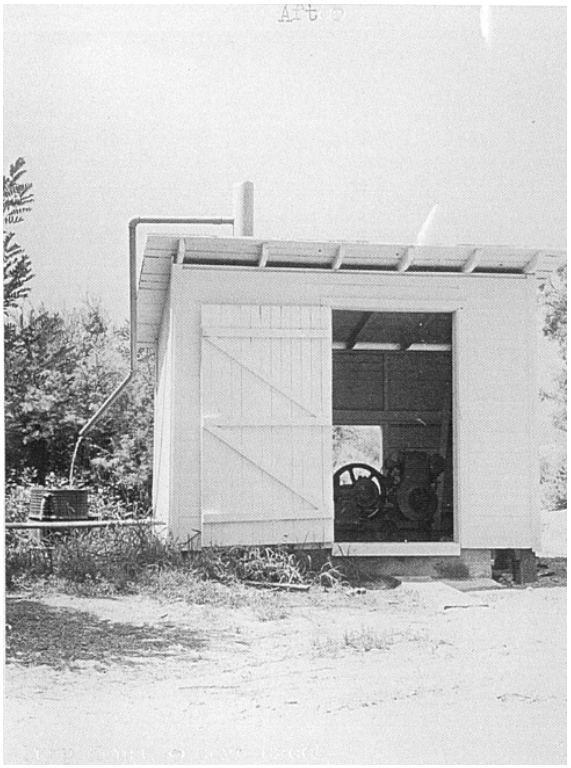

Figure 6.41. Pump House in 1946 (USFWS DNWR photo archives).

REFUGE MANAGER'S RESIDENCE (MAIN RESIDENCE, QUARTERS 2, QUARTERS 10)

A new residence for the Refuge Manager was one of the first needs identified by the FWS for its Corn Creek Headquarters. Originally, CCC labor was to build it, but that plan was scuttled when the camp was disbanded in August 1941. Refuge Manager Groves noted that funds had been appropriated in 1941 to construct the house (Narrative Report, Nov. 1941-Jan. 1942: 1); its location, south of the original ranch house, had been selected in 1940 (Narrative Report, Feb.-Apr., 1940: Photo A6). Ground was broken on the project in mid-February, 1942, and the residence was completed by the end of the fiscal year, June 30, 1942. Manager Groves and his family moved into the residence on July 6, 1942, and quickly built a redwood-picket fence to keep livestock away from the newly-planted lawn and shrubs (Figure 6.42). The fence was a cost-saving measure as well, since the courtyard had been graded and planted to sour clover as a soil builder. Groves allowed the FWS-owned horses to graze on it, saving at least $40 in hay purchases (Summary of Year's Accomplishments, Apr. 1942-Apr. 1943: 3).

The family did without heat at first. When a Mueller No. 48 furnace was installed toward the end of 1942, Groves was very grateful. This furnace had been converted into a coal burner, which Groves noted "is not so nice nor as cheap to operate as an oil burner," but since it was wartime, obtaining fuel was much more certain (Narrative Report, Sept.-Dec.1942: 11).

Figure 6.42. Refuge Manager's Residence in 1943.

In the years between construction of the house in 1942, and 1953, the Manager's Residence benefited from regular maintenance (sanding and finishing of floors, painting and re-painting). The knotty-pine paneled guest room and a bath were completed in the basement of the house in 1943 (Narrative Report, Sept-Dec. 1943: 7). Early in 1946, a dark room was improvised in the basement of the residence so that photographs depicting the development of the refuge during that period could be included in Manager Grove's report (Narrative Report, Jan.-April, 1946: 18). Subsequently, a dark room was constructed in the Service Building.

When the Corn Creek Plot Plan was drawn in the winter of 1953, the residence (Quarters No. 2), was depicted with a light plant, septic tank, and a walkway to the front door, all surrounded by fence.

