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**ARCHAEOLOGICAL INVESTIGATIONS AT  
34GR177, AN EARLY-20TH CENTURY DUMP SITE  
ASSOCIATED WITH GRANITE SULPHUR SPRINGS,  
GREER COUNTY, OKLAHOMA**

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By

**Robert Bartlett, Christa M. Wroblewski, Jessica A. Kepka,  
Brandon S. Reynolds and Chelsea R. Riley**



**Oklahoma Department of Transportation  
Environmental Programs Division  
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200 NE 21<sup>st</sup> Street, Oklahoma City.**

**ODOT Cultural Resources Research Report Series, Number 3  
March, 2017**

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## Foreword

This report serves as the third publication in the Oklahoma Department of Transportation (ODOT) Research in Cultural Resources series. As part of the Federal Highway Administration (FHWA) compliance process under Section 106 of the National Historic Preservation Act, cultural resources staff from ODOT routinely encounter twentieth-century archaeological sites that must be documented and evaluated for eligibility for the National Register of Historic Places. Many of these sites represent scatters of mid-twentieth century debris associated with rural farmsteads or homesteads, and seemingly offer little in the way of research potential. When 34GR177—the subject of this report—was documented during improvements to State Highway 6, in 1997 and then again in 2009, it was soon clear that the archaeological materials at this site were different and significant to the history of Oklahoma.

Continued investigation and study was able to associate the archaeological materials from 34GR177 with the nearby early twentieth century resort of Granite Sulphur Springs (34GR114), which is located just south of the site. Through extensive archival research of newspapers, postcards, and historical photographs, this report pieces together events that occurred at the Granite Sulphur Springs resort between 1900 and 1920 and ties them to artifacts recovered at 34GR177. Taken together, the material and historical information from these sites provide a unique, local window into some of the people and recreational and political activities associated with this dynamic period of Greer County and Oklahoma Statehood.

Robert Bartlett, the senior author of this publication, served as the Oklahoma Highway Archaeologist from 1993 until 2006, when he assumed the title of Program Director for the newly developed ODOT Cultural Resources Program. Under Bartlett's supervision, ODOT conducted archaeological site testing and mitigation of sites throughout the state that would be affected by transportation improvement projects. Robert stepped down as program director in 2013 to spend the last few years of his career finalizing reports for some of his most important projects. His ultimate goal, however was to complete the data recovery report for 34GR177 before his retirement from the program. This effort was truly Robert's highest priority, and his personal and professional interest in the project is reflected in the quality and importance of the information in this volume. This volume is an interesting and important contribution to the history of Oklahoma.

Scott A. Sundermeyer, RPA  
ODOT Cultural Resources Program Director



## **Abstract**

Archaeological site 34GR177 was recorded in 1997 by Roger Burkhalter while conducting a cultural resources survey for proposed reconstruction of State Highway (SH) 6 in Greer County, Oklahoma. Those investigations recommended additional testing of the site, should it be affected by the proposed highway undertaking. The site was reexamined by the ODOT Cultural Resources Program in 2010 prior to the proposed highway reconstruction. While the site was found to have been disturbed by past activities involving installation of a drainage berm and pond construction, it was determined that the site was comprised mostly of early-twentieth century cultural material. Archival work conducted during the 2010 investigations noted that the White Sulphur Springs archaeological site (34GR114), located approximately 0.5 miles south/southwest of 34GR177, was the location of an early-twentieth century resort referred to as Granite Sulphur Springs. This resort, centered on a source of Sulphur infused mineral water, was host to a range of activities including medically related practices and large gatherings and picnics often sponsored by groups such as the Independent Order of Odd Fellows and the Socialist party. Based on the determination that 34GR177 appeared to contain a single component of early-twentieth century materials, which may be linked to Granite Sulphur Springs, or at a minimum provide information regarding the initial settlement of this portion of Greer County, it was determined that the site was eligible for inclusion in the National Register of Historic places under Criterion D. Subsequent data recovery and analysis indicates that a bulk of the deposits at 34GR177 are associated with activities that occurred at Granite Sulphur Springs from 1900-1920.

Upon execution of a Memorandum of Agreement (MOA) to mitigate adverse effects to the site, and right-of-way acquisition, the archaeological fieldwork was initiated and completed by staff from the ODOT Cultural Resources Program between May and June, 2010. Fieldwork consisted of an intensive survey and collection of surface diagnostic artifacts. Artifact analysis, cataloging, and packaging was completed by cultural resources staff from Burns & McDonnell. The detailed analysis of diagnostic artifacts is presented as a CD attachment to this report. In accordance with 36 CFR 79, artifacts were curated at the Sam Noble Oklahoma Museum of Natural History in September, 2016.



## **Acknowledgments**

This completion of this project is the result of the efforts of many people. Dawn Sullivan, Director of Capital Programs and Siv Sundaram, Environmental Programs Division Engineer are recognized for their unwavering support of the project from inception to its completion. Rhonda Fair and Lauren O'Shea are acknowledged for valuable assistance in research of the site and the recovered artifacts. Christa Wroblewski, Jessica Kepka and the group with Burns and McDonnell are extended great appreciation not only for putting up with me for a couple of years, but for producing a fine description and analysis of the 34GR177 artifact assemblage which is a major contribution to historic archaeology in Oklahoma. Mr. Scott Sundermeyer, Director of the ODOT Cultural Resources Program, has been very supportive of the project from being a participant in the field work to facilitating the completion of the final report. Other members of the field crew are thanked including Lauren O'Shea, Mike McKay and Rhonda Fair. Kristina Wyckoff provided assistance with formatting and assembling the final report.



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## Chapter 1 Introduction

Site 34GR177 was recorded during a 1997 cultural resources survey conducted for proposed widening of SH-6 through Beckham, Greer, Jackson, Kiowa and Washita Counties (Bussey et al 1998). The site was recognized as a small dump containing largely early-twentieth century items (Bussey et al 1998:12). Though no historic association was discussed, the site was recommended for further evaluation prior to any potential impacts by the project. Consultation with the SHPO and the State Archaeologist regarding the multi-county SH-6 project was completed in 1998 with concurrence for further evaluation for 34GR177 being among the recommendations.

In 2009 the section of the project north of Granite in which 34GR177 is present was scheduled for R/W acquisition and construction [Project # STPY-028B(114); JP 10100(04)]. Site 34GR177 was subsequently visited by the ODOT Cultural Resources Program on July 30<sup>th</sup> and August 13<sup>th</sup> & 19<sup>th</sup> of 2009. During this time the site was subjected to an intensive surface inspection and shovel testing. This inspection resulted in better defining the site boundaries, a determination that the material is largely confined to the surface and upper 5 cm of soil, and recognition of previous site disturbances such as pond construction on the north portion of the site and construction of a drainage berm across the southern portion of the site. Despite the disturbances, the survey of the site provided confirmation that the materials largely dated from the late-nineteenth - early-twentieth century. Further, it appeared that medicinal-related bottles comprised a significant portion of the items dumped on the site.

Background research conducted as part of the 2009 site evaluation revealed that a previously recorded site, 34GR114, the location of a small, early-twentieth century resort know as Granite Sulphur Springs was located approximately 1/2 mile (780m) south/southwest of 34GR177 (Figure 1.1). The research revealed that many health seekers visited the resort and at times Doctors located their practices at the location. The resort, centered on a Sulphur spring and well, contained a bath house, roller rink, hotel and restaurant and was the site of many large gatherings and picnics as well as a popular camping spot. These activities began around 1900 and continued until around 1918-1920 when most of the activities ceased. The research further revealed that locations of the Granite Sulphur Springs resort and 34GR177 were both located on property originally patented to W.W. Marsh in 1900 and 1904.

Based on the site survey and background research, it was determined that 34GR177 may very likely be associated with activities at Granite Sulphur Springs. Though it was determined that 34GR177 had been largely disturbed, it appeared to contain a single component comprised of a variety of artifacts that likely are associated with early-twentieth century activities at the Granite Sulphur Springs resort, or at a minimum could provide information regarding the initial settlement of the area in the late-nineteenth and early-twentieth century.

Based upon these findings the site was recommended as eligible for inclusion in the NRHP under Criteria D, and consultation with SHPO, the State Archaeologist and pertinent Native American Tribes resulted in concurrence with this determination. The project proposed about 200 feet (63m) of new R/W width through the site area. This was determined to be an adverse effect and a Memorandum of Agreement (MOA) among FHWA, ODOT, SHPO and State Archaeologist stipulating data recovery from the site was executed in March of 2010.

**Figure 1.1. Location of 34GR177 in \_\_\_\_\_ on the 1971 U.S.G.S. Granite Quad. Note location in relation to Granite Sulphur Springs and the town of Granite.**

The data recovery began after right-of-way (R/W) acquisition and occurred during May and early June of 2010. A portion of the recovery occurred in September of 2010 while monitoring the removal of top soil in the site area. This report presents the findings of the data recovery at 34GR177 as well as the results of archival research conducted regarding Granite Sulphur Springs.

## Chapter 2 Environmental Background

Site 34GR177 is located in Greer County of southwest Oklahoma about 1.5 miles north of Granite, Oklahoma. (Figure 2.1). The site is within the Central Red Bed Plains province near the northern extent of the Wichita Mountains Region (Curtis, Ham and Johnson 2008). The general topography of the area is relatively flat to somewhat rolling plains punctuated with steep granite hills of the northern Wichita Mountains. These granite outcrops are manifest as steep isolated hills rising above the Red Bed Plains. One of the larger hills is Headquarters Mountain which rises 500-600 feet above the surrounding plains to a height of 2,260 feet above mean sea level (amsl). The town of Granite is situated at the southern base of Headquarters Mountain (Figure 2.1).

**Figure 2.1. Location of 34GR177, 34GR114 (Granite Sulphur Springs), Headquarters Mountain, and Granite Oklahoma as viewed from a Google Earth image dated 3/8/2014 (note reconstruction of SH-6 to four-lane divided facility), view to southwest.**

The Red Bed plains in the area are formed largely on deposits derived from Permian aged clays, shale and sandstone (Clifton 1928, Johnson 2008). The natural vegetation consists of mixed grass eroded plains vegetation comprised largely of dropseed, beardgrass, little bluestem, side oats grama, hairy grama and Indian grass (Hoagland 2008). The bases and lower slopes of the Wichita Mountains, including Headquarters Mountain contain Cross Timbers vegetation dominated by blackjack and post oaks (*ibid*). The mean annual rainfall in

the region is around 28 inches with a mean annual temperature of 60 degrees Fahrenheit (Johnson 2008). Period photographs and early descriptions of the of the area reveal that the during the early twentieth century the area was dominated by mixed grasses with groves of hardwoods along streams and along the base and coves of the Granite Mountains. The scrub mesquite, cedar and small trees now present over much the area were not present in the early-twentieth century. The attraction to the area by cattle ranchers in the late-nineteenth century indicates the grass dominated landscape was present during this time as well.

Site 34GR177 is about .8 km north of Armstrong Creek which flows along the northern base of Headquarters Mountain and confluences with the North Fork of the Red River about 3 km east of Headquarters Mountain (Figure 2.1). Armstrong Creek is an ephemeral stream carrying water only part of the year. The stream's headwaters are only about 1.75 km northwest of the location of Sulphur Springs and drains into the North Fork of Red River about 3.5 km east of the location of Sulphur Springs. Along the northeast edge of Headquarters Mountain, Armstrong Creek abuts the base of the mountain. Here an aquifer has formed in the clay and gravel at the base of the mountain (Gould 1905; Gunning 1972). During moist seasons, small seep springs emerge into Armstrong Creek from the subsurface deposits along the base of the mountain. The waters were found to contain sulphides (Gould 1905). The sulphur bearing waters can be tapped with relatively shallow wells (Gunning 1978).

### **Site Specific Setting**

Site 34GR177 contains artifacts deposits largely deriving from the first years of the twentieth century. The items occur along the edges of an erosion feature, or arroyo formed along the edge of an outcrop of Hennessy shale (Merrit 1958). Most of the artifacts are draped on the lip, slope and base of the erosional feature. Now, heavily altered by modern disturbances such as pond construction and shale quarries, the erosional feature (arroyo) begins about 120 m west of the site and opens broadly just east of the site. The archaeological deposit occurs mostly on the north facing south slope of the erosional feature as well as the east facing slope of a small gully that has cut southward and is present just off the west edge of the pre 2010 SH 6 R/W. The slopes on this gully feature are acute and rise about 3 m from the gully floor.

The pre-2010 SH 6 R/W bordered the east edge of 34GR177 and likely impacted the site when the highway as constructed along the Section Line. A county road was present prior to the highway being constructed in 1955 which followed the section line as well. A review of the 1955 plans reveal that this county road followed the lay of the land through the location of 34GR177. At this time the plans indicate the road traversed down a north facing slope of the hill and crossed the arroyo over fill and a small 18 inch diameter reinforced concrete pipe. When SH 6 was constructed in 1955, the highway cut through the hill and its northern slope which resulted in a 2-3 m vertical cut along the west R/W where 34GR177 is situated. A layered shale deposit is exposed in the R/W cut from just below the surface to about 50-75 cm

below the surface. The 1955 plans also indicate that this highway construction likely impacted and/or removed about 30-40 feet of area west of the old county roadway which may have contained additional early-twentieth century deposits along the lip of the arroyo feature.

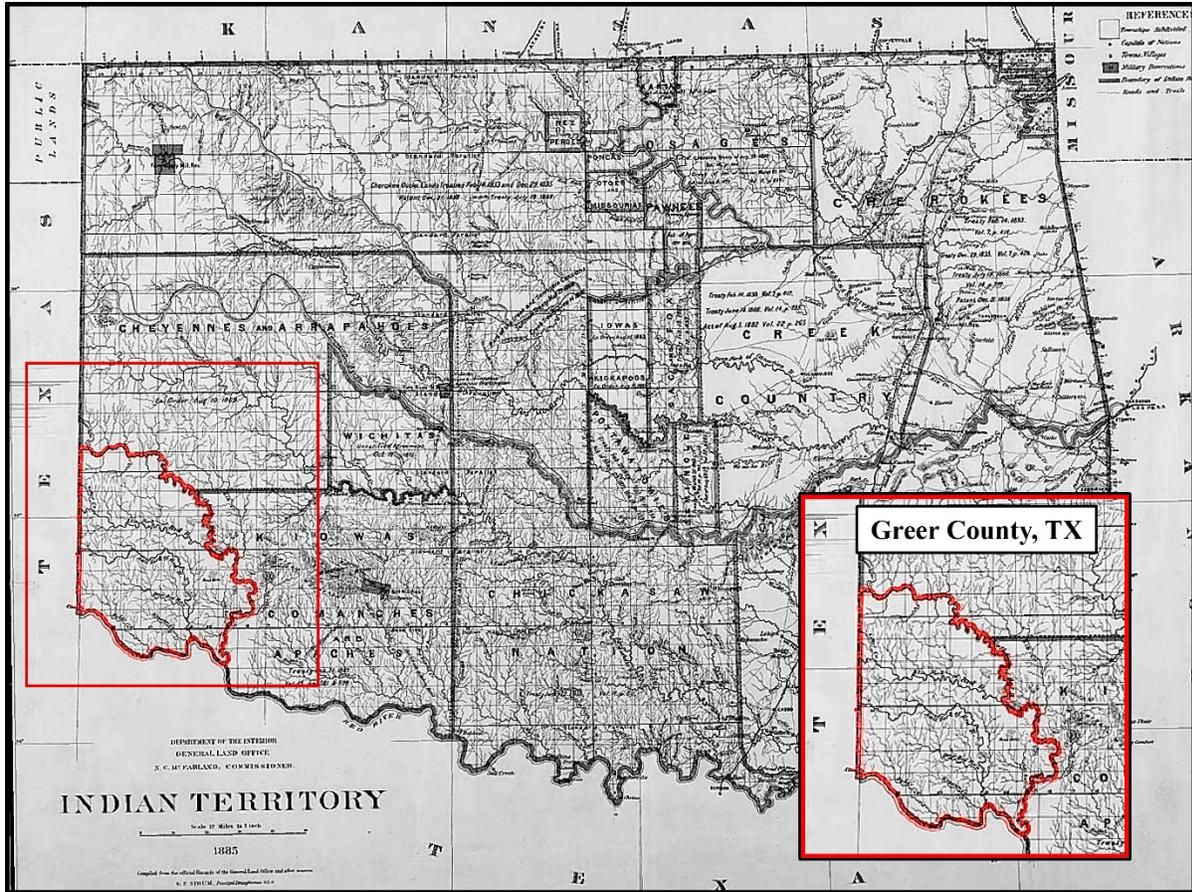
The site location is dominated by grasses and prickly pear cactus as well as mesquite, cedar and small, scattered elm trees. The cedars cover much of the gully walls. Period photographs of the Sulphur Springs resort suggest that during early-twentieth century this area was covered mostly in mixed grasses and the scrub trees such as mesquite and cedar were not present (see Chapter 9). Early-twentieth century descriptions of the local area also mention “groves” near the base of the mountains. The 1900 GLO map illustrates an “Elm Grove” near the southern base of Headquarters Mountain but provides no details regarding the north side of the mountain where Granite Sulphur Springs came to be located (see Figure 3.3 next Chapter). Early descriptions of Granite Sulphur Springs mention shade trees at the base of the mountain and along Armstrong Creek.



## Chapter 3 Granite and Early Settlement of Greer County

What is now Greer County Oklahoma became part of the United States in 1819 when the Adams-Onis Treaty between the United States and Spain established the 100<sup>th</sup> meridian from the Red River north to the Arkansas River as part of the boundary between the United States and Spanish territory in North America (Heisch 2009). When Mexico became independent in 1821, the same boundaries were recognized. After Texas became an independent Republic in 1838, and subsequently became a State in 1845, the boundaries were subject of a land survey to establish the 100<sup>th</sup> meridian (*ibid*). A mistake was made which placed the 100<sup>th</sup> meridian east of its true location and combined with the belief by the surveyors that the North Fork of the Red River was the main channel of the Red River, led to Texas claiming this portion of southwest Oklahoma as part of Texas in 1860. However, the error had come to light while establishing the location of the 100<sup>th</sup> meridian in 1857 when the United States was surveying the area as part of the Chickasaw and Choctaw territory (*ibid*). Due likely to larger issues such as the Civil War, the matter of the boundary was not pursued by either Texas or the United States, however, Texas laid claim to the area by establishing Greer County, Texas which includes what are now known as Greer, Jackson, Harmon and southern Beckham Counties of Oklahoma. Apparently in recognition of the land dispute, Greer County, Texas was not included within either the Cheyenne Arapaho reservation established by the United States in 1869, or the Kiowa, Comanche and Apache Reservation established in 1867 (Figure 3.1). The North Fork of the Red River formed a part of the southwest boundary of the Cheyenne Arapaho reservations and formed the western boundary of the Kiowa, Comanche and Apache Reservation. While only sparsely settled, the area encompassed by Greer County Texas was subject to cattle grazing, ranching and remained bison habitat until their eradication from the area by the 1870's. When the Organic Act for the Territory of Oklahoma was passed in 1890, the boundary dispute was required to be officially settled in a legal case before the Supreme Court, the *United States vs Texas*. As a result of the legal decision, Greer County Texas became Greer County, Oklahoma Territory in 1896 (Heisch 2009). Mangum was designated the County seat of the county which encompassed the area of Oklahoma now represented by Greer, Jackson and Harmon Counties as well as the southern half of Beckham County.

The Texas Cattle Trail (also known as the Western Trail) passed through Greer County between 1871 and 1890 approximately 3-4 miles east of Granite (Tennant 1936, Figure 3). During this time much of Greer County, Texas as it was known was subject to cattle grazing both by the trail herds coming from Texas and herds that grazed in the area to fatten before being driven up the trail. Large ranching operations such as the Day Land and Cattle Company and the Ikard and Harrold ranch grazed several thousand cattle in Greer County in the 1880's (Wilson 2002). A system of free range cattle grazing was employed in which cattle belonging to the different cattle companies mixed and grazed freely.



**Figure 3.1. Map of Indian Territory, 1885. Greer County Texas 1860-1896 in red (Wikipedia.org).**

The ranching operations consisted of a headquarters, usually a dugout and a small building or two, with line camps surrounding the grazing range at 15-20 mile intervals. The line camps usually consisted of a small dugout housing two riders who would ride in opposite directions from each camp each day meeting up with riders from the adjacent camps and returning (Coursey 1937). Many of the cowboys were employed as cattle cutters who would be responsible for separating out the cattle by brands prior to shipment or driving up the trail to locations in Kansas and points north. They also assured that grazing cattle belonging to ranches were separated from those being driven to market over the trail. Over the course of the year the free grazing cattle herds of different ranching operations would become mixed and the job of the cattle cutters was to separate the cattle belonging to the different ranches. Many of the cattle cutters and cowboys who worked in Old Greer County through the 1880's settled in the area when the land was opened for settlers. Some, such as Fox Chambers, George Briggs and S. H Tittle became early settlers in and around Granite.

One commonly used stopping place on the Texas Cattle Trail was known as Comanche Springs located along the North Fork of the Red River about five miles northeast of Granite (Mayer

1937b; Tennant 1936; Figure 3.2). Here, fresh water springs near the North Fork of Red River provided a source of good water for the cattle drives. The location also served briefly as a stage stop between Fort Sill Oklahoma and Fort Elliot Texas until 1879 (Mayer 1937). Springs were very important resource in this relatively arid portion of Oklahoma. Jay Buckle springs is another significant spring in Greer County that was listed on the NHRP in 2008. The spring served early ranching operations in the late-nineteenth and early-twentieth century and served as a gathering place for the local rural community for picnics and gatherings (Cassity 2008). The North Fork of the Red River was the northern and eastern boundary of Greer County Texas and served as the western boundary of the Comanche and Kiowa Reservation established in 1867 (see Figure 3.1). Native Americans were well aware of springs in the area and the Kiowa tribe refers to a spring located near Mount Walsh (adjacent to Headquarters Mountain) as “love making spring” (Meadows 2008:288).

**Figure 3.2. Location of Western or Texas Cattle Trail in relation to Sulphur Springs and 34GR177. Adapted from Map of the Portion of Oklahoma Showing the location of the Old Texas Cattle Trail, Oklahoma State Highway Commission, 1933.**

During the period from 1870-1890, the cattle drivers and few ranchers in the area, interacted with the Native Americans, mostly Kiowa and Comanche from the adjacent reservation through the trading of beef and horses. In the winter of 1878, U.S. troops from Fort Sill accompanied a band of Kiowas into Greer County to hunt wild game including any bison if present (Nye 1974:236). The Native Americans also sought trade with the early settlers in the

vicinity of Granite. In a 1937 interview conducted by the Works Progress Administration (WPA), Mrs. W. W. Marsh stated that when they moved to Granite in 1893, she had several colorful quilts and that whenever they were hung out to dry, she would be approached by Native Americans on horseback who would try and trade for the quilts (Mayer 1937a).

Due to the disputed land claims to old Greer County by Texas, the area was not open to the initial Oklahoma Territory land runs of 1889, 1891 or 1893. As a result of the Supreme Court decision in 1896 occasioning Greer County as becoming part of Oklahoma Territory, and a subsequent bill by U.S Representative Jeremiah Cockrell designed to protect settlers already present in Greer County, land Patents began to be issued in June 1897 (Heisch 2009). Under the provisions of the bill passed in Congress in 1897, settlers already in Greer County could file for land claims on a quarter section of land paying only the land office fees. The settler could also file claim on another quarter section of land at the cost of one dollar an acre (*ibid*). Most of the settlers were from Texas and had pending claims through the State of Texas.

The first settlement of any size in Greer County was Mangum established in 1882 by Henry Clay Sweet on a land grant in 1882-83 to Aaron S. Mangum (Bielich 2009). The Greer County land grant was from the state of Texas as ownership of county was still in dispute with the United States government. In 1879 the Texas legislature acted to make the public lands in Greer County available to veterans of the Texas Revolution and the Civil War or their widows through land grants of 640 acres. This was later changed in 1881 to 1,280 acres (Kilpinen 2005:74-75). By 1883, 242 veterans held land certificates in Greer County (*ibid*). One of the land grant holders was Aaron Mangum a veteran of the Texas War for Independence. Aaron Mangum hired Mr. John Swisher to survey and settle a town site on the land grant which became Mangum. Mr. Sweet, a veteran of the Texas War for Independence and the Civil War was granted land in Greer County as well and became a land speculator obtaining thousands of additional acres through buying grants from other veterans or going into fifty-fifty splits (Kilpinen 2005). Some of the land surveyed and obtained by Sweet was in the location of the future town of Granite. At this time all County business was done through Wheeler County, Texas as Greer County had no organized government. In 1886, a County government was established with Mangum as the County seat for Greer County Texas (*ibid*). Mangum continued as the County seat of Greer County Oklahoma Territory, and was named County seat of Greer County, Oklahoma upon Statehood in 1907.

Many of the early settlers were people familiar with old Greer County either working as cattle drivers, riding line for the large ranches, or freighting through the area. Others had pursued land grants from the State of Texas which had authorized grants for all Texas veterans of the Civil war and War for Texas Independence (Kilpinen 2005). Many of these settlers understood that as soon as the legal wrangling between the State of Texas and the United States clarifying the status of Greer County was completed that the area would be quickly settled and towns

established. Not only did this present opportunities to obtain land very affordably, but would present numerous business and entrepreneurial opportunities. The knowledge that the rail road would soon arrive in the area also spurred settlers looking for business opportunities.

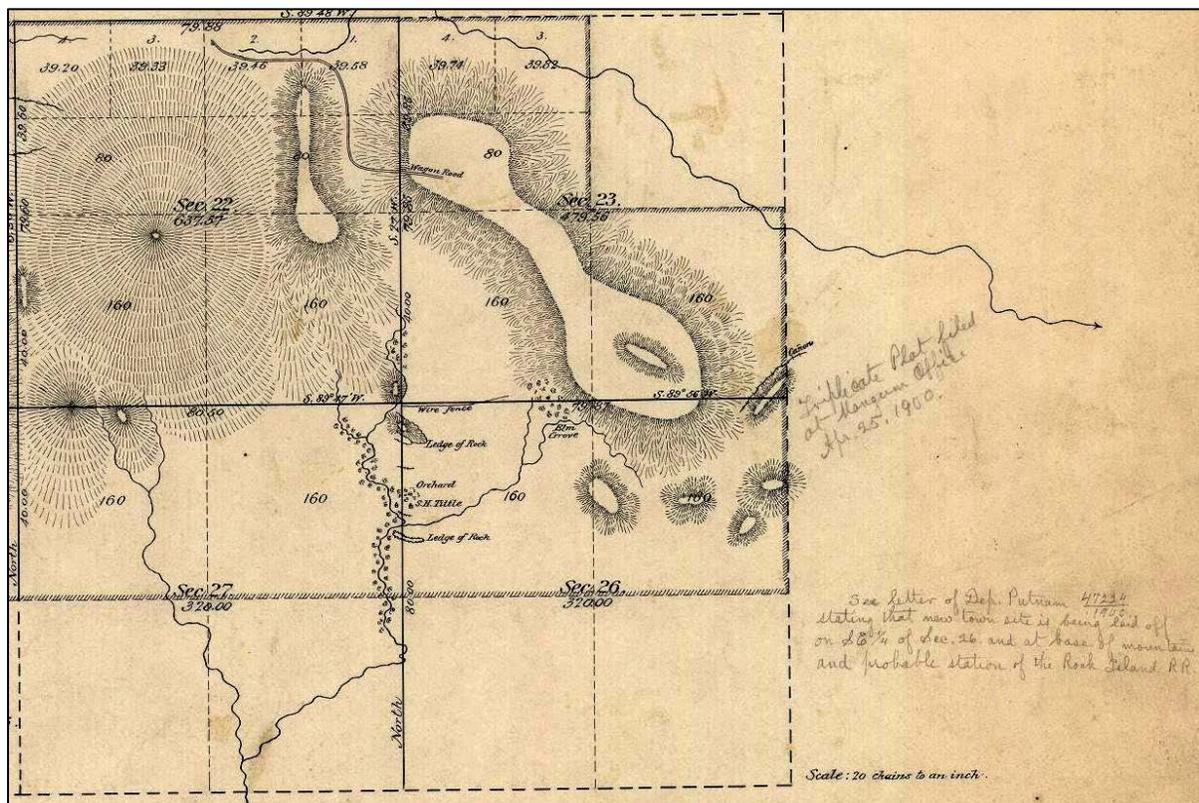
By 1886, settlers began land improvements on many of the land grants. Small, sparsely populated centers came into existence. Early post offices were established at these locations including Frazer in February 18 1886, Mangum on April 15, 1886, Navajoe on September 1, 1887, Quartz on February 25, 1888 and Mount Walsh on December, 5 1888 (Foreman 1928).

A post office was established at Granite in December of 1899 (Shirk 1974:103). At that time the town site was not platted and consisted of a community of initial settlers living in log homes and dugouts (Mayer 1937a). Granite was but one of a handful of loose rural communities in the area in the late-nineteenth century. Among these was a small community centered on a school near the south base of Headquarters Mountain known as Mountain Home (Thackitt 1937). Other small rural communities in the vicinity with post offices at the time include Quartz and Mt. Walsh (Shirk 1974). Mount Walsh had a post office from December of 1888 until August of 1900 when the mail service was relocated to Granite (Shirk 1948:242). While the exact location of the community post office is unknown, Mount Walsh is adjacent to Headquarters Mountain and Rock Cemetery, established in the shadow of Mount Walsh in 1888 three miles east and .5 miles north of Granite is also known as Mount Walsh Cemetery. The location of the Quartz post office is also not exactly known. It provided local mail service from February 1888 until July 1900 when mail service was moved to Granite (Shirk 1948:243). The Quartz Cemetery located 3 miles south and 2 miles east of Granite may be a clue to location of Quartz.

Granite is not indicated on pre 1900 maps though it was in existence as a post office in 1899. In 1900 the Granite town site was platted by K.C. Cox and the town quickly began to grow after arrival of Chicago, Rock Island and Pacific Railroad (C.R.I. & P.) that same year. In the years 1889-1892 the C.R.I. & P. constructed a rail line from the Kansas State line north of Medford, Oklahoma, south to the Texas State line south of Waurika, Oklahoma (George and Wood 1943). This line passed through Chickasha, then Indian Territory, in 1892 connecting the Territory with well-established markets to the north and south. In 1900, the C.R.I. & P. constructed a 98 mile long line from Chickasha to Mangum, in Greer County (*ibid*). Several small stations were set up along the rail line between Chickasha and Mangum including Granite. At this time locations east of Granite which became towns such as Lone Wolf, Mountain View, Hobart and Gotebo between Chickasha and Granite were located within the Kiowa-Comanche-Apache Indian reservation and could not be opened for settlement and town site development until after 1901 when the reservation was officially dissolved and the land opened to settlement. Granite, however, had no such restrictions on town site development

and this was likely a factor in the quick establishment and initial growth of the Granite along with the economic and market access provided by the rail road.

By 1900, the combination of new settlers and the arrival of the railroad to Granite as well as Mangum, 8.5 miles southwest of Granite, created business opportunities which were many and varied. In addition to continued ranching, early industries began to develop in the area including cotton farming and granite quarrying. The May 9, 1900 edition of the Mangum Star reported that K.C. Cox and J. N. Olds have charge of the town site affairs of Granite and have bought lumber in Mangum to build an office (The Mangum Star [MS] May 9, 1900). This report suggests that little in the way of constructed buildings were present in Granite as of early 1900. A General Land Office map of Sections 21-28, Township 6 North, Range 21 West, produced in 1900 from an 1899 survey only documents the presence of S. H. Tittle's residence near the southern base of Headquarters Mountain (Figure 3.3). A handwritten note on the map mentions that a new town site was being laid off in the SE ¼ of Section 26. However, no structures that may have been present at that time appear on the map. This location became Granite.



**Figure 3.3. General Land Office Map of 1900 showing the area around Headquarters Mountain and Walsh Mountain with hand written note about Granite Town Site in SE ¼ of Section 26.**

The Granite Enterprise edition of January 4, 1901 contained a summation of the founding of Granite and stated that 200 businesses and 300 residents are now present (GE, January 4, 1901). By 1903-03, the Polk's Gazetteer and Business Directory lists five physicians, five hotels, four banks, four grocers, three saloons, two billiard halls, two drug stores, one restaurant, a telephone exchange and a heat and gas company in Granite, as well as a couple of liveries, a wagon yard and a couple of general stores (Polk's 1903;189-190). A newspaper, *The Granite Enterprise* was started in 1900 with J. W. Ryder as its first editor. The newspaper is still in operation today. By 1907, when Oklahoma was granted Statehood, the population of Granite stood at 1,026 (Haynes and Burkhalter 2009).

By 1909 there were four companies quarrying granite in the vicinity of Granite (Haynes and Burkhalter 2009). The 1910 Sanborn Maps for Granite show two cotton gins, a grain elevator, corn crib and two wagon yards with camp houses in Granite. Three churches a public school and at least three boarding houses and one hotel were present in 1910. In addition to a bakery and two banks, three grocery stores and two drug stores are also present on the Sanborn map. A merchandise, hardware and general stores as well as a couple of restaurants and pool halls are also present in 1910. An electric light plant is indicated as under construction and several buildings are noted to have gasoline engines behind them which could be powering small electric generators. While the Granite Sulphur Springs existed at this time, it is not covered by the Sanborn maps as it is located outside the Granite City limits. Soon after 1910, the State of Oklahoma opened the Granite Reformatory at Granite. The reformatory is still in operation today and has been important in the history of Granite since it was opened.

One of the early settlers of Granite was W. W. Marsh who was issued a Patent in October of 1900 for the T6N, R21W (Figure 3.4). The Marsh's had been in the area since 1893 (Mayer 1937) and W. W. Marsh is listed on the 1895 tax records for Greer County, Texas (okgenweb.net). This plot of land contained the sulphur spring at the base of Headquarters Mountain and is the location of what became Granite Sulphur Springs (recorded as 34GR114). Mr. Marsh established a farm in this area (GE December 28, 1900) which was soon occupied by his brother (GE, February 22, 1901). In February 1904, W. W. Marsh received a Patent for the

T 6N, R21W. The location of site 34GR177 is situated within the T6N, R21W (Figure 3.4). Mr. William W. Marsh died in 1908 and Mrs. Kitsy Marsh lived until 1942. In 1908, the deed was transferred to Mrs. Kitsy Marsh. The records at the Greer County courthouse indicate that Mrs. Marsh obtained a mortgage on the property from William Sherman. By the mid 1930's William Sherman had become the owner of the property.

The Marshes were present in the area of Granite as early as 1893 (Mayer 1937). They were likely established on a 320 acre parcel as part of the 640 acre veteran land grants issued from Texas for Greer County. Being a previously established settler in Greer County, they could

claim 160 acres per the Supreme Court decision of 1987. Since the first 160 acres patent obtained in 1900 would reflect four years of established improvements on this parcel (parcel containing granite Sulphur springs). The patent on the 160 acre northern portion of the Marsh property was issued in 1904. This portion was acquired per the 1897 bill for homesteaders in Greer County and purchased for \$1.00 an acre.

**Figure 3.4. Locations of archaeological sites 34GR177 and 34GR114 (Sulphur Springs) on the W. W. Marsh property after initial land patents. Adapted from U.S.G.S. Granite Quad, 1971.**

### **Early Railroads and Granite**

Prior to the arrival of the C.R.I. & P railroad in 1900, much of the trade for settlers in Greer County was accomplished through ties with Quanah and Vernon Texas (Hightower 2008). Haulers used wagons powered by horses or mules. Due in large part to Oklahoma being Indian Territory up until the late-nineteenth century, rail development was slow to begin (George and Wood 1943:8-10). The first rail road was constructed by the Katy in 1871-72 entering Indian Territory north of Vinita and constructing south to Denison Texas. It would be another 15 years before much more in the way of rail road construction would occur in Indian Territory (George and Wood 1943:11). By 1892 the Rock Island had constructed a north-south rail line through the center of what became Oklahoma. The line followed the basic route of the Chisolm

Trail (George and Wood 1943:12). The route connected central Oklahoma with the well-established rail road grid in the Mid-west and Northeast as well as lines reaching into the Gulf of Mexico. Following this rail line construction several branch railroads were constructed in Indian and Oklahoma Territories up until 1907 when most major construction ceased (George and Wood 1943:13). One of the lines extended west from Chickasha across the Kiowa Indian Reservation to Greer County and Mangum in 1900. Granite was founded along this line and quickly grew within months of the completion of the rail road. From its beginnings, Granite had access to rail and the markets accessed by the national rail system. This greatly facilitated the rapid establishment of Granite as items such as lumber and hardware, could be readily accessed by railroad whereas previously this would involve freighting or hauling items by wagon from Vernon or Quanah Texas (Hightower 2008).

The railroad greatly facilitated access to Granite Sulphur Springs located just north of the town of Granite and likely figured in its development as a resort destination. Visitors could arrive by rail and reach the springs through taxi services.

### **Granite Sulphur Springs and Late-Nineteenth and Early-Twentieth Century Health Resorts**

During the late-nineteenth and early-twentieth century health spas and resorts centered on mineral waters flourished across the nation. This popularity coincided with the rise of diverse medical treatments for all types of ailments including the drinking of and bathing in mineral waters, electric treatments and magnetic healing. Such resorts and health spas not only served to provide medical relief but also as places for important social functions and gatherings (Malley 2009). In addition, local entrepreneurs saw opportunity at these locations for the development of businesses such as hotels, sanitariums and bathhouses as well as a means to boost the local economy and population.

In Oklahoma, health spas and resorts developed around a few mineral water springs and wells beginning around 1900. What was known as Sulphur Springs in the Chickasaw Nation of south central Oklahoma became Platt National Park in 1902, but not before the town of Sulphur began to be developed as a resort around the many artesian springs contained in the park. As the park was established the town had to move in 1902. However, bathhouses and hotels remained a thriving business in the new location adjacent to the park (Muncrief 2009). Today the park is the Chickasaw National recreation area and the springs remain popular attractions. The park is greatly enhanced by masonry features such as pavilions, camp sites and bridges constructed by the Civilian Conservation Corps (CCC) in the 1930's. Around 1904, the cities of Claremore and Nowata in northeastern Oklahoma began to develop several bathhouses and hotels centered on mineral wells that resulted from the drilling for oil (Malley 2002). These particular spas were advertised as providing radium waters, however, it is thought that the term "radium" was simply applied as a means of attraction rather than from known quantities of radium in the water (*ibid*).

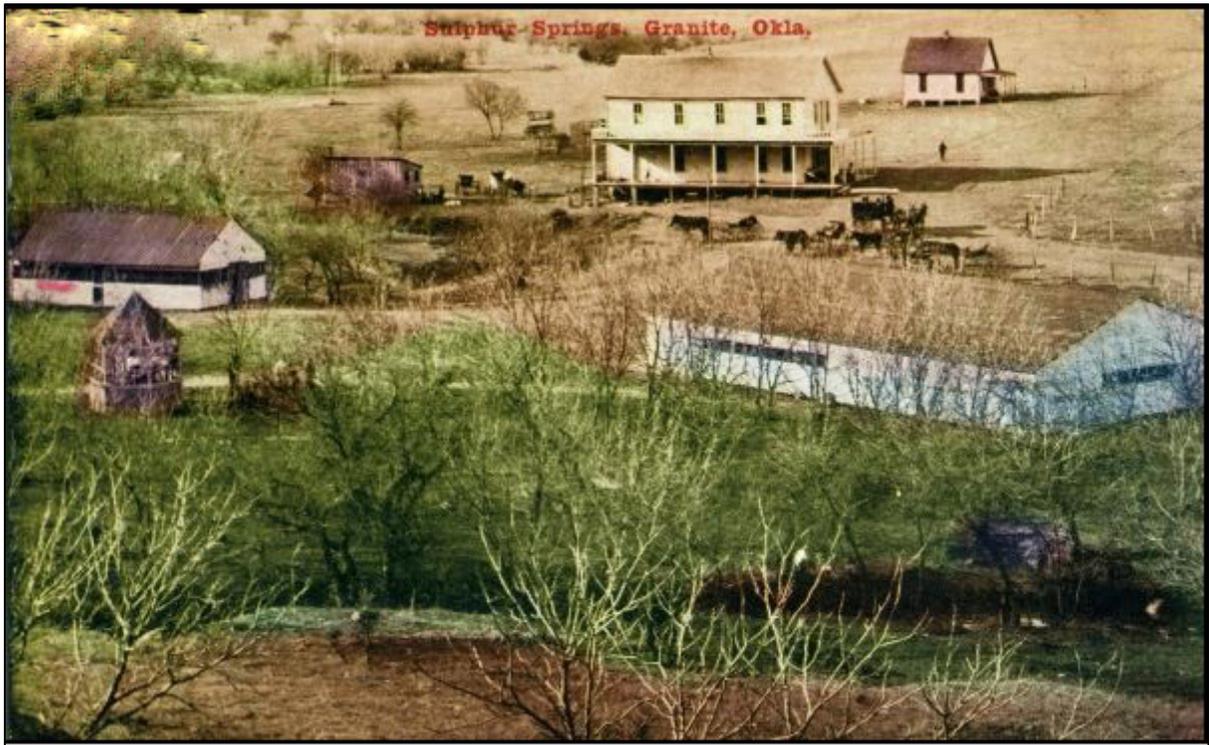
As southwest Oklahoma was opened to settlement in the late-nineteenth and early-twentieth century, the potential business opportunities tied to the touted health benefits of mineral waters was certainly keen on the mind of many entrepreneurs. Medicine Park, located north of Lawton near the entrance to the Wichita Mountains Wildlife Refuge became a popular health resort beginning around 1908 (Standfield 2009). The resort touted bathhouses, swimming pools along Medicine Creek, a hotel and had housing/cabin lots for sale. The structures of Medicine Park were constructed in a local architectural style involving the use of round granite cobbles in construction which provides a unique feel to resort and the town the developed out of it. Medicine Park remains popular today. The construction of buildings at Granite Sulphur Springs near Granite began around this same time. Many of the health resorts in Oklahoma, being within or close to population centers continued to operate for some time (Malley 2009). Both Medicine Park and Sulphur continue today as popular tourist destinations. Both Nowata and Claremore retain former hotels and bathhouses which are testament to mineral water health trend from the early-twentieth century.

Among these resorts discussed above, Granite Sulphur Springs at Granite is one that briefly flourished then fell into disuse. Being in a rural setting, the site was not subject to alternative uses common to those spas in more urban areas. The actual sulphur spring was not large enough to remain viable for other uses, and once the health craze associated with mineral waters had passed, the attraction of this resort diminished. While the site of Sulphur Springs (34GR114) at the base of Headquarters Mountain has been disturbed to some degree (Northcutt 1982), large scale development has not occurred on the site. While the site recorder states little remains on the site, subsurface investigations of potential archaeological deposits has not occurred. Being located in more populated areas and with continued use well into the twentieth century, the dumping locations of most of the early-twentieth century spas and resorts in Oklahoma area likely nonexistent or heavily mixed with discarded materials from many different settings other than the materials associated with activities at the springs. The fact the 34GR177 may represent the primary dump area for the Sulphur Springs resort provides a very unique opportunity to study remains that represent activities associated with the many aspects and activities that occurred at the resort.

The developments associated with the Sulphur Springs Resort is presented in the next chapter in a format that follows the stages of developments revealed by the archival research. The format basically follows the sequence of ownership changes, each of which has its own features that may be reflected in the archaeological record. Each new owner conducted improvements and introduced new activities on the site which may be reflected in the archaeological record at 34GR177.

## Chapter 4 Granite Sulphur Springs

The Granite Sulphur Springs began operations in 1900. However, very little in the way of features or buildings were constructed until 1906 when a bath house, roller rink and restaurant were built. A hotel, bandstand and pavilion were built by 1907 (Figure 4.1). The Springs attracted health seekers and medical practitioners who utilized the mineral waters to treat ailments by drinking and bathing in the sulphur infused waters. Many camped or stayed in the hotel for several weeks while being treated. The Springs hosted large gatherings and picnics including many three day long 4<sup>th</sup> of July celebrations, Independent Order of Odd Fellows (I.O.O.F.) picnics, Civil War veterans reunions, old Settlers gatherings, Socialist Party gatherings, church picnics, as well as Chautauquas and summer Normals. In addition to such events many visited the site for purely recreational pursuits, camping being one of the primary attractions. By 1918 the large gatherings and events as well the medicinal aspects of the curative powers of sulphur water had subsided and Granite Sulphur Springs became more of a local park attraction through the 1930's.



**Figure 4.1. Circa 1908 postcard with view of Granite Sulphur Springs. Two story Sulphur Springs Hotel in center, roller skating rink and bandstand in foreground.**

The location of the resort is recorded as 34GR114 in the site files at the Oklahoma Archeological Survey. The site was recorded in 1984 by J. Northcutt who reported that very little remains. The only features he noted were the remains of a “powerhouse” and some foundation remnants. However, a visit to the site in December of 2014 by the senior author of

this report resulted in the documentation of two intact, four hole privies, a concrete and stone pump base over a what may be a sulphur seep spring along Armstrong Creek and an octagonal concrete foundation surrounding a drilled water well. No evidence of a powerhouse was observed and it is quite possible that the stone and concrete pump base situated on the edge of Armstrong Creek was mistaken for the remains of a powerhouse. Though not visited due to heavy vegetation, a pond at the west end of the site is a swimming pool feature constructed during the later operations of Granite Sulphur Springs.

The developments associated with the Sulphur Springs Resort are presented below in a format that is discussed as stages of developments revealed by the archival research. The format basically follows the sequence of ownership changes, each of which has its own features that may be reflected in the archaeological record. Each new owner conducted improvements and introduced new activities on the site. The types of activities may be reflected in the archaeological record. It seems apparent by the archival review that operations were for the most part seasonal with announced openings usually occurring in April. The operations such as the hotel, bath house, and restaurant and roller rink appear to have changed hands often. It also seems apparent that owners of the structures often advertised them for lease at the beginning of the season.