In the archives at Corn Creek there are many photographs that depict this residence, including a set taken during construction. Other buildings and facilities often appear in the background of these pictures, which thus become unintended sources of information about ranch improvements not noted elsewhere. One photograph in an envelope labeled “Excavating basement for Refuge Managers residence. 1941" [sic, should be 1942] inadvertently captured the unoccupied CCC camp to the west (Figure 6.34). This is the only photograph discovered thus far that captured that camp. At least six long, barracks-style buildings and several smaller ones can be seen, as well as an elevated water tank that must have served the camp. It is not certain that the tower drawn on the 1953 plot plan is the same structure.

A second photograph of the basement trench taken from the southwest includes a fine image of the Richardson-Worts ranch house and its associated sheds (Figure 6.37). The white-painted stuccoed addition built by Worts is prominent in the picture; this part of the original homestead was retained when the older residence was torn down in 1950. On the 1953 plot plan, the remaining section is identified as Quarters No. 5.

HISTORIC STRUCTURES DESCRIBED DURING THE ARCHAEOLOGICAL SURVEY OF CORN CREEK

The Euroamerican historic structures and features recorded and evaluated include the Railroad Tie House, the “Blacksmith Shop,” the Refuge Manager’s Residence, the Workshop, the Pump House, The Service Building, a Civilian Conservation Corps camp, seven trash piles, roads, fences, and other miscellaneous features. Each historic feature is described below. The Railroad Tie House and the “Blacksmith Shop” (the latter which turned out not to be historic in age) were the only “historic” features initially listed on the National Register nomination form.

RAILROAD TIE HOUSE (a/k/a Trapper’s Cabin, Brown’s House, Tie House, Mesquite House, Skull House)

The Railroad Tie House is the northernmost structure on the 1953 DGR Plot Plan. The building was made of used railroad ties, which became available in large numbers in 1920, when the LV&TRR tore up its tracks. Richardson and Young retrieved many ties and stockpiled them. Buildings, fences, pens, and many other projects at the Corn Creek Ranch were constructed from this supply. When George Worts, Sr. purchased the ranch in 1936, there were still abundant ties stored at the western edge of the property, and he, too, put them to many uses. He built the study, the shop-bunkhouse-tack room, fences, and even used them to line the ditches that carried the water from the springs to the reservoir.

The building was first used as a residence, captured in a 1936 photograph taken by Bob Worts (Figure 6.17). It is now divided into two rooms, but originally may have been only one. The 1936 photograph reveals one flue, rising from the center of the roof near its west end. The 1936 roof was corrugated metal; the wooden shake roof that now covers the metal one was in place by 1974. The two chimney holes that now pierce the roof reveal that since 1936, two wood-burning stoves were installed. A window and a doorway pierce the west end of the building, and another set opens along the south-facing wall. The interior walls of the building are covered with celotex. The building lacks a foundation.

This building (Figure 6.43) is the major historic structure surviving from the Ranching Period, and retains a high degree of historic integrity. The structure is defined in the National Register form as follows:

> Mesquite House is 16 × 26 ft and slightly over 8 ft high; its long axis runs north-south. Its walls are constructed with railroad ties of varying lengths, the longest measuring 8 ft 2½ inches. The ties vary also, from 7¾ to 8 inches in width and from 5¼ to 6 inches in thickness; therefore, the walls are about 6 inches thick. The ties are joined Lincoln-log style at the corners and are held with 6-inch nails. They are chinked with silt to sand mortar that is

highly weathered; in places the chinking has fallen out. The ties still contain railroad spikes, and old rail scars are visible.

The structure appears to rest directly on the ground, but a limestone rock has been placed at every tie butt or corner. The southeast corner has been undermined by animals to a depth of 18 inches and is not supported. The building has two roofs: an older low-pitch, corrugated metal one, with 3¼ inch × 1½ inches rafters 24 inches on center; and, built over the original roof, a medium-pitch one, with 2 × 4 rafters 25 inches on center supporting 1 × 6 inch sheathing that are covered with shingles. There are two chimney holes in the east elevation at the eave line, one of which holds and 8-inch ceramic flue pipe, with corresponding holes in the eaves above. At the southwest corner, the 12-inch limb of a mesquite tree rests directly on the open eave, causing the roof to part at the ridgepole and the fascia to pull loose.