### **1900-1905**

It is unknown if W. W. Marsh, having lived in the area since 1893, was aware of the sulphur springs at the base of Headquarters Mountain prior to being granted a Patent on the property in 1900. Several ads in the Granite Enterprise beginning in 1900 indicate Mr. Marsh was involved in real estate sales and development in partnership with A.P. Lowery. He may have had plans for development of the land as a housing addition if the new town of Granite grew to the north or simply saw it as valuable land nearby the town. Whatever his initial intent was, in November of 1900 the Granite Enterprise reported that “miners at work sinking a shaft on the W.W. Marsh place two mile north of town truck a splendid flow of mineral water at a depth of six feet.” (GE November 23, 1900). The article goes on to note the water is highly charged with sulphur. The water was soon analyzed by a chemist employed by the C. R. I. & P. railroad and the results were touted in the local news (Figure 4.2). While the resort became known as Granite Sulphur Springs, this initial findings indicate the sulphur water was discovered by a dug well. Any springs that may be present are likely seep springs, flowing on a seasonal basis.

W. W. Marsh was also a popular Reverend in the area and in newspaper notices is often listed as a speaker at religious meetings in Granite and surrounding towns including Mangum and Altus (*ibid*). His name often appears on legal notices as a witness for land claims and had lived in the area since at least 1893 (Mayer 1937). By March of 1901 Granite Sulphur Springs was being promoted as a potential significant enterprise for the booming town of Granite (GE, March 1, 1901).

J. N. OLDS, PRESIDENT. P. Y. BRINTON SEC. AND TREAS.  
 J. W. RYDER, VICE PRES AND GEN MNGR.

## THE GRANITE WHITE SULPHUR SPRINGS COMPANY.

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See analysis of waters and affidavits showing some of its wonderful cures.

<p style="text-align: center;"><b>WHAT OUR MINERAL WATER HAS DONE</b>          David Bellnap of Des Moines, Iowa Tells The Public About It.</p> <p>March 4, 1901.          Before me personally appeared David Bellnap who being duly sworn deposes and saith; that I was formerly a resident of Des Moines, Iowa, on or about Feb. 10, 1901 I began using the water of the Granite White Sulphur Springs at the time I was in a helpless condition and unable to raise without assistance, caused by sciatic rheumatism. After using the water a short time I noticed a remarkable improvement in my condition and at this time just three weeks from the time I commenced its use. I feel that I am intirely recovered, and I possitively affirm that my recovery is due intirely to the use of said water. I am not actuated in making the above statement by the promise of any financial reward but do this solely for the benefit of my fellow sufferers."</p> <p style="text-align: right;">DAVID BELLNAP.</p> <p>I, Joseph B. Grover certify that the above facts are true and correct.</p> <p style="text-align: right;">JOSEPH B. GROVER.</p> <p>Subscribed and sworn to before me, a notary public in and for the county of Greer, Oklahoma Territory, this 5th day of March, 1901.</p> <p style="text-align: right;">THOS. J. MOLINARI,          Notary public.</p> <p>Commissioned and qualified for a term ending Feb. 11, 1905.</p>	<p style="text-align: center;"><b>Analysis of Water of White Sulphur Springs, Granite, Oklahoma.</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Calcium Sulphate.....</td><td>7.75</td><td>grains per gallon.</td></tr> <tr><td>Calcium Carbonate.....</td><td>3.32</td><td>" " "</td></tr> <tr><td>Magnesium Carbonate.....</td><td>4.19</td><td>" " "</td></tr> <tr><td>Sodium Carbonate.....</td><td>2.33</td><td>" " "</td></tr> <tr><td>Sodium Chloride.....</td><td>2.09</td><td>" " "</td></tr> <tr><td>Iron and Silice.....</td><td>.57</td><td>" " "</td></tr> <tr><td>Organic matter.....</td><td>trace.</td><td>" " "</td></tr> <tr><td>Free Amonia.....</td><td>0.047</td><td>parts pr. million</td></tr> <tr><td>Albumineid Amonia.....</td><td>0.093</td><td>" " "</td></tr> <tr><td>Nitrates.....</td><td>trace</td><td>" " "</td></tr> <tr><td>Nitrites.....</td><td>none.</td><td>" " "</td></tr> <tr><td>Sulpher as hydrogen Sulphide Gas.....</td><td>2.09</td><td>grains per gallon.</td></tr> <tr><td>Sulphur.....</td><td>1.87</td><td>" " "</td></tr> <tr><td>Total Solids.....</td><td>20.35</td><td>" " "</td></tr> </table> <p style="text-align: center;">This is pure mineral sulphur water, being free from contamination of any kind.</p> <p style="text-align: right;">Respectfully submitted,          (Signed) PROF. C. F. DRAKE,          Chemist, C. R. I. &amp; P. Ry., Chicago, Ill.</p>	Calcium Sulphate.....	7.75	grains per gallon.	Calcium Carbonate.....	3.32	" " "	Magnesium Carbonate.....	4.19	" " "	Sodium Carbonate.....	2.33	" " "	Sodium Chloride.....	2.09	" " "	Iron and Silice.....	.57	" " "	Organic matter.....	trace.	" " "	Free Amonia.....	0.047	parts pr. million	Albumineid Amonia.....	0.093	" " "	Nitrates.....	trace	" " "	Nitrites.....	none.	" " "	Sulpher as hydrogen Sulphide Gas.....	2.09	grains per gallon.	Sulphur.....	1.87	" " "	Total Solids.....	20.35	" " "
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OR  
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 SEC. AND TREAS.

**GRANITE, OKLAHOMA**

**Figure 4.2. Advertisement for the Granite White Sulphur Springs Company published in The Granite Enterprise, May 24, 1901. Includes analysis of the water from White Sulphur Springs.**

On March 11<sup>th</sup> 1901, "The Granite White Sulphur Springs Company" filed an Article of Incorporation in Oklahoma territory. The directors are listed as J.W. Ryder, J. N. Olds and P. Y. Brinton. The Company proposes "to buy, lease own, operate and sell lands and springs, own and operate hotels health and pleasure resorts, bottle and sell mineral waters and any and all things necessary to the conducting of such resorts." The incorporation papers list \$2,000 in assets and authorized \$10,000 in stock at \$1.00 each. While W. W. Marsh is not listed, he is the owner of the property at this time and evidently the company was formed to raise revenue to develop the Springs as a health resort. J. W. Ryder and J. N. Olds are both names that are associated with several diverse enterprises in the early settlement and economic development of Granite. P. Y. Brinton was the editor of the Hobart Chief, a newspaper in the town of Hobart 17.5 miles east of Granite. Soon after this incorporation, plans are announced for development of the springs including construction of a bath house and 20 room hotel (GE March 15, 1901; March 29<sup>th</sup> 1901). After some initial cleaning of the grounds and construction of walkways, J. W. Ryder sold most of his interest in The White Sulphur Springs Company to three investors from Chicago who announce plans to build a resort (GE, March 29<sup>th</sup>, 1901). Beginning on

May 3, 1901, and continuing through May 24, 1901, the Granite Enterprise published advertisements for the sale of stock in the Granite White Sulphur Springs Company for \$1.00 a share. The goal was selling \$10,000 in capital stock. J. N. Olds, P.Y. Brinton and J. W. Ryder are listed as the officers of the company. The May 24, 1901 edition of the Granite Enterprise contained an ad selling stock for the Granite White Sulphur Springs Company along with an analysis of the mineral water conducted by Professor C. F. Drake of the Rock Island railroad declaring it to be pure mineral sulphur water.

After these series of ads in May of 1901, their names don't appear in other articles relating to Sulphur Springs and it is likely this company, formed as a potential investment enterprise may have been unable to sell enough stock to construct buildings and continue to lease property from Marsh. While this company accomplished little in the way of improvements at Granite Sulphur Springs, the reputation of the medicinal properties of the sulphur water became well publicized. It does not appear that W. W. Marsh constructed much in the way of improvements at Sulphur Springs. The June 27, 1901 edition of the Granite Enterprise mentioned that Mr. Marsh had taken it upon himself to fix up the springs with the installation of "first class pumps and otherwise beautifying the grounds".

Beginning in 1902 the, Granite Enterprise, Mangum Star and the Mangum Sun-Monitor begin to mention people camping and picnicking at Sulphur Springs. On May 8, 1902 the Granite Enterprise announced that Reverend Marsh had conducted two weddings on the grounds of Granite White Sulphur Springs. This same year White Sulphur Springs at Granite is listed in a book "A System of Physiologic Therapeutics Volume 9, Hydrotherapy, Thermo-therapy, Heliotherapy and Phototherapy" (Winternitz 1902:364). The book discusses treatments including the use of mineral and sulphur waters. Most mentions of Granite Sulphur Springs in the Granite Enterprise over 1902 entail reports of picnics and touting the medicinal qualities of the waters and encouraging investment. J. W. Ryder, the editor of the Enterprise was one of the founders of the Granite White Sulphur Springs Company.

Beginning in the spring of 1903, mentions of picnics at Sulphur Springs involving citizens of Granite and Mangum occur in the local papers. It appears that some gatherings, including "moonlight picnics" begin to increase in the number of attendees, particularly on Sundays (GE June 4 1903). On July 3-4, 1903, a "Sunday School and Temperance Picnic" was held at "White Sulphur Springs Park" featuring oratorical and singing contest (GE June 4, 1903) (Figure 4.3). The July 2, 1903 edition of the Mangum Sun-Monitor mentions that Marsh has installed a swinging gate "to the great convenience of the patrons of that popular resort". This is the first note of constructed improvements at the springs. In late July of 1903, the Greer County Summer Normal for teachers was held in Granite. The Granite Enterprise edition of July 23, 1903 notes that a few participants were camping at Granite Sulphur Springs. Open air concerts by the Granite brass band occurred in late August of 1903 at the Springs (GE August 27, 1903).

Activities at Granite Sulphur Springs during 1904 appear to have been sparse. Only a few references to picnics and school related outings are mentioned in local papers. However, it is reported that a physician is practicing at the Sulphur Springs (MS, July 21 1904).

**Grand 4th. of July**  
**Sunday School and Temperance Picnic**  
To be held at the  
**"WHITE SULPHUR SPRINGS PARK"**  
**GRANITE O. T.**  
**JULY 3 & 4**  
Public Speaking and Lectures  
Every Day.  
**Oratorical and Singing**  
CONTESTS.  
Gold and Silver Medals given to Winners in each Contest.  
Granite Brass Band will furnish music.  
For information regarding Contests; write at once to  
R. THOMAS WILLIAMS. Granite, O. T.

*Ice Cream Supper.*      *School Closed.*

Figure 4.3. Advertisements for 4th of July "Temperance Picnic" at Granite Sulphur Springs. Granite Enterprise edition of June 4, 1903.

By 1905 the Granite Sulphur Springs had developed a reputation as a health spa. While no structures were yet present, extended camping at the springs to partake of the healthy waters and picnicking remained a principal activity at the springs according to local newspaper

accounts. A description of an outing in the Mangum Star on August 31, 1905 does not mention structures, but describes the park as *“40 acres and filled with large trees for plenty of shade with trees large enough for an old fashioned rope swing for the amusement of the little ones. The spring is located about the middle of the west side of the park. About 150 people were present and a fire made to make coffee and tea. A hundred pounds of ice was obtained after passing the hat for contributions and a meal was served on a long table”*. In 1905, the springs once again appeared in a nationally distributed publication where it is stated by Charles Gould *“the spring has quite a reputation and its water is used for medicinal purposes”* (Gould 1905:105). The first report of an automobile visit to the springs was reported by the Mangum Star on August 31, 1905. It was reported that a party from Mangum loaded up for a picnic and left Mangum at 9:45 am arriving at Granite Sulphur Springs one hour and fifteen minutes later. It is unknown what the road system consisted of in 1905, but Mangum is 10 miles (16 km) southwest of Granite Sulphur Springs.

### **1906-1909**

The year 1906 witnessed the beginning of constructed buildings at Granite Sulphur Springs and the resulting increase in visitation and activities. In the February 15, 1906 edition of the Mangum Star reports a Proposition to construct a Sanitarium at the location of the springs. The Sanitarium Company including Drs. Border and DeArman and C.L. Topping *“propose to put up a Sanitarium, hospital and bath house at the Springs and also bottle and ship water.”* They propose to raise *“\$2,500 from the people of Granite for which stock will be issued. No payment asked until there has been \$4000 spent on the grounds and buildings.”* The Sanitarium Company seems to have faltered as there is no further mention of the Company in either the Mangum or Granite newspapers.

The June 21, 1906 editions of the Mangum Star and the Granite Enterprise published a legal notice that W. W. Marsh transferred *“40 acres of land on which the sulphur well and grove is located near Granite”* to S. B. Owens and J. J. Adair. The transaction is also recorded at the Greer County Courthouse. That same editions contained an article discussing that the sulphur well on the property is becoming renown and that Owens and Adair were erecting tents for rent to the public and will sell lots in the future. The July 19, 1906 edition of the Granite Enterprise lauds that *“Messrs. Owens and Adair are the first men to take up the Sulphur Springs and try and make them worth something and are doing it with their own money”*. By July 26, 1906 Owens and Adair had placed an ad in the Mangum Sun-Monitor for Granite Sulphur Springs. The ad touts plenty of tents for rent as well as a new, well equipped eight room bath house with hot and cold sulphur water (Figure 4.4). It is also mentioned that the entire 40 acres is now fenced and in addition to the bath house, an office and storage house have been constructed. The same issue reports several prominent families stopping at the springs and that 14 tents are currently occupied (Figure 4.5).

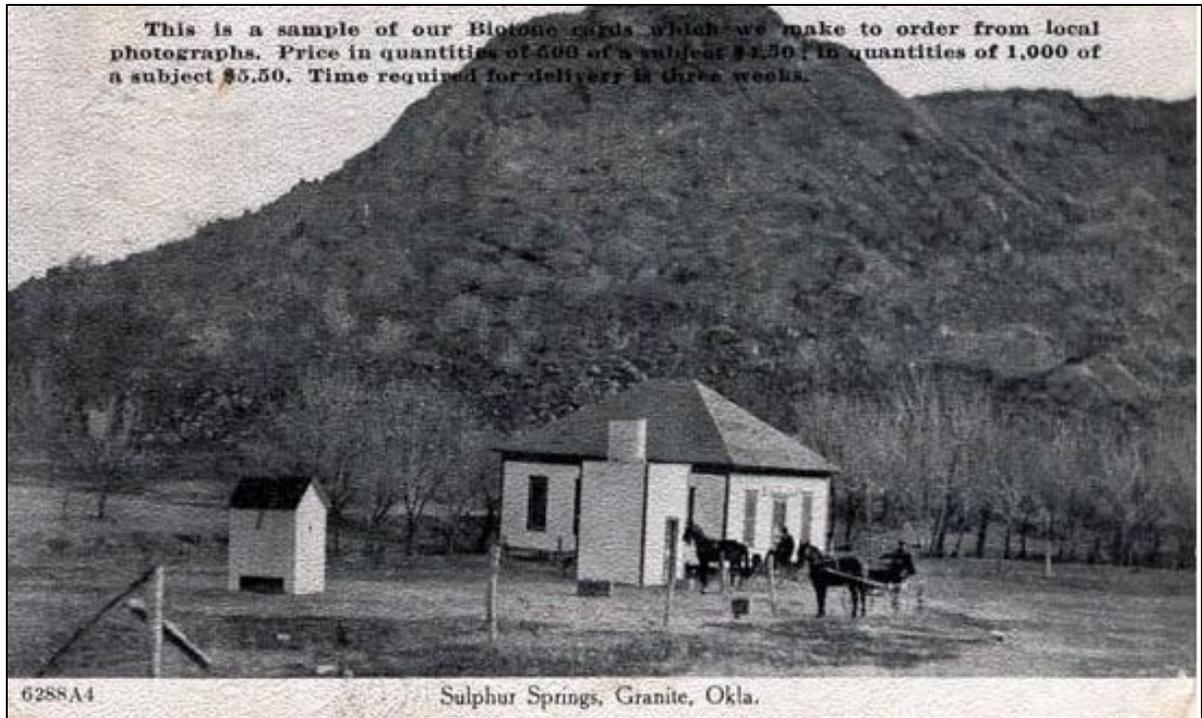


Figure 4.4. Circa 1906 view of Granite Sulphur Springs Bath house (usgwarchives.net).



Figure 4.5. Granite Enterprise edition of August 8, 1907 with tent scene at Sulphur Springs.

On August 2, 1906 the Mangum Sun-Monitor reported that 35 tents were on the grounds and that a new restaurant is doing business now as well. The tents rent for \$1.75-\$2.25 per week (MSS July 26, 1906). The August 6, 1906 Granite Enterprise mentions the eight room bath house with tubs, hot and cold water, engine and pump as well as a new eating house are among the improvements at Sulphur Springs. The bath house, is a single story hip roofed structure with four windows on each side (Figure 4.4). The front and back each have a door with a window on each side. A pump house and above ground cistern is located just north of the structure and what appears to be a privy is located north of the pump house. The bath house is built adjacent to Armstrong creek and is the eastern most building of the complex of structures at Sulphur Springs.

In addition to the new developments on the land, it appears that water from the Granite Sulphur Springs was being marketed locally as the July 19, 1906 Mangum Sun-Monitor mentions that A.C. Watt has secured the agency in Mangum for the mineral water from the Granite Sulphur well and will take orders daily. On July 12, 1906 a notice appeared in the Mangum Sun-Monitor by Owens and Adair inviting all to enjoy all the water they can drink while visiting the springs but will not allow water to be hauled away. This suggests that marketing the water was considered a source of income by Owens and Adair.

On September 13, 1906, an advertisement was published in the Mangum Sun-Monitor announcing that Drs. W. B. Hall, J. E. Gilbert and M.A. Nixon, “Graduated and Magnetic Healers from the famous Weltmer Institute of Nevada MO. have located in Sulphur Springs, Granite”. The Weltmer Institute was founded in 1887 by Mr. Sidney Weltmer who developed a system of medical treatments based in hypnotism and “vital magnetism” which involved treatment with magnetic waters and mental science. Basically faith healing. While some practitioners were trained at the building where the Institute was housed in Nevada, Mo., Weltmer offered license by mail correspondence as well. The institute also treated people by mail and offered treatments without medicines or surgery. Dr. W. B. Hall carried an advertisement in the Granite Enterprise through December, 1906 and January, 1907 as an Eclectic Physician specializing in cancer treatment using the D. C. Ramsey cure. A phone number is provided in the ad indicating that phone service was present at Sulphur Springs by this time.

It is unknown what type of accommodations Dr. Hall maintained as the only buildings known at the springs by this time are the bath house and restaurant. Perhaps he was renting space in the bath house as the March 21, 1906 edition of the Granite Enterprise contains an ad by J. J. Adair for Granite Sulphur Springs announcing that the bathhouse and restaurant are available to rent for the season beginning April 1. Satisfactory medical accommodations must have been present at the Springs as the September 26, 1906 edition of the Granite Enterprise reports that J. J. Adair’s, 17 year old son had his lower leg amputated at Sulphur Springs by Dr. Borders, Austin and Wiley. The operation was reported as successful and the patient is resting easy.

By December of 1906, J. J. Adair had bought out S.B. Owens interest in Sulphur Springs (MSM December 6, 1906).

With the addition of buildings at the Sulphur Springs, the type of events that were held there began to diversify by 1907. A March 21, 1907 J. J. Adair placed an ad in the Granite Enterprise announcing the opening of the season at Granite Sulphur Springs on April 1. In addition to new tents, the bath house, restaurant, and pavilion rights are advertised for rent. A wrestling match was held in the skating rink on May 30 (MSM May 30, 1907) with the winner being crowned the welter weight champion of Oklahoma. So by the spring of 1907 a roller skating rink had been constructed at the springs. The rink was located just west of the bathhouse (GE August 1, 1907). (Figure 4.6). Large gatherings at the springs began in June with a large picnic sponsored by the Mangum business committee on June 20-21 with brass band music, horse racing, roping contests (GE June 20, 1907). In addition to the skating rink and merry go round activities, it is stated that “Kiowa Chief Komalty will bring his band of Kiowas for horse racing and War dances” to the picnic as well (*ibid*). The June 27, 1907 edition of the Granite Enterprise reports that up to 3,000 people were in Granite for the picnic and associated activities.

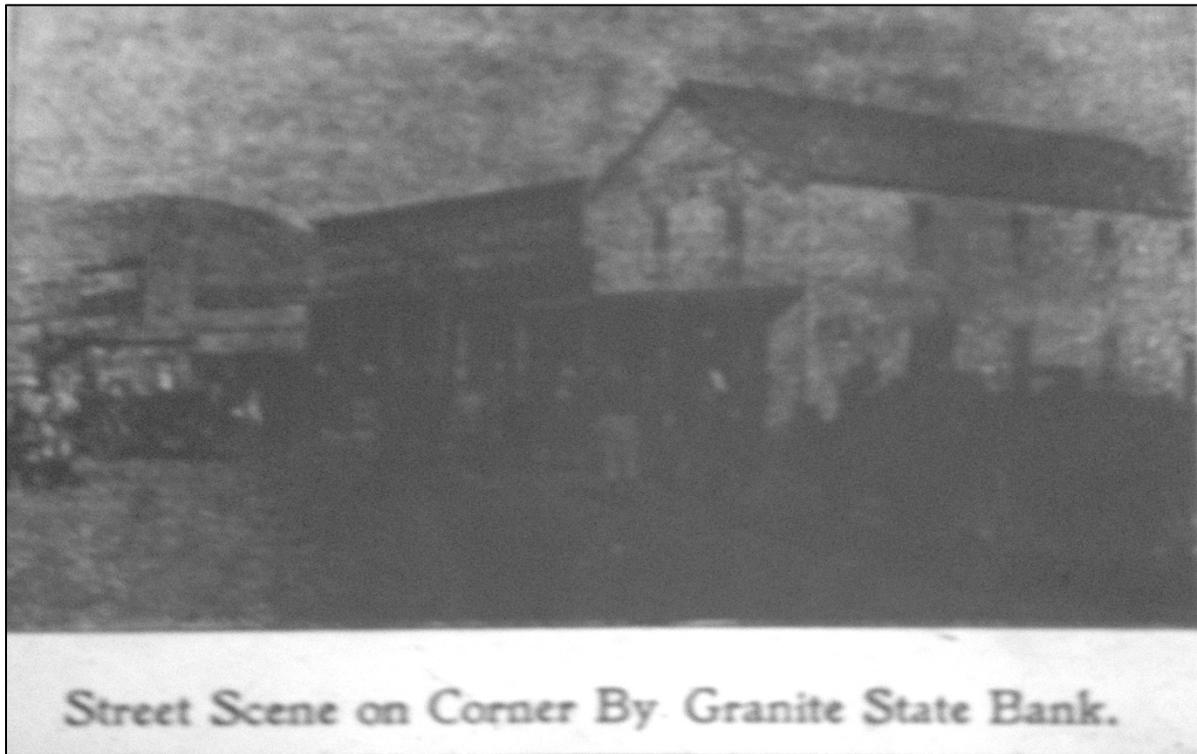


**Figure 4.6. View of roller rink from Granite Enterprise edition of August 1, 1907. Note bath house to the left.**

Another large event, the Old Settlers Reunion was held at the Springs September 26-28, 1907 (GE September 8). This event was somewhat marred by the carnival company that apparently

was running bogus games and was quickly shut down by the local law enforcement (GE October 3, 1907).

On August 1, 1907 the Mangum Sun-Monitor reported that Cora E. Poarch had bought the large frame building that stood behind the First national Bank for several years and that she will move the building to Sulphur Springs where it will be used as a hotel. A wing and double deck porches are planned to be added. This two story, rectangular, front and rear gabled building was originally built to house the Mountain Home School in 1889 (Gunning 1972). After a new school was built in Granite, the building served for a time as the home of the Granite State Bank as well as city hall (*ibid*)( Figure 4.7). The same edition reported a large skating party occurred at the springs with as many as 600 in attendance. One local newspaper reported that Fox Chambers and his wife are going to the Sulphur Springs for the benefit of Mrs. Chamber's health (MSM Sept 12, 1907). Fox Chambers was an old time Cowboy from the area (Chambers 1937). He later became an operator of the hotel at the springs (Figure 4.8). By the end of 1907, there is documented at Granite Sulphur Springs at minimum a bath house, a roller skating rink, merry go round, restaurant, pavilion and two story hotel nearing completion.



**Figure 4.7. Circa 1902 photograph of the Granite State Bank (GE 1902). This building was moved to Sulphur Springs in 1907 and became the Sulphur Springs Hotel.**



**Figure 4.8. Circa 1908 photograph of the Sulphur Springs Hotel.**

One other important event in 1907 was statehood for Oklahoma. The new state constitution included prohibition resulting in the end of liquor sales in the State. If consumption of alcohol at Granite Sulphur Springs was an activity, it would become less so after Statehood.

By 1908, the season opened and the Sulphur Springs Hotel was open for business. On March 19, 1908 a real estate transfer was noted in the Granite Enterprise in which John Poarch transferred the “Summer hotel” and half interest in the skating rink at Granite White Sulphur springs to Fox Chambers. J. Lee Ford is also mentioned as proprietor of the skating rink this year (GE August 6, 1908). A 1908 flyer advertises tents, cots and mattresses for rent, a bath house, ice cream parlor, a hotel for \$2.00 a day and a skating rink (Gunning 1972:134). A photograph on the front page of the April 23, 1908 Granite Enterprise shows a bathhouse, skating rink, two story hotel, gazebo (bandstand), and what is likely the pavilion, a small shed building behind the hotel (possibly a kitchen?) and a one story dwelling at Sulphur Springs. It appears that the hotel is managed by W. F. Chambers (Fox Chambers) and Chambers and Haynes manage the roller rink and Mr. J. P. Briles had been hired as the floor manager (MSM April 16, 1908). Jonas Ford is also documented as the proprietor of the roller rink so it is possible that he actually owned the building which was leased to Fox and Haynes who in turn hired Briles to manage the rink.

Many events occurred at Granite Sulphur Springs during the summer of 1908. The Greer County Summer Normal was held at the Sulphur Springs from June 2-25 (MSM, May 28,

1908). A total of 75-100 teachers are expected and 60 students are enrolled (MSM, June 11 1908). It is reported in local papers that rains hampered camping and high winds blew the large tent down which had been erected for the event (MSM June 18, 1908). This was a locally significant event as Granite had been advocating for quality education since it was founded. The June 8, 1908 edition of the Mangum Sun Monitor reports 500 at Sulphur Springs on Thursday night with skating and music by the Granite Concert Band. A July 4<sup>th</sup> Socialist picnic was held at Granite Sulphur Springs and was attended by a large crowd estimated at 5,000 people with Mother Jones was one of the guest speakers (GE July 9<sup>th</sup>, 1908) (Figure 4.9). The speakers stand was reported as a central attraction, likely due to the national renown of Mother Jones and the 1,000 seats provided were always full (*ibid*). This event appears to be one of the larger that occurred at Granite Sulphur Springs drawing much of the population of local towns (*ibid*). Activities at the event included two big tent shows of which De Rosa's animal show was one (*ibid*). Novelty booths, doll baby racks, as well as lemonade, popcorn and peanut stands were also present.

...BIG SOCIALIST...  
**PICNIC**  
 ...AND ENCAMPMENT ...

---

**JULY 4 AND 5**

---

“Workers of the World, Unite! You Have Nothing  
 to Lose but your Chains and a World to Gain!”

**T**HE Socialists of Greer County and Vicinity open up  
 the 1908 Campaign at 10 a. m., July 4th, at...

**SULPHUR SPRINGS,  
 GRANITE, - - OKLAHOMA**

One of the Local Comrades reading Labor's Declaration  
 of Independance. Prominent Speakers in the Movement  
 will Elucidate the Principles of our Philosophy. Arrange-  
 ments are being made to have with us...

===**E. V. DEBS AND MOTHER JONES**===

...of National Fame. Everybody come  
 and enjoy the Good Shade, Cool Water and Magnificent  
 Scenery. Refreshments on the Ground. : : :

**GRANITE, OK.**

Figure 4.9. Advertisement for a Socialist Picnic at Granite Sulphur Springs from the Granite Enterprise edition of July2, 1908.

A few other events are reported in local papers. The Methodist Baptists and Presbyterian Sunday schools held a picnic at the Sulphur Springs July 22, 1908 with 400 children and parents in attendance (MSM July 30, 1908). The Old Settlers and Cowboys reunion was held at Sulphur Springs at the end of September 1908 with 300 attending on Saturday (MSM October 1, 1908). A pony race was the main activity.

The events served to spur many other enterprises as the June 11, 1908 edition of the Mangum Star reports that the ice plant in Mangum is modernized and that the plant keeps a wagon in Granite to supply that town with ice.

An automobile bus line from Granite to Sulphur Springs was established (MSM July 19, 1908). Albert Caudle of Granite had taken over the transfer and bus business in Granite and advertises fares of 25 cents round trip fare to Sulphur Springs for 4 or more, 25 cents each way for less than 4 (MS August 27, 1908). Further details in the June 25, 1908 MSM states that Caudle now has a monopoly on the Granite bus business with the traffic to Sulphur Springs keeping 3-5 buses busy. It is also reported in local papers that J.W. Madden is now landlord at the Sulphur Springs Hotel (MSM July 30, 1908). Here we see the hotel business change hands for the third time since establishment less than a year before.

In January of 1909 J. J. Adair sold the Sulphur Springs operation to T. S. Wilcox (MS January 14, 1909). The transaction is also recorded with the Greer County Clerk. However, it should be noted that the courthouse records also record a transaction involving a mortgage between J. Adair and Susan Chaney. The 40 acre property was sold to T.S. Wilcox of the Real Estate firm Wilcox and Schave for \$10,400 (MSM, January 14, 1909). The firm Wilcox and Schave was heavily involved in both selling and leasing real estate around Granite. The newspaper article states that Wilcox plans to spend up to \$25,000 on improvements to the grounds and buildings beginning with a \$5,000 expenditure to conduct some badly needed sanitary arrangements, a loop to loop and a swimming pool. The description of "badly needed sanitary arrangements" suggests either that the facilities and grounds had fallen into disrepair or that the number of people visiting the resort was overwhelming existing facilities such as privies etc.

In the spring, efforts were underway to construct a 100 foot wide road from Granite to Sulphur Springs (MSM, April 15, 1909, MSM, May 27, 1909). Transportation services to the resort from Granite continues with the announcement that Doc Talley purchased the bus line from E. E. Morris which entails a big white four horse bus (MS April 22, 1909). Since an automobile bus line was in operation the previous year, this suggests that horse and wagon remained a dependable, viable option for bus transportation to the resort. On April 1, 1909 the Sulphur Springs Hotel opened for the season under new management by J. A. Burch (GE April 1, 1909). This is an indication that the hotel had either changed hands once again or was leased. Camping and health seekers continued visiting the resort and large gatherings continued. The

May 6, 1909 edition of the Mangum Sun Monitor reports girls' basketball game between Granite and Mangum High School girl's teams was played at the Sulphur Springs.

Evidence for the local use of automobiles begins to become news as it is reported that as of April 22, 1909 there are a reported seven automobiles in Granite (MSM April 22, 1909). The June 10<sup>th</sup> Mangum Sun Monitor reported that 200-330 people attended a dinner at the springs hosted by the M. E. Church. The Sulphur Springs again hosted the Grand Socialist Picnic on July 4-6 with Walter Thomas Mills has the quest speaker (MSM June 24, 1909) (Figure 4.10). The picnic notice states "*Hotels, restaurants, skating rink, cold drink and refreshment stands on the grounds*" (*ibid*). It is interesting that hotels and restaurants are plural. This may indicate that smaller operations other than the two story hotel and initial restaurant were present on the grounds by this time. It is also of note that an admission charge of 10 cents will be charged. This appears to be an effort on the part of the new owner (Mr. Wilcox) to turn the park into a more profitable enterprise.

**GRAND SOCIALIST PICNIC!**  
Sulphur Springs, Granite, Okla.  
**July 4, 5 and 6.**

**Walter Thomas Mills,** of Chicago, Illinois, the "Little Giant" of Socialism, and famous as a Chautauqua lecturer and debator.  
**Hon. Patrick Nagle, of Kingfisher, Okla., and Oscar Ameringer, of Columbus, Ohio, and other speakers of State and National Reputation, will be with us.**

**Music by the Celebrated Clarion Quintet.—Ball Games and Various Other Amusements**

Prizes will be given to victors in the various games on the 5th and 6th. Races, Greased Pole Climbing and many other interesting contests. Sunday, July 4, the Mountain View Ball Team will meet the Granite Team in a return game. For information as to entry see O. S. Lasswell, on the grounds.

**BEAUTIFUL PARK, Fine Shade, Spring Water, Tents, Skating Rink, Bath House, Steam Merry-go-rounds and Hotel**  
Carnival attraction, under the management T. S. Wilcox, park owner. Admission, 10c to adults, only.

For educational purposes we hereby challenge the Republican and Democratic county committees to produce a representative to defend capitalism.

**All Come! and have the time of your lives.**

**Figure 4.10. Advertisement for the Socialist Picnic at Granite Sulphur Springs appearing in the July 2, 1909 edition of the Granite Enterprise**

The year of 1909 continued to witness numerous financial transactions involving the Springs. On August 13<sup>th</sup>, 1909, it was reported that H. B. Childress bought Fox Chambers place and the hotel at the springs for \$8,000. (GE August 13, 1909). On July 30<sup>th</sup> 1909 it is reported that

Mrs. W. W. Marsh sold 30 acres just west and north of the Springs to Elk City capitalists who plan to sell lots and drill wells (GE, July 30<sup>th</sup>, 1909). This transaction does not appear to have been recorded in the Greer County Clerk records. It should be noted that W.W. Marsh had passed away on February 29<sup>th</sup> 1908, leaving this particular acreage as well as the 160 acres containing 34GR177 and the rental farm to his wife Kitsey.

There is evidence that Mr. Wilcox continued promotion of the Springs as it is locally reported that “*T. S. Wilcox returned from an advertising trip to 16 states where he disseminated information about Granite and the Sulphur Springs*” (GE May 23, 1909). On July 23 1909 a large full page ad in the Granite Enterprise taken out by T. S. Wilcox promoting the health benefits of the water at Sulphur Springs including testimonials, list of structures includes skating rink, baseball park, dancing pavilion with grandstand and ball every Tuesday night (Figure 4.11). Hotel, bath house, restaurant accommodations, cold drink stands and swimming pool under construction. Tents are \$5.00 a week (40 tents are advertised), baths 33 cents. The August 27, 1909 Granite Enterprise carried two ads from H.B. Childress, one of which advertises the Sulphur Springs Hotel for sell, trade or rent. The other ad was for loans at 5 percent interest.

Therefore, ownership the hotel had once again been transferred. On December 17, 1909 the Granite Enterprise reported that H. B. Childress had traded the Sulphur Springs Hotel to B. H Wall of Kirkland Texas for a telephone exchange. These exchanges, as well as those occurring the first year of the hotel operation are not recorded in courthouse records so must just involve contracts between the parties involved. This also an indication that ownership of the hotel as well as some of the other structures were not tied to the actual property.

### **1910-1913**

In 1910, the season may have had a slow start, and based on the relative lack of news reported from Sulphur Springs by local newspapers, it may have been slow year with fewer major organized picnics or gatherings like those of the previous couple of years occurring. Another investment scheme to raise money was introduced this year with the reported sale by T. S. Wilcox of Sulphur Springs Company to El Reno investors (March 4, 1910 GE). The name of the new Company would be the Bromo Sulphur Springs Company. On April, 2 a land auction is held for a new town site to be named Pasadena adjacent to Sulphur Springs (GE April 1, 1910). The sale is sponsored by the Bromo Sulphur Springs Company with T. S. Wilcox listed as the manager (Figure 4.12). Little more is heard of this effort and it apparently failed. However, gatherings and activities at Granite Sulphur Springs did continue.

# WAS PONCE DE LEON'S RAINBOW A MYTH?

## Cured of Muscular Rheumatism.

Mrs. M. J. Ellis, of Good Oaks, said: "I have been here about three weeks this time. I am troubled with rheumatism in my right arm, and since being here I feel that I can do my little cooking and dishwashing for myself and run a household with some ease. I have not had any pain, something I have not done in over ten years. My arm was in a cast and driven that I could not raise it at all. I have good use of it now. I was here three years ago and was greatly benefited by the treatment, but did not stay long enough. I intend staying longer this time. I am confident that by following the simple instructions given by the physician in charge here anyone can be entirely cured of the very worst case of muscular rheumatism in a very short time. I know what it is doing for me and am satisfied it will do the same for others if they will try it. Better than She has Been for Twenty Years."

Mrs. E. J. Keithon, of Benton, said: "I was almost completely invalid, suffering from rheumatism, and stomach trouble. I have been here a little over three months and was truthfully say that the waters here have done me more good than twenty years' medical treatment. My husband was also a great sufferer from kidney trouble, and the treatment here has made a new man of him. My son says I am a walking advertisement for these springs, but I do not care, as I believe that the greatest thing in the world for indigestion, stomach and kidney trouble, and am satisfied that they will cure anyone who can be induced to try them."

**Had Severe Hemorrhages Greatly Improved.**  
 Mrs. W. B. Deary, wife of Prof. Deary, formerly principal of the school at Granite, and well known here, said: "I was overworked and ran down, had five severe hemorrhages of the lungs in one day. I have not been here very long but can see a decided improvement in my condition. I have had no more hemorrhages, and am gaining in strength very fast."

**Cured of Kidney Trouble of Fifteen Years Standing.**  
 John P. Bell, of Elmwood, Oklahoma, said: "I am glad to recommend Sulphur Springs to any sick person. My wife and I came here without the least faith in the curative powers of the water but we have been greatly benefited. I had a case of kidney disease of fifteen years standing, have received more benefit in ten days than I have done in fifteen years. My wife had nervous prostration. She is now on the road to health after only 10 days treatment."

**Was Carried on a Stretcher.**  
 Mrs. L. H. Frank, of Good Oaks, said: "You can see for yourself what the waters have done for me. Ten weeks ago I came here on a stretcher, in a week I was on my feet, and now I walk all over the grounds every day. I was afflicted with severe stomach trouble and general debility. I did not believe there could be any relief for me before I came here. In fact, some of my friends told me, 'You will never get better' for the last time when I left home to come here. I am gaining in strength very fast, and sleep well. Yes, these waters have worked a miracle in my case, and I am glad to tell others of it."

## Hundreds of Suffering People Who Have Tried Granite's Springs Say that It Was Not.

### TYPHOID AND MALARIAL FEVERS CONQUERED BY THIS WATER

**Owner Proposes to Give Treatment Free and Refund Railroad Fare to and From Granite if He Cannot Cure Chills and Fever in Fifteen Days--He Makes the Same Proposition as to Typhoid Fever in Its Early Stages, Guaranteeing a Cure in from Seven to Nine Days--Could Any Suffering One Ask More Than This?**

When, aged, paralytic and racked with pain, Ponce de Leon set out to find the fountain of life-giving water which he believed was located somewhere in the great southwest, who knows, but what this iron-willed old man was aided with second sight?

Many people suffering from paralysis, rheumatism, stomach and intestinal troubles, who have come to Granite and taken treatment at these famous sulphur springs, are inclined strongly to the belief that his dream is a reality, and that the fountain of health-giving water which he gave his life in a vain effort to find gushes from the north side of Granite mountain.

In fact, Mr. T. S. Wilcox, the owner of these springs, is so confident of these great medical properties that he proposes to give free treatment and the use of a tent on the grounds and refund rail road fare to and from Granite to anyone suffering with malarial chills and fever, if he cannot cure him in fifteen days. He makes the same proposition in regard to typhoid fever in its early stages, guaranteeing that it can be cured in seven to nine days, or no charges will be made for treatment.

The tent is merely a simple affair, 12 x 14 cents; and the use of a large tent, \$1.00 per week.

These springs are located on the north side of the granite mountain, just one mile from the Granite depot. Two bus lines meet every train, and will take you to and from the springs for 25 cents.

They are situated in a beautiful natural grove, and the owner is making improvements as rapidly as possible. There are bath tents on the grounds now, all occupied except two. Mr. Wilcox is now in touch with a number of hotel men, and expects in the near future to have hotel accommodations equal to the best.

There are now on the grounds various forms of amusements, including skating rink, horse-boll park, dancing pavilion in which a grand ball is held every Tuesday night, bath house, hotel and restaurant accommodations, cold drink stands, etc. A swimming pool is in course of erection.

The Enterprise man visited the springs Monday and interviewed a number of people there, and was indeed surprised to note the perfectly unanimous accord with which the sufferers praise the springs. On this page are statements from a number of people now at the springs, anyone of whom will be glad to answer all questions in regard to them.

## Gained Twenty-three Pounds in Four Months.

About the most enthusiastic advocate the Enterprise man found on the grounds was Mrs. Jennie Pevey, a charming and beamy looking young matron, who did not look as though she had ever been sick in her life. She said: "I came here four months ago a total wreck from a severe case of stomach trouble; was completely run down, had no appetite, and could not rest at night. At that time I am running all over these mountains eating whatever I can get hold of and am gaining in flesh every day, having gained twenty-three pounds since coming here. Yes, I am a bonnie for Sulphur Springs in that out of reason, and that their merits only need to be made known to the outside world to make this the greatest health resort in the entire country."

## Beats Keeley Cure for the Tobacco Habit.

G. K. Harvill of Denver, Col., said: "I have been here about two months. When I came here I was using 15 cents worth of Geringer's tobacco a day. Now it pushes me to use a nickel's worth in two days. It beats the Keeley cure for the tobacco habit. When I came here I was a physical wreck. Now I can work like a horse, eat like a hog and sleep like a log. When I brought my wife here she was suffering with stomach trouble and could eat nothing solid, and got little of anything. Now she cannot get enough to eat. Just think of it. Two months ago she was eating only a little carefully prepared drug food such as melted milk or liquid peptonoid; now she is howling for sauerkraut and watercress."

## Better Than Kurks Springs.

Mr. E. G. Walcott, of Okemah, Okla., said: "I have only been here ten days, but from what I can see I am satisfied that these springs are a great thing for some diseases. I have for years suffered with indigestion and valvular heart trouble. I spent the early part of the summer at Kurks Springs, and could not see that I was receiving any benefit there. I came home, but in a week was down, unable to leave my bed. I came here with but little hope of receiving any benefit, but must say that after giving the water ten days' trial that it is doing me a great deal of good. I can now eat a hearty meal and feel no bad effects afterward. It is certainly a great thing for indigestion and stomach trouble."

## Mr. T. S. Wilcox,

owner of the Granite White Sulphur Springs, has been one of this city's most enterprising citizens for the past six years. Coming here when the town was a nothing, much of the progress shown today is due to his energy and far-sighted business ability. Mr. Wilcox was born in Columbus, Ohio, coming to Oklahoma in the early thirties. He located at Good, where his push and energy soon made him a leader among the big-brained men who have made that hamlet a city a little more than a decade. Mrs. L. S. Wilcox are of considerable value in town building, and Granite is indeed fortunate in considering such a one among her citizenship. He is now devoting his entire time and energies to the upbuilding of Granite Sulphur Springs, which he only recently acquired, and promises to make them one of the greatest health resorts in the country.



TESTING SCENE AT SULPHUR SPRINGS, OF WHICH THERE ARE NOW FORTY ON THE GROUNDS.

Figure 4.11. Article touting the healthy waters at Granite Sulphur Springs appearing in the Granite Enterprise on July 23, 1909.

# TOWN SITE SALE.



Scene at Bromo Sulphur Springs, and the Proposed site of our new town.

The new Townsite of **Pasadena**, which lies north of Granite, Okla., and adjacent to the **Bromo Sulphur Springs**, will be sold on **April 2, 1910.**

Sale begins at 8 o'clock and continues until all lots are sold. Terms of sale, one-half cash and balance on 90 days time with purchased property for security; no interest. Five per cent discount for cash on balance.

The demand for hotels, business houses and dwellings have been so great that the new company, which has recently purchased these springs for \$25,000, have decided to plat and sell a townsite, that these buildings may be erected to accommodate the thousands of tourists and sick people who visit this place yearly, and who have heretofore had to camp in tents or stop in Granite, Okla., which is some distance from these waters.

The new townsite that will be sold on April 2, 1910, is the most picturesque site in Oklahoma. The beauty of the mountains, with their evergreen trees, and springs of pure water, together with the level land for miles around them, affording level roads for auto and carriage driving, make this the ideal health resort of Oklahoma.

Besides, these waters are no more an experiment, having been patronized for the past seven years by hundreds of sick people who have been cured of various diseases, and who have made affidavits to same. In fact, the new company has offered a reward for any case of stomach, liver, kidney or bowel trouble that these waters fail to cure. They also cure nervous prostration and female troubles, and can boast to this day of not having a death on their grounds, which is a miracle to those who are acquainted with these springs and who know the vast number of sick that have patronized them in the past seven years. Pasadena will be to Oklahoma what Pasadena, Cal. is to California, the home of the rich and retired, and the pride of the state. Don't say this site won't sell for there are parties here every day asking to purchase these lots, but the company will sell none until April 2, 1910, and on that day all lots will sell, and the party who gets one of these lots will double his money in ninety days, for there are parties now on the ground who will rent the buildings before they are complete. Pasadena is destined to be a city, and no lot will ever be sold after the sale for the price it brings that day. We who have had experience in the townsite sales in Oklahoma, know that lots never sell at a sale for what they resell for after the sale day, and a lot in the new town of Pasadena will resell for more money than the same money invested in a lot in any town in the State of Oklahoma. If you miss this sale, you have lost an opportunity that will not present itself again in the State of Oklahoma. Remember the date and come early and secure a choice lot. Sold by

**BROMO SULPHUR SPRINGS CO.,**

**T. S. Wilcox, Manager.**

Granite Enterprise Print Granite Okla.