The interior of the structure has been altered to provide storage space. It is divided into two rooms and has 3-inch tongue-and-groove flooring. In the east elevation, a window at the south end and a door near the north end provide 12% fenestration. A door at the east end and a window at the west end also provide fenestration of 12% in the south elevation**.** A window in the north elevation and a door n the west elevation afford 5% and 7% fenestration, respectively. The windows and doors are framed with 1 × 6 inch boards. The wooden doors are about 2½ x 5 inch; the window, about 2 × 3 ft. New glass has been put in the window (National Register Nomination Form, Corn Creek Site, on file Harry Reid Center).

Figure 6.43. The Railroad Tie House as it appears today; note that the window has been boarded up.

BLACKSMITH SHOP (a/k/a Eagle House)

This problematic shed appears on no early maps or plot plans, nor is it mentioned in the Acquisition Examination Report of 1939. Bob Worts remembered (in 2002) that there was “some kind” of shed near the Trapper’s Cabin. The photograph of the cabin taken by Worts in 1936 shows a steam traction engine in the foreground, and Worts recollects that there was a shed behind it, but out of the picture. According to Worts, it

was definitely not a blacksmith shop; rather, he described one of the three structures located just south of the ranch lane in the center of the property as the blacksmith shop and tool shed (see Figure 6.17). The Acquisition Examination Report did not describe any building as a blacksmith shop.

The walls of this three-sided shed are made of Ponderosa pine puncheons protected by a plank roof that slants toward the rear. The shed has a wooden plank floor, and in 1974, in the center of the shed there was an "anvil block" (NRHP Nomination Form, Site 26CK2605, 1974). The structure is described in the National Register from as follows:

> The Blacksmith Shop, which stands about 18 ft southeast of the Mesquite House (Railroad Tie House), its long axis running generally east-west, is built of split pine logs set vertically. It is 13 ft 5 inches × 11 ft 5 inches and about 7 ft 4 inches high, sloping downward about 3 inches from the south elevation, which is open, to the north (rear) elevation. It has a flat roof of 12 × ¾ inches by 14 ft timber planks, and wooden flooring, which has collapsed in places. (National Register Nomination Form, Corn Creek Site, on file Harry Reid Center).

Wire mesh blocking the otherwise open side of the shed was put in place to "protect the public" after the structure was listed on the NRHP. In 2003, the wire mesh is still in place, and the "anvil block" is visible in Figure 6.22. When was the shed built? When was the floor installed? What purpose did the plaque that evidently once hung on the mesh serve? Why was this shed not an important part of the inventory taken upon acquisition by the U.S. government?

Consulting the typewritten DWNR Real Property Inventory cards at Corn Creek, item number 19 is described as a "storage shed" known as Eagle house, built in 1950. A hand-written entry on this record notes further that the structure was "Nominated as historical bldg. 1974 Blacksmith Shop," and the date of its erection is crossed off. However, the name applied to the shed may provide one clue to its use, and to the date of its construction. As custodians and protectors of all the biota on the Desert Game Range (DWNR), information was collected about all kinds of fauna. Biologists assigned to work at the DGR conducted many studies and filed many reports about sheep and other mammals and birds. If an eagle were held in captivity for any reason, a suitable pen would be needed, and this shed might well have served the purpose, earning its appellation as "Eagle house." Further research should be conducted to verify any study of eagles, or holding any in captivity for any reason, since eagles are federally protected.

Regarding the fabric of the structure, and the time of its construction, it is interesting to note that the "unsightly sheds" that dated from the ranching period (one of which, according to Bob Worts, was used as a blacksmith shop and tool shed, see Figure 6.17) were removed from the courtyard early in 1949 (DGR Narrative Report, Jan-April 1949). Photographs of the courtyard area taken between 1936 and 1938 provide glimpses of these "unsightly sheds," built of materials that closely resemble those used in Eagle house. The personnel at Corn Creek were accustomed to recycling everything possible; certainly re-using the materials salvaged from old sheds to build another is a reasonable supposition. The very crude nature of the shed supports this proposition, since a structure to hold an eagle temporarily would not require solid craftsmanship. The wire mesh front allowed observation of the bird without entering the shed, and any plaque or sign on the front probably warned anyone passing by of the perils of teasing the bird or putting fingers through the mesh–thus "protecting the public." The "anvil block" might have functioned as a base for an eagle perch, rather than an anvil. Later use of the shed could have obscured its original purpose, so that by 1974, no one remembered why it had the name "Eagle house."

Recent investigations including test excavations and archival research by FWS architectural historian Lou Ann Speulda-Drews and archaeologist Kathleen Sprowl suggest the structure was probably built after 1960. The "Blacksmith Shop" was found not to be a contributing element to the Corn Creek National Register District in 2007 based upon FWS archival research and excavation. FWS maps narrowed down its construction to the mid-1960s and its use as a shed. Thus, it is not considered historic or eligible.

PUMP HOUSE

The modern pump house is a metal building set on a concrete pad, located southwest of the Skull House. This is the historic location of the "spring" identified by Bob Worts in the 1936 photograph of the Skull House (which he calls the Trapper's Cabin). This water was not a spring source, however, but the well drilled by Richardson in 1919. George Worts filed an application to use water from the springs, but the well was already in place and he was not required to file to use it. When the ranch was acquired by the FWS in 1939, this well was described as artesian, 6 inches by 300 feet, cased to 250 feet. The pump included in the property inventory was described as a 3 ½ hp. Economy gasoline irrigation pump on concrete base. The distribution system for the water produced from this well is not described separately from the system used for irrigation, although there were "pipes and connections with 15 outlets for domestic use around buildings." Since the Worts family installed indoor plumbing in the main residence and one other, undoubtedly some of these connections linked the artesian well to the houses, but it is not possible to describe the particulars. The location of this small pump and its concrete base is not delineated in the Acquisition Examination Report.

In the first report he filed after moving to Corn Creek in 1939, Refuge Manager Joe Allen noted (Narrative Report, Nov. 1939-Jan. 1940: 10) that he hoped to produce horse feed (hay and grain) on the ranch after the water supply was "improved." Not until 1943, however, was a larger pump installed. This pump doubled the production of the artesian well, and a water tank and tower erected to store the water and release it to the residences (Narrative Report, Jan.-April, 1943: 16; Corn Creek Photo Archives, "Water tank, April, 1943" and "Water tank at Corn Creek. Earl Brooks in photo. 1946.").

The pump was a "Wisconsin water pump," transferred to Corn Creek from Red Rocks Wildlife Refuge, and the tank and tower were shipped from Upper Mississippi Wildlife Refuge. Water pressure increased dramatically after the pump and tower were hooked up: "Previously when the water faucet was turned on a very small stream emitted. Now when the faucet is open we have pressure equal to that in any city." That summer, a concrete base was poured and the pump bolted to it. Finally Refuge Manager Groves noted that, also during the summer, a "simple, but storm and windproof shed" was erected on the concrete foundation to protect the pump. These improvements solved the problem of rain and blowing sand interfering with the pump operation (Narrative Report, Sept.-Dec. 1943: 7). The photo archives at Corn Creek contain an envelope with two photographs titled "Water pump on flowing well before construction of pump house. 1943." A separate envelope labeled "Pump house. Corn Creek headquarters. Oct. 1946 O. V. Deming" includes a photograph of the pump house before and painting. The building was not painted until 1946. (Narrative Report, May-Aug., 1946: 19). This wooden pump house appears on the Corn Creek Plot Plan, 1953 (Figure 5.44).