Figure 4.12. Ad for the Bromo Sulphur Springs Co. in the March 25, 1910 edition of the Granite Enterprise. Ad touts the sale of lots and the new town of Pasadena at Granite Sulphur Springs

On April 29, 1910, Granite's electric light plant was reported to be up and operating. It is not known if electric service was run to Sulphur Springs. On May 10, 1910, a 66 foot wide road to Sulphur Springs from Granite was reported as almost completed (GE May 10, 1910). The March 31, 1910 edition of the Mangum Star reported that 10 to 12 automobiles full of Mangumites headed out for Sulphur Springs and the trains were jammed as well. The Mangum-biased report stated that up to 175 people from Mangum went to the Springs, however there were no amusements, not even a cold drink stand. It appears that road construction to the springs continued as R/W for the road was obtained from Mrs. J.B. Jones (MS April 21, 1910).

The April 22, 1910 Granite Enterprise noted that B. H. Wall had opened up the hotel at Granite Sulphur Springs for the season. Road improvements continued as on June of 1910, the Mangum Sun Monitor reported that a bridge was being constructed at Sulphur Springs (MSM, June 23, 1910). Skating also continued as an activity (MSM June 30, 1910). A large picnic was held over July 4<sup>th</sup>, however it was stressed in the newspaper that no admission fee would be charged this year (GE, July 1, 1910). As stated above, it was reported that Wilcox charged a 10 cent admission to attendees of the 1909 Grand Socialist Picnic at Granite Sulphur Springs. This likely did not go over well, particularly among the Socialists. The picnic sponsored by the Modern Woodsman was described as attracting the largest crowd ever at Granite Sulphur Springs with upwards of 5,000 in attendance (GE July, 8 1910). The Greer County Normal students were treated to a large supper at Sulphur Springs by the teachers of Granite on July 29, 1910 (MS July 20, 1910).

On November 17 1910, the Mangum Star reported that the case of the State of Oklahoma vs B.H. Wall was disposed of with the jury finding him guilty of running a house of ill fame at the Granite Springs. As stated above, B. H. Wall had bought an interest in the Hotel from H. B. Childress in December of 1909. Apparently Mr. Wall had explored more nefarious modes of business at the Springs. Three weeks later, a legal notice was published in the Granite Enterprise edition of December 9, 1910 regarding a foreclosure notice by the State Guaranty Bank of Granite Oklahoma against Cora Poarch, J. F. Poarch, B. H. Wall and H. B. Childress. The foreclosure was against a loan taken with the Bank on July 22, 1907 by Cora Poarch and J. F. Poarch for the sum of \$300 plus interest. This was the original loan to buy the building and move it to Sulphur Springs in 1907 and make it a hotel. B. H. Wall and H. B Childress evidently had financial interests in the property's being foreclosed on, but the foreclosure included a quit to any title or claim to any land or improvements by mortgage they may have had (Childress bought hotel in August 1909 and in turn traded it to Wall). It is likely the B. H. Wall referred to in this notice is the same B. H. Wall who purchased an interest in the hotel in December in 1909 and convicted of operating a house of ill fame here the previous month. The foreclosure includes a frame building 24 x 50 feet and all improvements (GE December 9, 1910). This is likely for the building bought by Cora Poarch in July, 1907 which was moved to Sulphur Springs and became the Sulphur Springs Hotel.

On March 10, 1911, T.S Wilcox is reported to have asked the Granite City Council for a franchise to establish a spur line to the Sulphur springs (GE March 10, 1911). On March 31, 1911 the skating rink is advertised for sale in the Granite Enterprise. The roller rink building is described as 100 x 50 feet and the deal includes a 100 pairs of skates. J. Lee Ford of Granite is listed as the contact (GE March 31, 1911). The rink was taken over by E. L. Chapman on April 28, 1911 and it is reported that he promises a pleasant resort this summer (GE, March 31, 1911). On May 19, 1911 the Granite Enterprise reports that Dan Cook and Wyatt and Tom Hedley are preparing to keep the bachelor's hall at Sulphur Springs this summer. Whether this entails a structure, a tent or a rented room is unknown, but it is the only time something of this nature is reported for the Springs.

The Granite I.O.O.F. held a July 4<sup>th</sup> celebration at Sulphur Springs on July 3-4, 1911 (Figure 4.13). The event was well advertised including full page ads in the Granite Enterprise which highlighted horse races, auto races and bicycle races along with riding, roping and tug of war contests (GE, June 23, 1911). It was reported that four head of cattle will be barbequed to supply 1,800 pounds of beef for the event. Attendance is predicted to be in the thousands (GE June 30, 1911). The July 7 Granite Enterprise edition reported that 5000-10,000 were in attendance. While this number may be a bit of a high estimate, there is no doubt the event was well attended. The account of the event goes on to report "plenty of cold drinks and barbeque and not an intoxicated person was to be found".

**GRANITE, OKLA.**  
**JULY 3RD AND 4TH!**

I. O. O. F. CELEBRATION  
 AT  
**Granite's Famous Bromo Sulphur Springs**  
 NATURE'S IDEAL PICNIC SPOT.

The Granite I. O. O. F. Lodge is one of the strongest and most progressive in the state. They have recently completed their own \$15,000 home. The fact that their entire energies are behind this event guarantees its success. It is estimated that 2,000 Oddfellows from all over the state will be present.

SPEAKERS

George Henshaw. J. B. A. Robertson. D. S. Wolfinger.

<b>RACES</b> Horse Races, Bicycle Races, Auto Races.	<b>CONTESTS</b> Riding Contests Roping Contests Tug-of-war, etc.
---	---

Liberal purses will be "hung up" for the various contests and every event will be hotly contested and full of interest.

The celebrated Granite Sulphur Springs is one of the prettiest spots in Oklahoma. Worlds of shade and life and health-giving sulphur water. Spend at least these two days in mountain climbing and relaxation.

**There Will be Plenty of Barbecued  
 Meat and Water on the Grounds.**

For Further Particulars See Small Circulars or Write Committee  
 Don't Forget the Date and Place.

**GRANITE**  
**SULPHUR SPRINGS**  
 JULY 3rd and 4th, 1911

COMMITTEE.

J. B. HOOD. V. S. HARRINGTON. G. J. McCLURE.  
 E. O. TOMPKINS. G. M. BROWN.

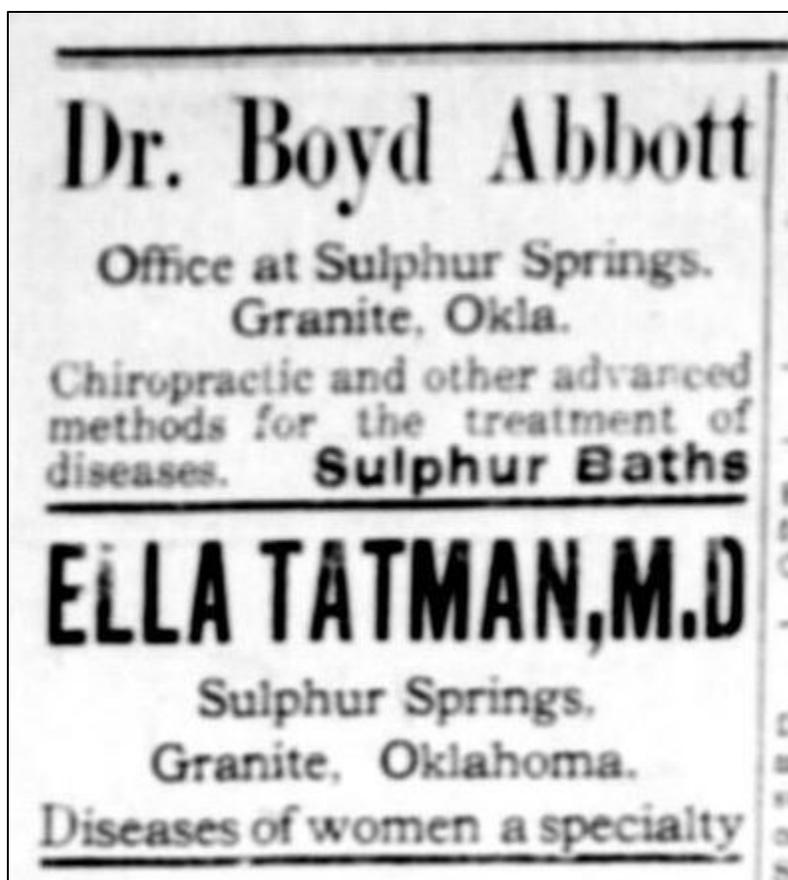
Figure 4.13. Advertisement I.O.O.F. sponsored picnic at Granite Sulphur Springs in the Granite Enterprise edition of June 16, 1911.

However, soon after this event, further financial troubles for T. S. Wilcox and the Sulphur Springs resort are apparent by the occurrence of further foreclosure notices in local newspapers. The July 13, 1911 Mangum Sun Monitor published a legal notice regarding a sheriff's sale of foreclosed property at the Granite Sulphur Springs addition. The foreclosure was on behalf of J. J. Adair against T. S. Wilcox. The sale was also subject to a prior mortgage on a portion of the property in favor of Susan L. Chaney. In August of 1911, the notice of the sheriff's sale of the Cora Poarch and J. F. Poarch property is published to occur on September 6, 1911 (GE August 4, 1911). Soon after that, in September, 1911 a notice is published advertising the sale of property at Sulphur Springs by the Rounds and Porter lumber company used for storage or waiting room, one cold drink stand 12 x 14 feet, one cold drink stand, 10 x 14 feet and one cold drink stand 10 x 12 feet (all with 8' walls) one automobile shed 16 x 64 feet with 10-foot walls and one office building 10 x 12 feet with nine-foot walls. In addition, 15 tent floors, four out buildings described as 4 x 5 feet, the material in the baseball park, and all the Bois D'Arc posts around Lots 2, 3, and 4 in Granite Sulphur Springs Addition" (GE September 8, 1911). The October editions of the Granite Enterprise contain ads by Rounds and Porter Lumber for the sale of a 12 x 24 foot building and a 16 x 54 foot automobile shed at Sulphur Springs (GE October 27, 1911). Another blow to the development of Sulphur Springs was the completion of a larger well for the city of Granite. The water is reported to be strongly tinged with sulphur which at the time was viewed as positive and led to access to sulphur water for the entire town of Granite (GE, July 21, 1911).

The year 1912 witnessed a sort of resurgence at Granite Sulphur Springs. Local papers report picnics and gatherings by schools and churches at Sulphur Springs. The Granite Enterprise began a small column which appeared through much of the 1912 season dedicated to events and visitors to Sulphur Springs entitled "At The Springs" or "At Sulphur Springs".

In May of 1912, two doctors began advertising their practices at Sulphur Springs (GE, May 24, 1912) (Figure 4.14). Dr Boyd Abbott advertises chiropractic and other advanced treatment for diseases and sulphur baths (*ibid*). Dr Ella Tatum whom began publicizing at the same time, advertises as a specialist in women's disease (*ibid*). Both doctors retain ads in the Granite Enterprise from May through September of 1912 (GE September 13<sup>th</sup>, 1912).

The Granite I.O.O.F. held another July 4<sup>th</sup> picnic at Sulphur Springs which was well advertised (Figure 4.15). Horse, bicycle and auto races were conducted as well as baseball, riding and roping contests (GE June 28, 1912). Speakers were also part of the picnic agenda including political, religious and educational speakers (*ibid*). Music and concessions were to be provided including "the red lemonade stand" and a merry go round with a steam powered calliope (GE June 14, 1912). Fireworks are also advertised (GE June 28, 1912). The picnic was well attended with a reported attendance of 3,000-5,000 people (GE July 5, 1912). However, apparently not as well attended as previous gatherings (GE July 5, 1912).



**Figure 4.14. Advertisement for Doctors Practicing at Granite Sulphur Springs from the May 24, 1912 edition of the Granite Enterprise.**

The June 21, 1912 Granite Enterprise reports that the population at Sulphur Springs numbers thirty souls. This same edition reports that road from Granite to Sulphur Springs is being graded and put in fine shape by a work crew from the reformatory. This attests to continued road improvements between Granite and Granite Sulphur Springs. The July 4<sup>th</sup> edition of the Mangum Sun Monitor carries an ad for the Sulphur Springs Sanitarium. However, no other accounts could be found. The July 12 edition of the Granite Enterprise states that Wallace Adair has opened a stand and Sulphur Springs and will dispense pop etc. the remainder of the season.

Over the summer of 1912, the City of Granite continued with its water supply improvements. By the end of July 1912, public two public drinking fountains were available which supplied sulphur water freely (GE July 19, 1912). The July 16, 1912 edition reports that Fred Boyd is operating an auto livery at the Springs and that tennis and pitching dollars are becoming popular pastimes at the Springs. It should be noted that there is little to no mention of the hotel or skating rink in local papers over the course of 1912.

# FOURTH OF JULY ODDFELLOWS' PICNIC

## 3 GRANITE 4

The Granite I. O. O. F Lodge is one of the strongest and most progressive in the state. To visit their new hall, with its splendid furnishings is itself worth a trip to Granite; their success as a lodge, and the fact that their entire push and energy is behind this event is a *guarantee of its success.*



at Granite  
Liberative and  
Dissiminated  
High Class re-  
tortainment  
will be heretofore  
in our vicinity  
**SPECIAL**  
arrangements  
will be made  
for students  
and members  
of women  
and children



**Races Contests**

Home Races Riding Contests  
Bicycle Races Roping Contests  
Auto Races Bas- Ball  
And other popular sports  
Liberal purses for winners  
Everything free including  
iced sulphur water in abundance.  
Excursion Rates on all Rail Roads.

*Our Continuous  
Round of Pleasures  
Instruction in dancing,  
music. Our continuous  
Band Concert by one of  
the best bands in the State.  
Discussions of Patriotic, Re-  
ligious, Educational, Political  
and Fraternal subjects by men  
who are masters of, and authority  
on the different lines of thought.  
We not only want to entertain  
and amuse you, but to give  
you food for thought and  
make you glad you came.*

Noted speakers of state and national repute will be present.  
Among whom are:  
Senator R. L. Owens.  
Ex Gov. C. N. Haskell  
Judge J. B. A. Robertson  
Hon. Scott Ferris  
Judge J. W. Mansell  
And others will address us on  
Religious, Educational, Political  
and Fraternal subjects.

The Granite Sulphur Springs, with its surroundings of lofty mountains, natural pagodas, shafts, columns and cones, having the appearance of being designed and carved by the world's greatest architects and sculptors, and all set in a veritable forest, tropical plants and trees, is indeed one of the beauty spots of Oklahoma, a few days' riding among their beautiful natural scenes, and drinking the sparkling water from the springs, gives new life to the tired and weary, re-invigorating both mind and body, and directing and purifying them more for the struggle of life. Our entertainment and sport will be clean and healthful, such as we want our wives and children to hear and see.

**DON'T FORGET THE TIME AND PLACE.**

## Granite's Famous Sulphur Springs, July 3rd and 4th, 1912

Programs will follow. COMMITTEE. For Particulars address Sec. I. O. O. F., Granite, Okla.

Figure 4.15. Advertisement for the Odd Fellows 4<sup>th</sup> of July picnic appearing in the June 7, 1912 edition of the Granite Enterprise

The 1913 season opened in April with the first large crowd reported on April 4, which included several people from Granite as well as people from Altus and Olustee arriving in autos (GE April 4, 1913). According to local papers, picnicking groups continued to visit and baseball games continued (GE June 6, 1913). The May 16, 1913 Granite Enterprise published a legal notice of a sheriff's sale of property owned by J. J. Adair at Sulphur springs to satisfy a judgment against Adair and in favor of Susie Cheney. This transaction is recorded in the Greer County Clerk records and entails an acreage in the northwest portion of the 40 acre plot containing Granite Sulphur Springs.

The June 20, 1913 edition of the Granite Enterprise reports that the Old Time singers of Greer County will hold their meeting at Sulphur Springs. However, the annual 4<sup>th</sup> of July picnic sponsored by the Granite I.O.O.F. is held at Tittle Park west of Granite rather than at Sulphur Springs (GE June 27, 1913) A smaller "Old Time Picnic" was to be held at Granite Sulphur Springs over the fourth (*ibid*). On August 7-8, a large gathering and picnic was held at Sulphur Springs with the Socialist Annual Gathering occurring on the 7 and the annual reunion of Civil War veterans on August 8 (GE August 1, 1913). It is reported that "Blalock's merry go round" is on the grounds (*ibid*). A grass fire broke out on the grounds during the August 7 gathering resulting in the severe burning of 6 horses and damage to one wagon and several buggies (GE August 8, 1913). At the end of October 1913, a legal notice was published in the Granite enterprise regarding a Tax Sale by the Greer County Treasurer for property with overdue taxes. Among the Greer County properties are listed lots at the Granite Sulphur Springs Addition and the Granite Sulphur Springs Second Addition (GE October 24, 1913).

### **1914-1920**

The 1914 season seemed to open quietly for Sulphur Springs. Newspaper notices regarding health seekers, picnickers, campers and small group gatherings at Sulphur Springs continue in local papers. The I.O.O.F. did hold its annual 4<sup>th</sup> of July three day picnic and gathering at Sulphur Springs and it was well advertised (GE June 19, 1914). Races, baseball, contests and public speakers are advertised (Figure 4.16). One addition to this year's program are balloon ascensions each afternoon (*ibid*).

In 1915, there were two large gatherings at Sulphur Springs. The camping and picnicking continued. The Granite I.O.O.F. held its 4<sup>th</sup> of July picnic at Sulphur Springs. The big attraction for the picnic was to be an aeroplane flight on Saturday and Sunday (Figure 4.16). However, the Sunday flight was canceled by the County Attorney and sheriff due to Oklahoma Sunday laws (GE July 9, 1915). The Grand Socialist encampment was held at Sulphur Springs on July 28-30 (GE July 16, 1915) (Figure 4.17). Concessions (drink stands) for this gathering are advertised as platted on the grounds and up for auction (GE July 23, 1915).

# IS BIGGER AND BETTER THAN EVER!

## GRAND CELEBRATION UNDER AUSPICES *Granite Lodge No. 127 I. O. O. F.*

# 3 JULY 4

### Two Whole Days of Fun and Frolic! Some- thing Doin' Every Minute!

*Foot Races  
Sack Races  
Potato Races  
Baseball  
Climbing  
Greased Pole  
Catching  
Greased Pig  
and other  
Contests in  
which liberal  
Prizes will be  
Presented  
to the winners*



Camping Party at White Sulphur Springs, where Celebration will Be Held

*Fat Mens' Races  
Fat Ladies' Races  
the funniest race you ever saw.  
Old Mens' race and all other kinds of sport and amusement you are looking for.*

### Grand Balloon Ascension Each Afternoon

### EIGHTEEN STATE CANDIDATES,

Including Hon. J. B. A. Robertson, Judge Sam W. Hayes, Mayor P. P. Duffy, Hon. S. B. Garrett, Hon. J. V. McClintic, Judge J. R. Tolbert, and all County Candidates.

Come! Don't forget the Place: Granite White Sulphur Springs.

# JULY THIRD AND FOURTH

For Privileges, etc., Write Sec. I. O. O. F., Granite, Okla.

Figure 4.16. Advertisement for the 4<sup>th</sup> of July Picnic at Granite Sulphur Springs appearing in the June 19, 1914 edition of the Granite Enterprise.



Figure 4.17. Advertisements for events at Granite Sulphur Springs over July, 1915. Left: from Granite Enterprise edition of July 16, 1915; Right: From the Greer County Democrat, June 24, 1915.

The August 20, 1915 edition of The Granite Enterprise reports that the hotel at Sulphur Springs is being repaired and both furnished and unfurnished rooms are advertised at weekly rates of \$1.00 for unfurnished room and \$2.50 a week for a furnished room (in 1908, a room was \$2.00 a night and tents \$5.00 week). Jeff Davis is noted as the proprietor. Mr. Davis owned land along Armstrong Creek about a mile northwest of Granite Sulphur Springs. This is the first mention of the hotel in local newspapers since around 1911. Mr. J. J. Adair may have been divested of all interest in Granite Sulphur Springs by this time. A large auction was conducted on his farm 2 1/2 miles north of Granite on November 11, 1915 (GE November 5, 1915).

The March 17, 1916 edition of the Granite Enterprise noted that a large crowd was at the Sulphur Springs the previous Sunday with a number of autos. In May of 1916, Mr. Walter Veale had taken over the operations at Sulphur Springs (GE May 19, 1916). Mr. Veale had operated a drug store in Granite for a few years. Thus it appears another effort is being made to develop the springs. The Granite Enterprise published an article on June 2, 1917 advocating park development for the betterment of Granite and to spur local business. The article noted that 75 autos were present the previous Sunday with visitors from Altus, Fredrick, Mangum, Duke and Hollis as well as areas to the north of Granite. The May 11 edition of the Mangum

Star reported that Mr. T. C. Elkins has established The Auto Taxicab Service and will provide a regular Sunday service to and from Sulphur Springs at one and a half hour intervals.

On June 2, it was also announced the Dr. T. J. Nunnery was planning to build a modern sanitarium at the Springs that would specialize in treatments of tuberculosis and drug and alcohol addiction (GE June 2, 1916). Little more is published regarding Dr. Nunnery's plans and no sanitarium was ever constructed. An Old Settlers reunion picnic was held on July 3-4 at Sulphur Springs. Barbeque meat, baseball games and a few speakers were scheduled (GE June 16, 1916) (Figure 4.18). On June 14, 1916 a storm system blew through the area and The Granite Enterprise reported that "The old restaurant building at Sulphur Springs was blown down as well as several smaller buildings." (GE June 16, 1916). This report provides confirmation of the presence of a restaurant and other small buildings on the site as of 1916. The November 3, 1916 edition of The Granite Enterprise contained an article announcing plans for an event with the Chautauqua circuit is being planned at Sulphur Springs the following summer. The event should last 4-5 days and a large 80 x 150' tent will be erected to house daily performances.

The 1917 season opened with the report of up to 100 autos at Sulphur Springs on Sunday March 18, (GE March 23, 1917). On June 1, 1917, The Granite Enterprise reported that Attorney B. F. Van Dyke bought Sulphur Springs and plans numerous improvements. He plans to set up a stock company to raise funds for the improvements. One item of improvement is a plan to construct swimming pools by building dams across the numerous small canyons in the park (GE June 1, 1917.). From July 3-7 of 1917 a five day July 4<sup>th</sup> celebration occurred at Sulphur Springs with music, baseball and the Evans-Platt Carnival Company advertised as activities (GE June 22, 1917). Also in July, the Granite Chautauqua was held at Sulphur Springs. This five day event focused on presenting a variety of musical entertainment (GE June 22, 1917). On July 27, 1917, an ad was published in The Granite Enterprise advertising two free band concerts and a free picture show at Sulphur Springs on Sunday July 29, 1917 (Figure 4.19). Admission to the park was 25 cents (GE July 27, 1917). The screening of outdoor movies is a new activity at the Springs. On August 17, 1917, The Granite Enterprise reports that the bath house at Sulphur Springs was sold to A. R. Miner who will move the house to his farm and make it a residence. On August 19, 1917 another Sunday night movie was shown at Sulphur Springs (GE August 17, 1917). Free use of two tennis courts is advertised and park admission is 10 cents. In Late August, 1917, it is reported that Mr. Van Dyke had completed constructing a dam for a bathing pool at Sulphur Springs (GE August 17).

THE GRANITE ENTERPRISE

# GRANITE!

OKLAHOMA

## OLD SETTLER'S REUNION AND PICNIC!

### JULY 3RD & 4TH, 1916

Don't Miss this Big Celebration at

### Granite's Famous Bromo Sulphur Springs

Nature's Ideal Picnic Spot of Southwest Oklahoma.

SPEAKERS	AMUSEMENTS
<p>Hon. Jim McClintic has promised to be here and speak on this occasion if possible.</p> <p>There will also be other prominent State Speakers, as well as practically all of the county Candidates. Well known orators will discuss all phases of social and economic conditions.</p>	<p>Base Ball Games Each Day. Some of the very best amateur teams in the Southwest have been invited to furnish amusement for the fans.</p> <p>Others Announced later.</p>
<b>COME!</b>	<b>COME!</b>

The Celebrated Granite Sulphur Springs is one of the Prettiest Spots in Oklahoma. Lots of shade and health giving Sulphur Water. Spend at least these two days in Mountain Climbing and Relaxation.

There will be Plenty of Barbecued  
Meat and Fresh Water on the Grounds

Don't forget the Date and Place,  
**GRANITE JULY 3 & 4, 1916**  
SULPHUR SPGS.

For further information See or Address Picnic Committee

Figure 4.18. Advertisement for Old Settlers Picnic at Granite Sulphur Springs over July 4, 1916 from the Granite Enterprise June 16, 1916.

Visit

## SULPHUR SPRINGS!

Sunday, July 29.

---

3:30 P.M.    Two Free    8:30 P.M.  
                    Band Concerts

---

Free Picture Show  
at Night.

---

Admission to Park - 25c

Figure 4.19. Advertisement appearing in the July 27, 1917 edition of the Granite Enterprise.

A review of local newspapers from 1918 did not result in locating articles or advertisements regarding major gatherings or events at Sulphur Springs for the year 1918. The Granite Enterprise mentions picnics and that small church and school groups continue to visit the park with picnics being the featured activity. An auto service providing rides to Sulphur Springs was in business and run By Mr. John Gravelee. He also offered Sunday lunches and cold drinks at Sulphur Springs (GE July 26, 1918). The city of Granite completed a new water well this year which produced more sulphur water for the residents of Granite (GE May 10<sup>th</sup>, 1918). This is likely a factor in the downward trend of visitors to the springs seeking health benefits from the sulphur waters since the same water was available in Granite. In addition, the United States had entered WW I and many young men were drafted into military service including Dr. T. J. Nunnery who had announced plans to build a sanitarium on the site in 1916 (GE December 20, 1918). It is also likely that the increasing availability of the automobile was a factor in the decreased visitation to Granite Sulphur Springs. The automobile enabled people to travel to other similar locations such as Medicine Park near Lawton, Oklahoma and Sulphur, Oklahoma which offered ideal swimming locations along with mineral waters and varied activities.

The year 1919 was much the same as 1918 with no major gatherings reported at Granite Sulphur Springs. Accounts in local newspapers of picnics by small groups continued. The June 30, 1920 edition of The Mangum Star contained a legal notice published by the State of Oklahoma which contained a list of corporations that could no longer conduct business due to nonpayment off charter fees. The list includes the Bromo Sulphur Springs Corporation. The March 31, 1921 Mangum Star contains a small ad by the Granite Commercial Club announcing that Granite White Sulphur Springs is open to the public and that the camp grounds are free. This may indicate that the city of Granite had taken over the operation of Granite Sulphur Springs. The lack of advertisements for major events at the park after 1920 suggest that it became more of a local park suited for small picnics and gatherings.

## Chapter 5 Site 34GR177

As mentioned in the previous chapter, W.W. Marsh established a farm on the property north of the Sulphur Springs location for which he received a patent in 1904. This is the property containing 34GR177. Upon the death of W.W. Marsh in 1908, the deed was transferred to his wife Kitsey Marsh. It appears that this farm served as a rental property and one of the early renters of the Marsh farm was Mr. W. J. Mitchell and family (Gunning 1972:141). The farm home is described as being located across the pasture northwest of the hotel and separated from the resort by a stock fence (*ibid*). While the exact location of the farmstead is not known, some potential locations are indicated on aerial photos and maps.

Much of the following summation has been gleaned from archival review including a 1932 Soil Conservation Service map, a 1900 General Land Office map, 1971 U.S.G.S. Granite Quad, 1941 large format, low resolution aerial, 1964 small format high resolution aerial photograph. The General Land Office (GLO) map of 1900 (see Figure 3.3) shows the Tittle farmstead on the south side of Headquarters Mountain but does not indicate any structures in Section 23 north of Headquarters Mountain. This could be because there were no structures there, or any present were not mapped. No structures are indicated in the SE ¼ of Section 26 at that time where the surveyors note that a town site is being laid out. However, it is known that there were some structures and settlers were present at that location during this time (Mayer 1937).

The earliest map showing the location of structures and roads in Section 23 north of Headquarters Mountain is a 1932 Greer County Soil Conservation service map (Figure 5.1). This map shows a structure in the \_\_\_\_\_ near the base of Headquarters Mountain. This location is connected to the Section line road to the east (which became SH 6 in 1958) via a 0.43 mile long drive. This location appears to be an active farmstead on 1941 and 1964 aerial photographs as well as the 1971 U.S.G.S. Granite Quad. This is the likely location of the Marsh farmstead, described as “across the stock pasture northwest of the hotel” (Gunning 1972:141). This location is approximately 665 meters (2,181 feet) southwest of 34GR177

The 1941 aerial appears to show two structures at the location of Sulphur Springs as well as the buildings shown on the 1932 soil map. It is a large format photograph so details are difficult to discern. However, some observations can be made. It appears as if some of the gravel and shale quarry operations that continue to this day in Section 23 had begun by 1941. The drainage berm that impacted the southern portion of 34GR177 had been constructed by 1941. In addition the field road to the farmstead at the base of the Mountain shown on the 1932 Soil Conservation map now shows a fork on its east end. The northern fork extends to a potential

activity area just south of 34GR177. While a structure cannot be discerned here on the aerial, there is a lighter colored area that indicates exposed soil suggesting an activity area of some kind is there. The alignment of the north south section line road along the east side of Section 23 is readily visible in the 1941 aerial. This road extended north another six miles beyond Granite Sulphur Springs where it ended with in a tee intersection with what is now designated County Road EW 134 just before reaching the North Fork of the Red River which at this point is flowing southwesterly. The main road connecting Granite with other cities to the north and south at this time was along Highway 283 three miles west of Granite.

**Figure 5.1. Locations of 34GR177 and Sulphur Springs in relation to structures and roads on the 1932 Soil Conservation Service map (alabamamaps.ua.edu).**

According to the 1955 construction plans for SH 6, the highway's centerline followed the existing Section line road as it passed the location of 34GR177. The centerline survey profile shows that the pre highway section line road followed the lay of the land through this section and indicates the road followed up the hill slope south of 34GR177 and then down the north slope where 34GR177 is situated. This would indicate that the SH 6 road cut which clips the east side 34GR177 was made during the circa 1955 construction of SH 6. The plans indicate about sixteen feet was removed from the highest point of the cut and about 10 feet on the north slope where 34GR177 is located. This cut largely removed the east wall of the gully feature

in Area 1 along the east edge of 34GR177. It is likely that a significant portion of 34GR177 was impacted at this time as about 30-40 feet of area west of the edge of the original county section line road was modified R/W in 1955 for the highway construction.

By 1964, the only structures in Section 23 north of Headquarters is a structure at the Sulphur Springs location, and the farmstead location to at the base of the Mountain a ¼ mile to the northwest of Sulphur Springs (Figure 5.2). This farmstead location remains active on the 1971 Granite Quad, and recent aerial as well. By 1964, the east fork in the field road to this farmstead which shows on the 1941 aerial appears to have been unused for some time. In addition erosion or some other disturbance has exposed soil on the southeast edge of 34GR177 and along the field side of the SH 6 R/W fence. A pond has been constructed on the north edge of 34GR177 by 1964. The construction appears to have truncated some of the site deposits. Between 2003 and 2005 a two field road track road was constructed along the west edge of 34GR177. This road begins at the pond on the north edge of the site and extends.4 miles to the south. While disturbing the west edge of the site, the impact is minimal as few deposits occur in the area. The final disturbance to 34GR177 occurred sometime between the years 2008-2010 when an underground utility line to a new residence located west of the site bisected the site east to west.

**Figure 5.2. Aerial photograph from 1964 illustrating features such as roads, drainage berm and pond in the vicinity of 34GR177.**

While no definite conclusions can be drawn regarding the where location of the Marsh farmstead in the early-twentieth century, it is likely the location about 660 m (.4 miles) north/northwest of Sulphur Springs and 665 m (.4 miles) west and south of 34GR177. This location has been in consistent use since before 1932. One important factor revealed by the archival review is that no occupied structures occur in the vicinity of 34GR177. A small, circa 1941 activity area is noted just south of 34GR177, however, no structures are readily visible in the 1941 aerial photograph.

### Site Description

Site 34GR177 is located along the head of an erosional feature or arroyo, which opens to and drains to the east toward the North Fork of Red River. The head of the arroyo is about 130 meters northwest of the 34GR177 deposits and formed along the edge of an outcrop of Hennessy shale (Merritt 1958). The arroyo feature widens rapidly is about 100 m wide where it is bisected by SH-6 (Figure 5.3). The arroyo east of SH-6 has been heavily altered by shale quarry operations, however, archival maps and photographs show the drainage as widening as it cuts around the north edge of the shale deposit before entering more level topography and merging with the North Fork of the Red River about 3 km east of 34GR177. The archival maps and photographs also indicate this arroyo has been present for some time and was present during the occupation of Granite Sulphur Springs.



**Figure 5.3. 1964 aerial showing the arroyo and the location of 34GR177. Note the erosional nature of the south wall of the drainage feature. As of 2015 much of the south arroyo wall east of the highway has been removed by shale quarry operations.**

Site 34GR177 contains artifacts deposits largely deriving from the first years of the twentieth century. The items occur along the edges of an erosional feature or arroyo. Most occur within the thin, clay loam top soil of the Vernon-Knoco complex (1-12 percent slopes) recorded on the site area (USDA 1967). Most of the artifacts are draped on the lip, slope and base of the

arroyo. The soils within the arroyo are classed as Knoco-Badland complex (1-12 percent slopes) consisting of clay and silty clay derived from clayey residuum weathered from shale (*ibid*). Now, heavily altered by modern disturbances such as pond construction and shale quarries, the erosional feature (arroyo) begins about 120 m west of the site and opens broadly just east of the site. The archaeological deposit occurs mostly on the north facing slope of the arroyo feature as well as the east facing slope of a small gully that has cut southward and is present just off the west edge of the pre 2010 SH 6 R/W. The slopes on this gully feature are fairly acute and rise about three m from the gully floor.

Several factors likely played into the selection of this location as a dump site in the early-twentieth century. It is a common occurrence even today for people to dump items along the edges of erosional features to not only rid themselves of trash and debris, but also as an effort to slow the erosional process. In addition, this location was at the time of deposition, just off the county section line road and was easily accessible. Factors that may support its use by Granite Sulphur Springs include the fact that both properties (Granite Sulphur Springs and the location of 34GR177) were initially owned by W. W. Marsh. In addition, the location of 34GR177 was easily accessible, being ½ mile from the resort and right off the county road. In addition the site was on the north side of the hill that is north of Sulphur Springs and well out of sight of the Sulphur Springs location.

### **Initial Site Investigations**

Site 34GR177 was recorded during a 1997 cultural resources survey for the reconstruction of SH-6 from Blair north to Elk City conducted by Stan Bussey, under contract with Roberts/Shornick and Associates Inc.[project # STP-5F(214)/ JP 14982(04)]. The site was described by its recorders as dump containing items from the 1890's through the 1930's. The site recorders noted that most of the dump is outside the proposed R/W for the project, however, recommended further investigation in the way of the subsurface excavation of three 1 x 1 meter test units within the proposed R/W (Bussey et al 1997).

On July 30th, and August 13th & 19, 2009 the site was examined by Rhonda Fair, Lauren O'Shea and Mike McKay from the ODOT Cultural Resources Program. The initial site investigation consisted of a surface inspection with formal shovel tests along three north/south transects spaced across about 40 meters the approximately 61 meter (200') width of the project R/W through the recorded site area. While a moderately dense scatter of early-twentieth century items were observed on the surface, the three shovel tests transects indicated that there is no real depth to the deposits. Most of the deposit is confined to the surface and upper 5 cm of soil entailing the root zone of the grass and scrub vegetation covering the site area. It was at this time as well that the degree of previous disturbance to the site deposits by the pond and drainage berm construction became apparent. The majority of observed glass and ceramic artifacts were in a highly fragmented state. Many metal items were also fragmented and flattened. It is likely that both the construction of the drainage berm and pond resulted in heavy

equipment being driven over much of the site area in addition to moving some of the deposits around. It was also determined that a linear scatter extending northward from the gully along the SH-6 R/W fence line was likely spread as a result of the 1955 construction of SH-6.

Since the disturbances removed most of the artifacts from their primary depositional context and most were on the surface or within the upper 5 cm of soil, the excavation of 1 x 1 meter test units was no longer considered appropriate for the site evaluation. Additional surface observations indicate the dumped items occur along a topographic break, and some of the dump area is west and outside of the R/W and area of potential effect (APE) for the project. In addition, the initial investigation better defined the extent of the materials. The original site recorders recorded the site boundaries' as extending further south than the extent this investigation found the site to actually be. Further, the artifact deposits thinned appreciably in the western portion of the APE. I might add that the while ODOT owns the R/W easement investigated by this survey, the landowner indicated that family members had collected bottles from the site prior to ODOT obtaining the R/W.

Three collection areas were delineated during the initial surface examination and are largely based the local topography of the site. Within these three areas, collection efforts focused on diagnostic and datable items such as bottle bases, and ceramics with makers marks and bottle tops/necks with intact finishes/lips as well embossed bottle fragments. All areas produced items that for the most part date to the early-twentieth century, with some potentially deriving from the late-nineteenth century.

## **Summary**

Based on the information gleaned from the initial 2009 site investigation, it appears that while there is little depth to the trash deposits on 34GR177 within the APE for the project, much of the area is disturbed, and the majority of the cultural materials derive from the early-twentieth century (1900-1920), with some potentially deriving from the 1890's. In other words, for the most part, the materials, while largely lacking primary depositional context, appear to represent a single component and do not appear to have been much contaminated with later dumping episodes. Further, the assemblage is composed of items that could be considered as consistent with items that may be expected to derive from an early-twentieth century hotel and resort activities focused around "medicinal springs" such as the sulphur spring at the base of Headquarters Mountain.

While the archival research accomplished by the initial investigation had not established an unquestionable tie between the early-twentieth century dump (34GR177) and the early-twentieth century Sulphur Springs Resort (34GR114) located ½ mile south/southwest of the site, documentation was found that W.W. Marsh was the original owner of both locations (34GR114 & 34GR177) and there are documented transactions involving W.W. Marsh and T.S. Wilcox and J.J. Adair. Mr. Wilcox as well as a Jasper Adair are names associated with

the establishment and management of the Granite Sulphur Springs. Therefore, it is certainly possible that the cultural materials comprising 34GR177 represent the dump area for the Sulphur Springs resort. Such a connection is certainly suggested by the artifact assemblage as well.

### **Artifact Collection**

The data recovery operation conducted as part of the mitigation efforts involved surface collection of diagnostic artifacts. The initial site evaluation determined that the materials were largely confined to the surface and upper five cm of soil and most had been removed from their original context by disturbances related to road, pond and berm construction and lacked stratigraphic information. However, since the materials appeared to derive from a rather tight time frame, diagnostic materials, even derived from the disturbed areas could still provide information. Therefore, a surface collection was considered the most efficient means of data collection rather than formal excavations. However, some areal control designation three collection areas was implemented to provenience materials.

Diagnostic materials were considered as those that could provide information indicative of time frames and/or function and use. Most of the diagnostic items are fragmentary and include items such as glass bottle bases and tops with lips and necks (finishes); glass bottle and jar fragments with embossing or potentially identifiable company or makers marks and ceramics/stoneware bearing makers marks or identifiable designs were collected. Stoneware fragments were also collected if bearing diagnostic glazes or enough of the vessel remained to identify a likely function. Rusted metal items were collected if identifiable and faunal material was also collected. Artifacts collected have been curated at the Sam Noble Oklahoma Museum of Natural History, in accordance with 36 CFR Part 79.

### **Collection Areas**

Site 34GR177 is located immediately west of the SH-6 right-of-way (Figure 5.4). The area of data recovery is roughly 40 meters east-west by 70 meters north-south. An additional scatter extending about 25 meters north occurred along the fence line demarking the SH-6 existing R/W. The analysis of the initial 2009 collection resulted in a determination that the site was NRHP eligible under Criteria D for the data it contained regarding its likely association with Granite Sulphur Springs and early-twentieth century settlement in Greer County, Oklahoma. Pursuant to this determination a MOA was executed with the SHPO to mitigate the adverse effect the highway project would have on the deposit. This was followed by a collection of artifacts within three designated collection areas (Areas 1, 2 & 3) and a general surface collection during a monitor of the soil stripping on the site. Various collection methods were employed including hard raking of the surface deposits, however, it became apparent that had troweling through the deposits was the most efficient method of collection.



**Figure 5.4. Google Earth photograph of collection areas looking southwest from SH-6.**

The collection areas that were defined after the initial surface examination of the site were employed in the data recovery efforts. The areas were somewhat arbitrary and based on the site's topography (Figure 5.5). Area 1 basically encompassed the gulley and areas to the south, Area 2, the site center and Area 3, the largely disturbed area between Area 2 and the pond. However, there were some refinements based largely upon areas of apparent lesser disturbance (or example Area 1A, 1B etc.). The site was found to be fairly disturbed, mostly by the pond and drainage berm construction as well as the initial SH-6 construction in the 1950's. Examination of aerial photos dating to 1941 and, more distinctly, 1964 (Figure 5.6) revealed the extent of disturbance. Prior to 1941, a terrace or berm was constructed just upslope from the edge of the drainage in which the dump occurs. The berm disturbed much of the upper portion of the slope and pond construction disturbed the lower portion of the deposit. The result was the complete disturbance of Area 3 and partial disturbance of Areas 1 and 2. While the disturbed areas lacked primary context, artifacts in these areas were consistent in diagnostic traits regarding period of manufacture and functional attributes as those in the lesser-disturbed areas of the site. Therefore, while lacking primary depositional context, the items retain value as the site is considered to be a single component deposit, confined largely to the surface.

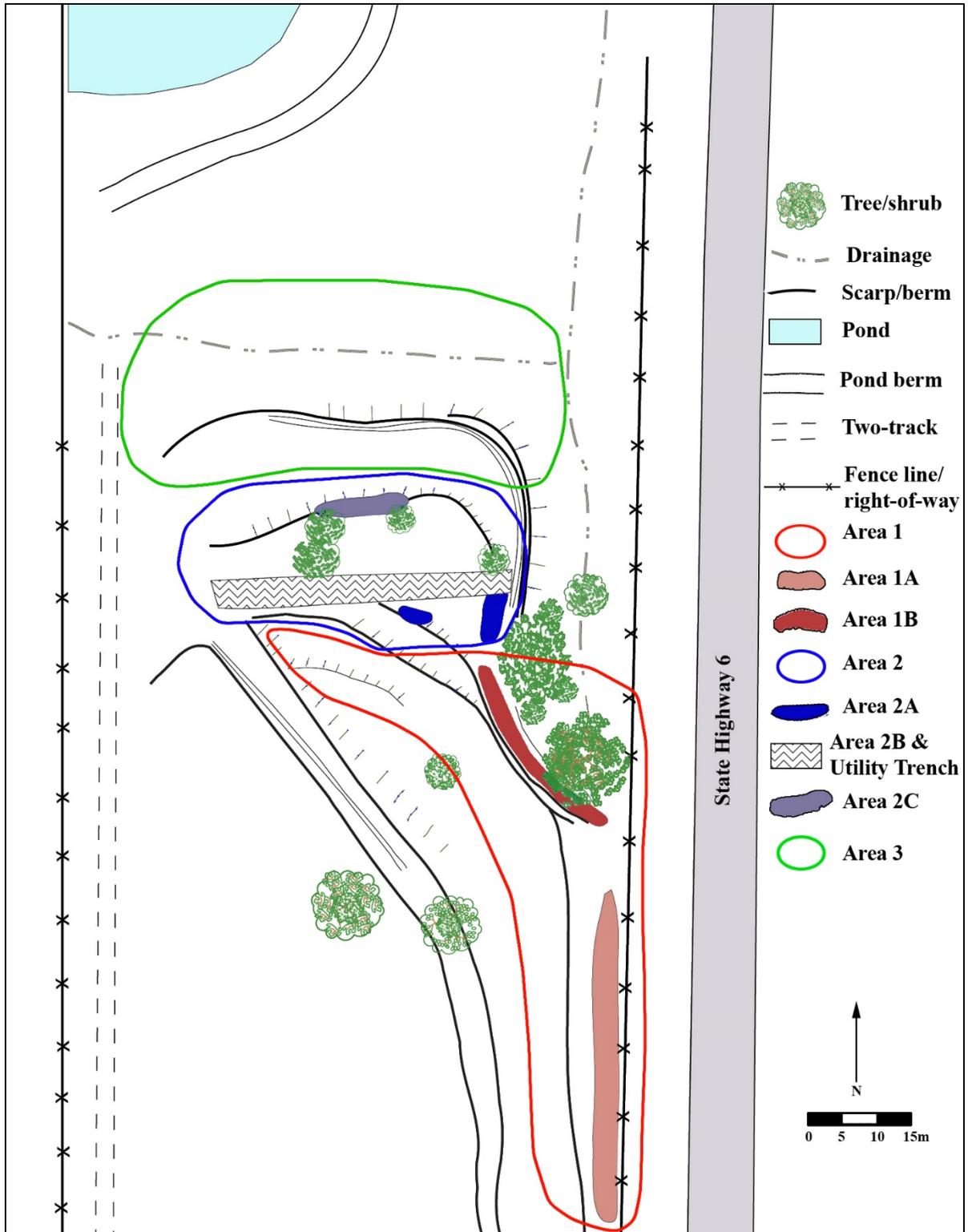


Figure 5.5 Plan map of 34GR177 and collection areas.

**Figure 5.6. Collection Areas and disturbances plotted on a 1964 aerial photograph.**

**Area 1**

Area 1 comprises the southernmost portion of the site including the upper slopes and the edge of a 30 m long steep sided gully along the eastern boundary of the site. The gully drains northward toward the pond. Two concentrations were evident within Area 1, and were designated Area 1A and Area 1B. Area 1A contained a concentration of artifacts extending in a north/south direction for approximately 40 m along the SH-6 R/W fence (Figure 5.7). It is very likely these items were deposited here as a result of SH-6 construction in 1955 and the road cut through the hill rather than being in primary context. It also appears that a north/south swale, largely devoid of artifacts, was graded through this area to facilitate drainage into the gully from the south.