WORKSHOP (a/k/a Barn, Equipment Shed, Carpenter's Shop, Workshop and Tack Room)

This was a major building erected in 1938 by Skip Worts and some fellow students from Stanford University. The structure was intended to replace the ramshackle bunkhouse, tack room, blacksmith shop and tool shed used by the Richardsons and Youngs. The workshop was divided into three parts: workshop in the east portion, a smaller tack room at the west end, and the middle devoted to "bunkhouse" use, according to Bob Worts. The center of the building was open to the north, and was large enough to shelter several vehicles. Bob Worts took two photographs of this building in 1938, and both are in the Worts Collection at UNLV (Lied Library, Special Coll. Dept., Photo nos. 0007-0010, and 0007-0013).

The Valuation of Improvements list of the Acquisition Examination Report called this a barn (A). It was described as a frame building, measuring 18 × 100 × 8, with shingle roof and a concrete foundation. Its two rooms measured only 32 × 17 and 8 × 17; the open center is not expressly included in the description, and is detectable only by comparing the stated total length of the building with the size of the two rooms. The rooms featured wallboard ceilings, were plastered and wired for electricity. Special note was taken that the walls were built of railroad ties.

This building remained intact for many years, and appears in numerous photographs. Some of its original uses continued well into the 1980s, and the name assigned to the building reflects changes in use as well (the "Jeep Shed," for example). Part of the building was later demolished and replaced with a metal building that presently houses the Field Station offices and archives. The workshop portion of the building was retained, and is today used as a workroom called the "Carpenter's Shop."

SERVICE BUILDING

Constructed in 1943 (see Figure 6.41), this side gable Service Building measures 29 × 67 ½. It contains four garage bays and a closed shop bay, with pedestrian doors located on the gable ends (Figure 6.44). The building was made with a wood fame and a poured concrete foundation, and the original siding was asbestos shingle with a slate roof. When it was originally constructed, the Service Building had wood frame windows on each elevation, with five across the rear (Nevada SHPO Historic Resources Inventory Form, 2007:2). A darkroom was added in 1946. According to the form this building is one of only two that were designed and built for the refuge headquarters during the initial development period (prior to 1950). Along with the Refuge Manager's House, the Service Building is the only building that was constructed at Corn Creek before supplies and funds were cut because of World War II.

The Service Building was remodeled in 1996, and a metal roof, vinyl siding, aluminum sash windows, and new over-head doors on the garage bays were put in place (Nevada SHPO Historic Resources Inventory Form, 2007:2). The dark room was also converted into a restroom at this time. The building is now used for vehicle storage and maintenance.

Figure 6.44. Photo of the front of the Service Building taken in 2007, looking west (FWS photo).

OTHER HISTORIC FEATURES

A number of other interesting historic features and artifacts were also identified during the survey. These features include a well pump (Figure 6.45), roads, a dugout, the remains of a mine shaft, and a windmill, and various trash scatters. The windmill (Figure 6.46) and associated water well were built before the property was purchased by the FWS. The Civilian Conservation Corps may have used the well as a source of domestic water for their camp in 1941. There are also a few trash scatters and a road (Figures 6.47 and 6.48) found near the windmill. A metal frame made of railroad ties (Figure 6.49) was also found during the survey. Bob Worts, who lived on the ranch, remembered that this frame was used by his father to grade the dirt roads into the station. The frame was dragged behind the tractor or truck over the dirt road to level the washboard condition of the roads into the ranger station. The frame would have been used in the 1930s, and possibly earlier. The dugout (Figure 6.50) is a hollowed out area in a wash bank with a dirt floor and dirt wall. It also has a door made of milled timbers, a leather handle, and wire nails. Bob Worts remembers this dugout, although he does not know what it was or what it was used for. It was probably built before the 1930s.

Figure 6.45. HRA Archaeologist Richard Ahlstrom recording the wellhead with pump.

Figure 6.46. Windmill blades found during the survey of the Corn Creek Field Station.

Figure 6.47. A historic trash pile identified during the survey of the Corn Creek Field Station.

Figure 6.48. Historic two-track road identified during the survey of the Corn Creek Field Station.

Figure 6.49. Metal frame made of railroad ties that Bob Worts said was used as a road grader in the 1930s.

Figure 6.50. A dugout feature identified during the archaeological survey.