Area 1B designates a deposit of items along the crest of the northwest edge of the gully (Figure 5.8). This deposit extended about 3-4 meters back from the edge of the gully encompassing an area roughly 212 square meters. While disturbed, Area 1B is thought to retain some integrity, but the artifacts were found to be in a rather even layer on the surface suggesting the area was smoothed or graded out at some point. This may have happened when the drainage berm oriented northwest to southeast was built to divert water to the northwest.



**Figure 5.7. View of area 1A looking south. Cedar trees mark head of the gully. Most of the items in Area 1A occur along the fence line.**



**Figure 5.8. View of Area 1B looking south. Gully is to the right. Person in the background center marks Area 2B.**

## Area 2

Area 2 produced the most of the recovered items. Area 2 for the most part comprised the north facing slope from the opening of the east gully and continuing westward to the northern end of the drainage berm. While disturbed to a large degree by the constructed drainage berm which crosses the southwest portion of Area 2 and installation of a subsurface utility line which bisected Area 2 from east to west, Area 2 was also the most intact portion of the site. Three sub areas, 2A, 2B, and 2C were designated within Area 2. Area 2A comprised 2 small locations totaling about 12 square meters with artifact concentrations denser than the surrounding area. Area 2B was designated to denote the area of recent disturbance by the utility line trench (Figure 5.9). Area 2B comprised about 55 square meters. Area 2C comprised about 12 square meters occurring near the base of the steepest portion of the north facing slope and contained what appear to be the most intact area of deposits subject to this investigation.



**Figure 5.9. View of Area 2B looking west. This area was disturbed by a utility trench.**

## Area 3

Area 3 is the northern most area of collected artifacts. It is also the most disturbed area and the artifact scatter here was relatively sparse. Area 3 includes a “bench” which extends from the north edge of Area 2 (see Figure 5.4). Construction of the pond disturbed the entire area and the abrupt end to the Area 2 deposit suggests that any artifact deposits that may have extended from Area 2C into Area 3 were truncated and removed by the pond construction. The artifacts collected from this area derived largely from the western and eastern portions of Area 3 and are entirely in a secondary context.

## **Chapter 6 Research Questions**

In this chapter some basic research questions are established to address by analysis of the recovered artifacts and the archival research. If the assemblage from 34GR177 is associated with Granite Sulphur Springs, located about one half a mile south of the site, then it is essential we establish some expectations that should be manifest in the archaeological record if the assemblage is associated with dumping activities related to Granite Sulphur Springs. The archival research has established that Granite Sulphur Springs operated from around 1900-1920. Many activities are documented including a variety of activities associated with large picnics and gatherings, medical practices, hygiene practices associated with bathhouse, camping, both by tourist and health seekers as well as restaurant and dining activities.

If 34GR177 is the dump site for some of the activities which occurred at Granite Sulphur Springs, then the recovered artifacts should be relatable to the activities documented by the archival review. The research questions below are postulated for interpretation of the 34GR177 assemblage.

### **Research Questions**

Based upon the archival research presented in Chapter 4, the following research questions/assumptions may be posed for the deposit at 34GR177.

Activities centered on Granite Sulphur Springs began soon after the discovery of Sulphur infused waters in November of 1900. Activities increased and became more varied beginning in 1906 when the bathhouse and restaurant were opened. The addition of a hotel and skating rink by 1907 contributed to an increase in visitation as well as activities. Activities began to decline after 1915 and by 1920, activities at the Springs were greatly reduced and the Springs served mainly as a local park and the frequent large gatherings had ceased and most buildings had been removed.

1. Therefore, it can be assumed that refuse deposits resulting from the activities at Granite Sulphur Springs should largely be comprised of items that were being manufactured during the time span 1900-1920.

First and foremost is the question as to if the material recovered from 34GR177 derives from activities at Granite Sulphur Springs. The central activities associated with Granite Sulphur Springs include medical related activity including the practices of doctors established at the springs including the documented presence of Drs. Hall, Gilbert and Nixon in 1906 and Dr.

Abbott and Dr. Tatum in 1912 as well as individuals seeking the curative powers of the Sulphur infused waters as treatment or part of treatments. Such individuals may have been undergoing treatment with medicines prescribed by doctors not practicing at the springs or using medicines available for purchase locally or through mail order.

2. Therefore, if the deposits at 34GR177 are associated with Granite Sulphur Springs, medically related items should be well represented in the assemblage.

Personal hygiene practices are activities closely associated with the medical activities at the Springs. In addition, the eight room bath house present from 1906-1916 provided hot and cold baths with Sulphur water both for health seekers and those simply seeking a good bath. It is also likely that many of the patients seeking medical treatment at the Springs practiced good hygiene as well.

3. Therefore, if the deposits at 34GR177 derive from Granite Sulphur Springs then items relating to personal hygiene should be well represented.

Another significant activity occurring at the Springs were the large multi-day picnics and gatherings. Events include 4<sup>th</sup> of July celebrations, Socialist gatherings, Odd Fellows and Rebekah's gatherings, Civil War veterans gatherings, church groups and Old Settlers reunions. Period newspaper accounts indicate that multiple refreshment stands offering drinks were present at many of these events. Obviously food would be a significant component of these picnics and gatherings. These events began in earnest after 1906 when buildings were erected at the Springs and continued through the late nineteen teens. The restaurant and hotel likely offered refreshments as well.

4. If the deposits at 34GR177 are associated with Granite Sulphur Springs, they should contain evidence relating to the storage, selling and serving foodstuffs and drinks including soda and lemonade.

Throughout the existence of Granite Sulphur Springs, camping for both short and extended stays up to several weeks are frequently mentioned in local newspapers. Portable items such as tents, small stoves, various forms of lighting and trunks to carry and store items in would comprise the basic materials for setting up a camp.

5. Although camping is for the most part a short experience, camping was a significant activity at Granite Sulphur Springs. If the deposits at 34GR177 relate to Granite Sulphur Springs, discarded items associated with camping activities may be present.

Transportation activities relating to the springs are also well documented by the archival research. Period photographs show horse drawn buggies were very common. The Granite Enterprise contains several ads and announcements pertaining to taxi and bus services from Granite to Sulphur Springs. Both horse drawn and early automobiles area documented as involved in this service. By 1910 automobiles began to be mentioned in newspaper accounts of the happenings at the Springs. The 1911 sale by Rounds and Porter lumber company to recover debt owed by T.S Wilcox for improvements at Granite Sulphur Springs includes what is described as a 16 x 24 foot “automobile shed”.

6. If the 34GR177 deposits are associated with Sulphur Springs, then transportation related items that may be present and should include both horse related and items evidencing the introduction of the automobile.

Sports were a popular activity at Granite Sulphur Springs. Baseball is most often mentioned and archival materials suggest a race track and baseball field were present at the Springs. Foot races and horse races are mentioned in newspaper accounts as is a wrestling match in 1907. The roller rink provided opportunities for rolling skating for many years. Toward the end of Granite Sulphur Springs, tennis was mentioned as an activity.

7. Should the 34GR177 deposits be associated with Granite Sulphur Springs, evidence for sports related activities may be present. However, if present they could be rare as many items associated with sports related activities such as balls, bats, uniforms and shoes do not preserve well.

The presence of a hotel and restaurant on the grounds of Granite Sulphur Springs from 1906-07 until at least the mid nineteen-teens is well documented.

8. If the 34GR177 deposits are associated with Granite Sulphur Springs, then it might be expected that evidence for commercial type food storage, preparation and serving items will be present in the assemblage. In addition, evidence for furnishings relating to the hotel could be present. In addition, food remains may be present. For example repeated presence of the bones from certain cuts of meat may indicate a more commercial type origin for the cuts.
9. Large crowds are documented as attending multi day picnics, gatherings and events such as a Chautauqua, the variety of personal items may be expected including items relating to children activities.

Power supply would have been an obvious necessity at Granite Sulphur Springs. Lighting in the structures which were built beginning in 1906 would have required an energy source. The

bath house appears to have an above ground cistern in a circa 1906 photograph. Filling this cistern would have required a pump powered by an engine of some sort. Though most of the activities at Granite Sulphur Springs was seasonal, with most occurring in spring through summer, heating would have been practiced by campers and visitors during cooler times of the seasons. The city of Granite did not have an electric generating plant until 1910. It is unknown if electricity was run to the springs from Granite at this time or not. Mention is made in the July 23, 1909 edition of the Granite Enterprise of a small fire at the skating rink caused by an oil lamp which fell from the ceiling onto the wood floor. This statement suggests that generated electricity from was not in use at Granite Sulphur Springs roller rink. Prior to the 1910 installation of the electric light plant in Granite, some business and residences generated their own electricity. The 1910 Sanborn map indicates that the Tinsley & Clayton Cotton Gin had its own electric light plant. The map also indicates gasoline engines present behind some businesses. It is likely these engines powered small generators to provide power. It is unknown if any of the structures at Granite Sulphur Springs had their own gasoline powered generators.

10. It might be expected that a refuse deposit associated with Granite Sulphur Springs would contain items relating to portable power and lighting sources such as oil/kerosene lamps, batteries.

### **Analysis of Recovered Materials**

The next section of this report is the artifact analysis conducted by archaeologists with the Burns and McDonnell Engineering Company. The analysis is a large document and the detailed artifact descriptions along with tables and photographs are provided on the accompanying CD. The analysis, tables and photographs are in separate files and for the best experience in reviewing the analysis, readers are advised to open all the documents as they review the study.

The next Chapter in the text report provides a summary of the analysis of the recovered materials.

## **Chapter 7 Summary of Recovered Materials**

In this section a summary of the artifact analysis is discussed. The collection efforts in the field were focused on items that may have the potential to provide some information. Diagnostic materials were considered as those that could provide information indicative of time frames and/or function and use. Items such as glass bottle bases and tops with lips and necks were collected. Glass bottle and jar fragments with embossing or potentially identifiable company or makers marks were collected as well. Ceramics bearing makers marks or identifiable designs were collected. Stoneware fragments were collected if bearing diagnostic glazes or enough of the vessel remained to identify function. Rusted metal items were also collected if identifiable. Faunal material was also collected.

The summaries below are focused on the results of the analysis in each functional category. This is followed by a discussion and interpretation of the results of the analysis. The summaries begin with the larger analytical categories such as Bottle Finishes and Unclassified items which could not be confidently place in a functional category. While these items may be limited in the information they provide, they do exhibit attributes that can shed light on things such as manufacturing processes which can often be bracketed by production dates. While some items consisting of only a bottle finish could be identified as to a likely function such as related to medical or pharmaceutical products, many could not be confidently placed in a functional category. Many of the bottle/jar finishes in the collection fall into this category. Many items could be identified as to a manufacturer, however not to particular products since a company may have produced a wide variety of products. In some cases only a manufacturer such a glass bottle/jar manufacturer could be identified, however, information regarding the form and function of the vessel could not be determined. The Unclassified grouping of items from 34GR177 discusses these items. Therefore, these two groups are discussed first, followed by the functional categories.

### **Bottle Finishes**

One of the diagnostic type artifacts collected during the data recovery were bottle finishes. Though these items represent only the necks and lips of broken bottles which could not be further identified and placed in one of the functional categories, their method of manufacture and type of finish can provide information such as potential date range of manufacture as well as some functional information. For example a Prescription finish was commonly used on Patent and Proprietary medicines from the mid-1870s into the early 1920s. While also found on bottles containing other materials such as chemicals, cologne and toiletry products, it's most common use was with Prescription and Proprietary medicines. Another example is the crown finish, which came into widespread use during the early-twentieth century on beverage bottles. Both alcoholic and soft beverages used the crown finish.

A total of 16 different bottle finishes were identified by the analysis (Table 7.1). Of these, 35 percent were tooled finishes, 1 percent improved tooled, and 60 percent were machine made. The manufacturing of bottles during the late-nineteenth and early-twentieth century witnessed the rapid transition from various types of mouth blown mold produced bottles with tooled finishes to fully automatic machine made bottles, including the finish. The introduction of and speedy adoption of the fully automatic Owens Bottle machine by bottle manufacturers after 1905 led to the almost complete replacement of mold blown bottles by 1920.

The variety of finishes and the significant presence of both tooled and machine made bottle finishes certainly appears to reflect what would be expected from a large sample of bottle finishes dating to the late-nineteenth and early-twentieth century. The sample of bottle finishes provides good evidence that the trash deposits at 34GR177 are derived from items available and in common use during the time that Granite Sulphur Springs was operating nearby.

Among the 16 types of finishes in the sample, Prescription finishes comprise the largest single identified type making up 17.4 percent (N=206) of the bottle finish sample. Patent/Extract type finishes comprise 14.3 percent (N=169) of the sample and Collared/Ring type finishes comprise 12.6 percent (N=149) of the sample (Figure 7.1). These three finishes are common on medicine and extract bottles from the late-nineteenth and early-twentieth centuries (Fike 2006). The significant number of amber colored bottles represented among the Prescription finishes could be representative of chemical bottles.

**Table 7.1. Bottle finishes from 34GR177.**

Bottle Finish	Colorless	Solarized Amethyst	Amber	Aqua	Light Green	Olive Green	Cobalt	Blue	Total
Double Ring	26	4	6	42	2	-	-	-	50
Bead	47	25	19	4	1	-	1	-	97
Prescription	73	44	80	4	1	1	-	3	206
Patent/Extract	101	37	22	10	3	-	1	-	174
Packer	12	3		5	-	-	-	-	20
Reinforced Extract	3	1	10	9	-	-	-	-	23
Oil/Ring	26	15	5	9	3	-	-	-	58
Brandy/Wine	37	44	14	2	1	-	-	-	98
External Thread	84	13	3	6	1	-	4	-	111
Crown	64	7	16	22	20	-	-	-	129
Collared Ring	94	41	14	1	-	-	-	-	150
Sprinkler Top	3	-	-	-	-	-	-	-	3
Pouring	1	-	-	-	-	-	-	-	1
Champagne	-	-	3	-	-	-	-	-	3
Blob	-	-	-	2	-	-	-	-	2
Total	601	234	192	116	32	1	6	3	1,185



**Figure 7.1. Examples of bottle finishes recovered from 34GR177. Top Left: Collared Ring, Top Right: Prescription; Bottom: Patent Extract**

Bottle finishes usually associated with beverages including crown and brandy/wine finishes are present in the finish group category. Crown finishes comprise 10.8 percent of the sample and Brandy/Wine finishes comprise 8.3 percent of the sample. Externally thread finishes comprise 9.3 percent of sample (Figure 7.2).

The solarized amethyst and colorless glass samples comprises the bulk of the bottle finish sample at about 71 percent. Since solarized glass represents colorless glass that was made with manganese widely used as a discoloring agent in bottle and jar glass between 1890 and 1920 (Lockhart 2006), the fact that about 28 percent of the colorless glass examples in the finish sample have solarized provides evidence that much of the sample dates to the early-twentieth century.



**Figure 7.2. Examples of bottles finishes from 34GR177. Top: Crown Finish; Center: Brandy Wine; Bottom External Thread.**

The sample of bottle finishes from 34GR177 contains a variety of finishes reflecting the diversity of types of finishes being produced during the early-twentieth century. Finishes often associated with medicinal and extract products comprise about 44 percent of the finishes in the group. The percentage of finishes that are identifiable as tooled (35 percent) and machine finished (60 percent) also seems to reflect the transition from mold produced to machine produced bottles and jars that took place in the first two decades of the twentieth century.

## **Unclassified Group**

The Unclassified Group contains a total of 1,002 items from which 749 individual objects are represented. Glass items comprise the bulk of the group comprising 83.4 percent of the individual objects identified in the group. Metal items account for 16.2 percent of the Unclassified group, many of which are closures and lids for glass containers.

A total of 640 glass items representing 625 individual objects were put in the Unclassified group. The group is comprised of items for which some information could be gleaned. In the case of items such as glass jar and bottle fragments retaining a makers mark which could allow for a glass or product manufacturer to be identified, but the due to the manufacturer producing a range of products, the actual product could be identified were put in this group. In these cases a production date range for the bottle could be identified.

Much of the group is comprised of bottle/jar fragments from which only a manufacturing method could be determined. A potential date range for manufacture can be arrived at if the processes for manufacture could be identified. The late-nineteenth and early-twentieth century witnessed revolutionary changes in the techniques for the manufacture of glass containers. A variety of mold blown bottles with applied lips were in use in the late-nineteenth and early-twentieth century which can be identified by the presence of distinctive attributes of a particular mold present on containers. By the turn of the century, semi-automatic bottle machines had come in to use and by 1905 the Owens fully automatic bottle machine was available which could produce bottles and jars, including the finish in much larger quantities and for a much cheaper price than any other processes at the time. The machine method quickly became adapted by most bottle and jar manufacturers by around 1920.

Among the unclassified group, eight different companies have been identified accounting for 35 individual items. These items account for 5.5 percent of the unclassified group. The identified companies include the J.E McBrady Company (n=2), J.R. Watkins Medical Company (n=6), United Drug Company (n=17), Rawleigh's (n=3), Penslar Drug Store (n=3), H.C. Whitmer Company (n=1) and the Kellogg's Company (n=3). While the product or potential function of the objects could be positively identified, many of the companies were known for producing medical related products. The manufacturing date ranges for the objects

identified in the Unclassified Group all span the early-twentieth century, with most ending production around 1920 (see Table B-22 in the attached CD). Another 38 (6 percent) items were identified that likely held extracts or syrups. The ascription to pre 1920 is based on the bottle attributes evident on the pieces which are typical for these products in the early-twentieth century (Table B-22).

A total of 220 individual glass containers were identified by makers marks used by the companies that manufactured them. These items comprise 35 percent of the unclassified group. Most all exhibit marks used in the early part of the twentieth century. The exceptions, meaning items that are of post 1920 manufacture comprise only a small part of this assemblage. Of these 220 items, 31 (14 percent) were produced after 1920 (Table B-22). All others have production ranges that span the years of operation of Granite Sulphur Springs. Seven were produced by the Owens Illinois Glass company after 1929, one by the Knox glass company in 1932, three produced by Capstan Glass company 1918-38, 19 Hazel-Atlas Glass Company (1923-1964) and one by Three Rivers Glass Company between 1928-1937.

The glass manufacturer company marks on the remaining 189 represented containers in this Unclassified group include at least 100 vessels produced by the Illinois Glass Company for which the contents could not be identified. One vessel contains the heel "I G Co" mark indicating production between ca. 1880 and ca. 1911 (Lockhart, Lindsey, Whitten, and Serr 2005:2). Based on the presence of the "IGCO" mark inside of a diamond on the bases, two vessels (Specimens #287 and #559 from Area 2A) were produced between ca. 1900 and ca. 1911 when the company used this mark (Lockhart, Lindsey, Whitten, and Serr 2015:3). Of the remaining 97 vessels, 66 contained the "I" inside of diamond mark, indicating production between ca. 1915 and 1929 (*ibid*). Twenty six contained the number in diamond mark, indicating production between 1911 and 1929 (*ibid*). The remaining five contained suction scars but had unidentified embossing inside of the diamond, indicating production between 1910 and 1929 (*ibid*). Fifty-six of the vessels recovered were colorless, 22 were amber, 13 were solarized amethyst, and nine were aqua. The manufacturing date range for these 100 Illinois Glass Company products all span the first two decades of the twentieth century. Most exhibit the "I" mark which was in use between 1915 and 1929. Therefore, while in production during the time Granite Sulphur Springs was active, it would have only been during the last few years of operation.

The Owens Bottle Company is represented by 57 individual vessels among the Unclassified Group. At least three plants are represented, the Toledo, Ohio; Plant Number 3, the Owens West Virginia Bottle Company in Fairmont west Virginia; Plant Number 4, the Owens Eastern Bottle Company in Clarksburg, West Virginia; Plant Number 6, the Owens Bottle Company in Charleston West Virginia; and Plant Number 8, the Owens Bottle Machine Company, Glassboro New Jersey. The Owens Bottle Company merged with the Illinois Glass Company in 1929.

Based on the presence of two complete jars and 16 complete or fragmented bases, at least 18 vessels produced by the Owens Bottle Company plant In Toledo Ohio are represented at 34GR177. Based on the presence of the “O” inside of box mark on each base, all vessels were produced between 1919 and 1929 (Lockhart et al. 2010:56).

Based on the presence of two complete bottles and 28 complete or fragmented bases, at least 30 vessels produced by the Owens West Virginia Bottle Company are represented at 34GR177. Twenty-one of the 30 vessels recovered contained the “F” mark used by the company from ca. 1908 to 1919, indicating production during this time (Lockhart, Schriever, Lindsey, and Serr 2015:80). Seven additional vessels contained the “F” mark either partially or completely surrounded by a circle of dots, indicating production between 1916 and 1919 (Lockhart et al. 2010:58). All of the vessels contained suction scars indicating production by Owens rather than the Fairmount Glass Works, who did not have the license to produce vessels with the Owens machine (Lockhart et al. 2015:80). One vessel contained an embossed “O 35” with the “O” inside of a box. This mark was part of the date code system adopted by the company in 1919 (Lockhart et al. 2010:59). The “3” indicates production at plant three and the “5” indicates production in 1925 (Lockhart et al. 2010:60). The remaining base also contained a date code, with “3” to the left of the box “O” and “7” to the right. This could indicate production in 1927 as this system was carried over into the merger with Illinois Glass (Lockhart, Schriever, Lindsey, and Serr 2015:52). However, Lockhart et al. (2010:60) only show the “x O x” format for this particular plant as having production dates of 1923 and 1924. Regardless, the vessel was at least produced between 1919 and 1929 based on the box “O” mark (Lockhart et al. 2010:59).

At least five vessels produced at the Owens Eastern Bottle Company are represented in the assemblage by the presence of one complete bottle and four base fragments. Plant four was in operation from 1912 to 1929 indicating all vessels were produced during this time (Lockhart et al. 2010:54). The “0” on one specimen could indicate production in 1920, the “2” on another specimen indicates possible production in 1922, the “4” on a specimen indicates possible production in 1924, the “7” on one item indicates possible production in 1927, and the “8” on the remaining specimen indicates possible production in 1928 (Lockhart et al. 2010:59-60). However, Lockhart et al. (2010:59) indicates that their evidence shows that plant four likely never used the code system. Regardless, all vessels were at least produced between 1919 and 1929 based on the box “O” mark (*ibid*).

Based on the presence of one complete bottle and one base fragment, at least two vessels produced by the Owens Bottle Machine Company at Charleston are represented at 34GR177. Based on the presence of the “C” inside a half circle of dots mark used by the company, one vessel was produced between 1918 and 1919 (Bottle Research Group 2014). The “2” to the right of the box “O” mark on the remaining vessel indicates it was possibly produced in 1922

(Lockhart et al. 2010:60). However, Lockhart et al. (2010:60) indicate that their evidence shows this plant only used the “x O x” format with codes 3-7. Regardless, the box “O” mark indicates the vessel was at least produced between 1919 and 1929 (Lockhart et al. 2010:59).

The presence of two base fragments evidences at least two vessels that were produced by the Owens Bottle Machine Company at Glassboro are represented at 34GR177. One exhibits the “8” to the right of the box “O” mark on indicating the vessel was produced in 1928 (Lockhart et al. 2010:60). The remaining base contains a date code of “0.” This could possibly indicate production in 1920, however, only codes of 1 through 8 were used to this is not certain (*ibid*). Regardless, the vessel was at least produced between 1919 and 1929 based on the presence of the box “O” mark (Lockhart et al. 2010:59).

Based on the presence of one complete bottle and six complete or fragmented bases, at least seven vessels produced by the Owens-Illinois Glass Company are represented at 34GR177. Based on the presence of the “I-O” diamond mark on each of the bases, all vessels were produced between 1929 and ca. 1960 (Bottle Research Group 2014). Furthermore, Owens-Illinois used a plant and date code system embossed with some of their manufacturer’s marks. The system included embossed numbers in various locations around the “I-O” diamond mark that would indicate when and where the vessel was produced. The number to the left of the mark indicated the plant of production, the number to the right of the mark indicated when the vessel was produced, and the number below the mark indicated the mold cavity code (Lockhart 2004:25). Six of the vessels recovered contain a partial or complete code. One contained an unknown plant code but a “2” for a date code, indicating production in either 1932 or 1942 (Lockhart and Hoenig 2015:6). Another specimen contained a “3” for a plant code and “9” for the date code. This indicates the vessel was produced at the Fairmont, West Virginia plant in either 1929 or 1939 (*ibid*). Lockhart and Hoenig (2015:11) indicate that very few bottles contained the 1929 date code, which could indicate that the vessel more likely dates to 1939. One specimen contained a “2” date code indicating production in 1932 or 1942 (Lockhart and Hoenig 2015:6). The specimen did not have a plant code. Another specimen contained a plant code of “7,” indicating production in either 1937 or 1947 (*ibid*). The specimen contained a plant code of “0,” which does not indicate a production plant, as the list started at 1. One specimen exhibited a plant code of “7” and a date code of “7.” This indicates the vessel was produced at the Alton, Illinois plant in either 1937 or 1947 (*ibid*). Another specimen also contained a plant code of “7,” indicating production at the Alton plant but a date code was not listed, indicating the vessel was produced between 1930 and ca. 1960, when the Alton plant was in operation and the diamond mark in use (Bottle Research Group 2014; Lockhart and Hoenig 2015:6). The remaining vessel, only contained the diamond mark, indicating production between 1929 and ca. 1960 (Bottle Research Group 2014).

Of the 57 vessels identified as being produced by the various Owens Glass Company operations, only 21 appear to have been manufactured prior to 1920. Of the remaining 36, some may have been produced as early as 1919, but most appear to postdate 1920.

Based on the presence of three complete or fragmented bases, at least three vessels produced by the Capstan Glass Company are represented at 34GR177. Based on the presence of the capstan mark, all vessels were produced between 1918 and 1938 (Bottle Research Group 2014).

At least 6 vessels produced by the Obear-Nester Glass Company are represented at 34GR177. Two of the vessels are solarized and contain the “N” inside of a circle mark used by the company from 1895 to the mid-1920s (Bottle Research Group 2014). This indicates they were produced between 1895 and ca. 1920 (Bottle Research Group 2014; Lockhart 2006). The remaining vessels contained the “N” inside of a square mark, indicating production between 1915 and 1978 (Bottle Research Group 2014). One of the vessels was produced in a cup bottom mold, indicating it would have been produced between 1915 and ca. the 1920s (Bottle Research Group 2014; Lindsey 2014c).

Based on the presence of one complete jar, and 18 complete or fragmented bases, at least 19 vessels manufactured by the Hazel-Atlas Glass Company are represented in the 34GR177 assemblage. Based on the presence of the “H” over a smaller “A” mark on each of the bases, all vessels were produced between ca. 1923 and 1964 (Toulouse 1971:239; Whitten 2015d).

The presence of 11 complete or fragmented bases, indicates that at least 11 vessels produced by the Fairmount Glass Works are represented in the collection. Three of the vessels contain the “FGW” mark with machine scars, indicating production between ca. 1910 and the early 1920s (Lockhart, Schriever, Lindsey, and Serr 2015:77). The machine scars on the vessels were likely produced by one of the many bottle machines patented by John Rau at Fairmount. The remaining eight vessels were produced in cup bottom molds and contain the company’s “F” maker’s mark. The “F” mark indicates the vessels were produced between the late teens and 1964 (*ibid*). The vessels production in a cup bottom mold would usually indicate production through the 1920s, however, Fairmount patented a machine in 1925 that also produced vessels in a cup bottom mold and would leave no scars on bases in the same fashion as a mouth blown cup bottom molds so it could not be determined with certainty where the vessels were mouth blown or machine manufactured (Lindsey 2014c; Lockhart, Schriever, Lindsey, and Serr 2015:64).

At least one vessel produced by the Modes-Turner Glass Company is represented at 34GR177. Based on the presence of the “T” overlapping “M” mark on the base, the vessel was produced between ca. 1899 and ca. 1912 (Bottle Research Group 2014). The production in a cup bottom mold confirms this date range (Lindsey 2014c).

Based on the presence of two base fragments, at least two vessels produced by the Whitall Tatum Company are represented at 34GR177. The presence of the “W.T.CO.” mark on the bases indicates the vessels were produced between ca. 1901 and 1924 (Lockhart et al. 2006:3). The production of the bottles in a cup bottom mold in addition to the solarization confirms this date range (Lindsey 2014c, 2014d). Whitall Tatum was most famous for their prescription and druggist bottles; however, they did produce a variety of vessels and without labels it could not be determined what the contents of the bottles recovered were.

A total of four complete or fragmented bases represent at least four vessels produced by the Pierce Glass Company. Based on the presence of the “P” inside of a circle mark, all vessels were produced between 1905 and 1987 (Bottle Research Group 2014). One specimen was produced in a cup bottom mold, which indicates the vessel was produced between 1905 and the 1920s (Bottle Research Group 2014; Lindsey 2014c).

The Three Rivers Glass Company is represented at 34GR177 by at least one vessel. Additional analysis was completed on each specimen to determine they derived from the same vessel. Based on the “THREE RIVERS” embossing on the base, this vessel was produced between 1928 and 1937 (Bottle Research Group 2014).

A total of 212 (33.9 percent) of the items in the Unclassified group could only be identified as to the process of manufacture. Evidence for the types of molds used to manufacture glass containers can be found on bottle/jar bases as well as mold seams and bottle finishes.

A total of 71 (33.4 percent) of the 212 items for which manufacturing processes could be the only information obtained were identified in the assemblage as being mouth blown into molds. The use of two different mold types could be discerned by the analysis including Post Bottom Molds (n=18), and Cup Bottom Molds (n=50). A few (n=3) were found to be mold blown but unidentifiable as to a type of mold. Both mold types were in common use in the late-nineteenth century and extend in use during the early-twentieth century. The fact that 20 of the 50 Cup Bottom Mold specimens are solarized amethyst indicates a pre-1920 manufacturing date for many in the sample.

During the early-twentieth century the use of machines to manufacture glass containers became widespread. Particularly after 1905 when the Owens Bottle machine became widely used by bottle manufactures as it increased production and lowered manufacturing costs tremendously. A total of 141 individual items in the Unclassified Group can be attributed to machine manufacture. Three different machine processes were identified in the analysis including the Press and Blow machine (n=13), Owens Automatic Machine (n=113) and 1 made by an O’Neill Machine. While only one of these latter types is present, the O’Neill machine was only in use from 1911-1916.

Of the 13 Press and Blow items, three are solarized amethyst and three are from vessel made of aqua colored glass, both of which indicate they were likely pre 1920 in manufacture. A total of 113 individual vessels in the Unclassified Group are identifiable as being made by Owens Automatic Machine, most of which are bases with an obvious Owens machine scar.

Among the miscellaneous glass items in the Unclassified group are fragments of at least 22 glass jugs. The jugs are of a size indicating they were held one gallon capacity. Of the 22, five are solarized amethyst indicating a pre-1920 manufacture. Manufacturing attributes indicate that at least two were made in post bottom molds used in the late-nineteenth and early-twentieth century. Five exhibit suction scars. Of the company marks present on some specimens we know that four were produced by the Illinois Glass Company from 1911-1929. Two others exhibit a mark of the same company used between 1915-1929 and one a mark used between 1910 and 1929. Most all are production dates bracketed by the early-twentieth century and span the operation of Sulphur Granite Springs. The interesting facet of the presence of the glass jugs is that they may represent gallon jugs filled with the Sulphur water for use or for sale which is documented during the tenure of T. S Wilcox, 1909-1911 (Coursey 1937b).

## **Medical/Pharmaceutical Group**

The artifacts classified within the Pharmaceutical and Medicinal Group are subdivided into more narrowed classifications that pertain to a specimen's presumed function as pharmaceutical and medicinal. These refined subheadings or classifications include: "Patent & Proprietary Medicines," "Druggist & Prescription Bottles," "Miscellaneous Medicinal Supplies," and "Bottle Finishes." A total of 737 artifacts representing a minimum of 535 individual objects or vessels are present in the medical pharmaceutical related group (Tables B-1 and B-2). The medical related items comprise the largest functional category among the recovered artifacts placed within functional categories accounting for 25.8 percent of the minimum number of identified objects placed into the functional groups (tabulation does not include Unclassified, Bottle Finishes and Faunal Groups). Again most of these items are glass bottles or fragments thereof that are identifiable as intended to contain and medicinal or pharmaceutical product or use in medical practices. A few non glass items are present including a ceramic pill tile and metal caps for hot water bottles.

### **Patent and Proprietary Medicines**

The artifact analysis identified a total of 300 (409 total pieces) individual glass items that relate to Patent and Proprietary medicines. Most all are fragments of glass bottles bearing embossing or marks that identify specific products. A total of 235 individual items (248 pieces) are recognizable as proprietary and patent medicines identifiable to specific products and are grouped in sub categories according to advertised uses. These refined sub categories include:

“Laxatives & Digestive Ailments,” “Coughs & Colds,” “Consumption,” “Bladder, Kidney & Liver,” “Women’s Ailments,” and “Salves & Liniments,” The remaining 65 can be identified as being a medicinal related product that couldn’t be readily classified under any one of the above-listed patent and proprietary medicine subcategories and are grouped as “Miscellaneous Medicines.”

### Digestive Ailment Products

Among the 233 identified individual Patent and Proprietary Medicines, a total of 70 (30 percent) are of the identified as products advertised for laxative and digestion ailments. The most prevalent product identified is Caldwell’s Pepsin Syrup (n=32) comprising 45.7 percent of the digestion products. Based on the presence of two complete bottles, 30 complete or fragmented bases, and 33 body fragments, at least 32 bottles of Caldwell’s Pepsin Syrup are represented at 34GR177 (Figure 7.3). Based on the presence of embossing on each of the specimens, all vessels were produced between ca. 1895 and 1962. The company used embossing on their bottles during this time before replacing the embossing with paper labels (Fike 2006:224). Furthermore, six of the vessels contain Owens suction scars in addition to the body embossing, indicating that they were produced between 1909 and 1962 (Fike 2006:4, 224). Seventeen of the vessels contain the Illinois Glass Company numbers inside of diamond maker’s mark (with a suction scar) in use by the company from 1911 to 1929, indicating that they were produced during this time frame (Lockhart, Lindsey, Whitten, and Serr 2005:3). Four vessels contain the Illinois Glass company “I” inside of diamond mark (with a suction scar) in use by the company from ca. 1915 to 1929 (*ibid*). Two bottles were produced in a cup bottom mold, indicating production between ca. 1895 and the 1920s (Fike 2006:224; Lindsey 2014c). All vessels are aqua, which was a common bottle color prior to the 1920s indicating that all of the specimens may have been produced prior to the 1920s (Lindsey 2014d).

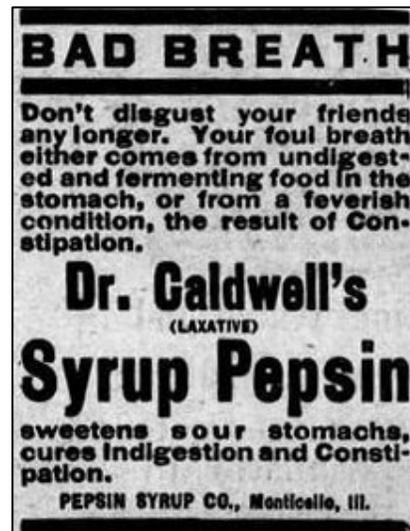


Figure 7.3. Left: Caldwell’s Syrup Pepsin bottle from 34GR177; Right: Caldwell’s Advertisement from the Granite Enterprise, February 18, 1904.

Angier’s Emulsion is represented by a minimum of six vessels. Based on when the remedy was produced, in addition to the suction scar in the center of each of the bases, these vessels were produced between 1909 and the mid-twentieth century (Comen and King 2012; Fike 2006:4,152).

California Fig Syrup (Figure 7.4) is represented by a minimum of six vessels. Based on the presence of solarization, at least five were produced between ca. the late 1880s and ca. 1920 (Fike 2006:225; Lockhart 2006).



**Figure 7.4. Left: Fragment of California Fig Syrup bottle from 34GR177; Right: Advertisement for California Fig Syrup from the Granite Enterprise, June 16, 1911.**

Based on the presence of one complete and one nearly complete bottle, one body fragment, and four base fragments, at least six bottles of Pitcher’s & Fletcher’s Castoria are represented at 34GR177 (Figure 7.5). Based on the presence of the “A” base mark and the Pitcher embossing at least two of the bottles were produced between ca. 1900 and 1909 (Lockhart, Schriever, Serr, and Lindsey 2014a:20). The “S” base mark on one specimen indicates post 1909 production however it is uncertain if the bottle reads Pitchers or Fletchers so the bottle dates through 1914 (*ibid*). Three Specimens have the Chas. H. Fletcher’s mark indicating production between ca. 1911 and ca. 1935 (Lockhart, Schriever, Serr, and Lindsey 2014a:20, 24). The “s” was dropped from Fletcher’s when the Pierce Glass Company began manufacturing bottles between ca. 1932 and 1935, which indicates that the bottles don’t postdate this time (*ibid*). The remaining specimen, has a machine-made, double ring bottle finish indicating production between 1914 and ca. 1935 (Lockhart, Schriever, Serr, and Lindsey 2014a:24). Lockhart, Schriever, Serr, and Lindsey (2014a:24) list this specific finish as beginning production in 1914 and being replaced with continuous threads ca. 1935.

One complete bottle, containing Winstead’s Lax-Fos is represented in the assemblage. Based on the tooled process of manufacture, the bottle was produced between the 1870s (though likely after 1885) and the 1920s (Lindsey 2014b).

At least one bottle of Dodson's Levertone or Liver-Tone is represented at 34GR177. Exact dates for the production of the remedy are unknown but it was produced by 1912 through at least 1948, so the bottle was likely manufactured during this time (Fike 2006:146).



**Figure 7.5. Top left: Bottle of Pitcher's and Fletcher's Castoria from 34GR177; Bottom left: side panel of bottle; Right: Advertisement for Pitcher's and Fletcher's Castoria in Granite Enterprise, August 20, 1909.**

Based on the presence of two base fragments, one body fragment, and one bottle finish, at least two bottles of Wyeth's Granular Effervescent Salts are represented at 34GR177. Based on when advertisements for the salts begin to appear in addition to possible production in a cup bottom mold, one vessel, the base fragments which refit, was likely produced between the late 1890s and 1920s (Lindsey 2014c). The machine-manufacture of the bottle finish indicates a post ca. 1910 production date for this vessel (Lindsey 2014a).

At least one bottle of Nujol is represented at 34GR177. Based on when the product was introduced to the market, this vessel was produced post 1915 (Printer's Ink 1921:103).

Based on the presence of one complete bottle and one body fragment, at least two bottles containing Chamberlain's Colic Cholera and Diarrhea Remedy are represented in the 34GR177 assemblage. Based on the tooled process of manufacture and when this product was introduced, the complete bottle was produced between ca. 1882 and the 1920s (Lindsey 2014b). The remaining body fragment postdates ca. 1882 (Fike 2006:205). The aqua coloring of the body

shard could indicate production prior to the 1920s, as aqua colored bottles were very common prior to this time (Lindsey 2014d).

Several vessels (n=10) containing mineral waters are present in the assemblage. Based on the recovery of one complete bottle and eight base fragments, at least seven bottles of Pluto Water are represented at 34GR177 (Figure 7.6). This product was bottled at the French Lick Hotel in Indiana beginning in 1890's (Whorten 2000b:126). Based on when the water was tapped, all of the vessels were produced between the late 1890s and the late 1940s (Whorten 2000b:126-127). At least three of the specimens were produced between ca. 1905 and the late 1940s based on their machine-made process of manufacture (Lindsey 2014c; Lockhart et al. 2010:50). Further research into the embossed numbers found on most of the bases yielded no additional information. At least two vessels containing Abilena Natural Cathartic Water are represented at 34GR177. Judging by the advertisements for the water, both vessels could have been produced between ca. 1902 and ca. 1913; however, it is uncertain exactly when the water was sold (IJ 11 October 1902:3; NARD 1913:491). Based on the presence of one body fragment, at least one bottle of Veronica Mineral Water is represented at 34GR177. Based on when the mineral water was bottled, this vessel was produced between 1890 and 1928 (De Forest 2012).



**Figure 7.6. Top: Pluto Mineral Water bottle from 34GR177; Bottom right: Mark on base of Pluto bottle; Bottom left; circa 1918 advertisement for Pluto Water (Wikipedia.org/wiki/Pluto-Water)**

## Cough and Cold Products

Cough and cold remedies are represented by 48 (20.1 percent) items comprising 20.1 percent of the identified patent and proprietary medicines. Mentholatum (n=21) and Vick's Vapo-Rub (n=12) comprise most (80 percent) of this category (Figure 7.7). The Mentholatum jars are milk glass and based on when the remedy was introduced and the use of milk glass, all vessels were produced between 1894 and 1955 (Taylor 2006:C2; The Mentholatum Company 2014). The company changed their product packaging from milk glass jars to green glass jars in 1955 (Taylor 2006:C2). At least nine of the jars were machine-made, indicating that they were produced between ca. 1905 and 1955 (Lockhart et al. 2010:50; Taylor 2006:C2). One of the machine-made jars, as well as four other jars whose process of manufacture could not be determined, were solarized, indicating that they were produced during the first few decades of the twentieth century (Lindsey 2014d). The remaining jars were produced between 1898 and 1955. The Vicks Vapo-Rub vessels are cobalt blue glass and based on the presence of six complete jars and seven base fragments, two of which refit, indicate that at least 12 jars of Vicks VapoRub are represented at 34GR177. Based on the triangle mark on each of the bases, these jars were likely produced ca. 1910 through the 1930s (Whitten 2014).



**Figure 7.7. Left: Milk Glass Mentholatum jars from 34GR177, note solarization of specimen on the left; Right: Vicks Vapo-Rub jars from 34GR177.**

Other cough and cold related products are represented by one or two items. At least one bottle containing Ayer's Cherry Pectoral is represented at 34GR177. Based on the tooled process of manufacture the bottle was produced between the 1870s (though likely after 1885) and 1920s (Lindsey 2014b). At least one vessel containing Vinol is present. From the information gathered on when the remedy was sold, the vessel was produced between 1898 and 1948 (Digger Odell Publications 2007b). One bottle of Hick's Capudine is represented in the assemblage. Based on advertisements and the production in a cup bottom mold, this vessel was likely produced between the 1890s and 1920s (Fike 2006:166; Lindsey 2014c). Based on the presence of one base fragment, at least one bottle of Pinex Cough Syrup is represented at

34GR177. Based on when the remedy was introduced and the solarization of this specimen, the vessel was produced between 1906 and ca. 1920 (Fike 2006:240; Lockhart 2006). At least one bottle of Chamberlain's Cough Remedy is represented in the collection. Based on when the remedy was sold, this vessel was produced between ca. 1881 and at least 1918 (Fike 2006:206; The Smithsonian National Museum of American History 2015b). Furthermore, the aqua coloring indicates a probable pre-1920 production (Lindsey 2014d).

Based on the presence of four base fragments, at least four bottles of Martin H. Smith Company Glyco-Heroin are represented at 34GR177 (Figure 7.8). Based on the presence of suction scars on each base and the banning of heroin in 1924, the vessels were likely produced between 1905 and 1924 (Lindsey 2014c; Moore 2014).



**Figure 7.8. Bottle bases of Martin H. Smith Company Glyco-Heroin from 34GR177.**

Based on the presence of one complete base, at least one jar of Mother's Salve is represented at 34GR177. Based on advertisements for the product and the probable machine-made process of manufacture, the jar was likely produced between ca. 1905 and at least 1948 (Fike 2006:173; Lockhart et al. 2010:50).

Due to the presence of three base fragments, at least two bottles containing Peruna are represented at 34GR177. Based on when the remedy was introduced and the likelihood of its production in a cup bottom mold, one specimen was produced between 1879 and the 1920s (Fike 2006:62; Lindsey 2014c). Another specimen is solarized, which indicates production between the late 1880s and ca. 1920 (Lockhart 2006). The remaining specimen could only be given a general production date from when the remedy was sold between 1879 and 1948, possibly later (Fike 2006:62).

At least one vessel containing Hall's Catarrh Cure is represented at 34GR177. Based on the presence of the suction scar and the use of the word 'Cure' on the bottle, this vessel was produced between ca. 1905 and 1918 (Fike 2006:99; Lindsey 2014c). The name of the product

was changed to Hall's Catarrh Medicine sometime between 1916 and 1918, possibly due to the implementation of the Pure Food and Drugs Act (Fike 2006:99).

The presence of one base and one body fragment indicates at least one bottle of Vapo-Cresolene is represented at 34GR177. Judging by the bottle design and process of manufacture this bottle was likely produced between ca. 1894 and the 1920s. The hobnail bottle design was patented in 1894 and cup bottom molds were used through the 1920s (Lindsey 2014c; Wilson and Wilson 1971:143). The hobnail design was probably placed on this particular bottle because its contents were considered a poison. In 1908, the Poisons and Pharmacy Act was passed and required that liquid poison containers be distinguishable by their shape and feel (Fike 2006:4). The passing of this law in 1908 may suggest that this bottle dates from 1908 and later. Furthermore, aqua bottles are very common prior to the 1920s indicating a possible production prior to this time (Lindsey 2014d).

### **Consumption Related Products**

At least 11 vessels are present in the collection that were advertised as treatments for Consumption, or Tuberculosis. Most (n=7) are Dr. Kings New Discovery product (Figure 7.9). Based on the presence of one complete bottle, three body fragments, and five base fragments, at least seven bottles of Dr. King's New Discovery are represented at 34GR177. Based on the presence of Owens suction scars, five of the vessels were produced post 1909 (Fike 2006:9). Based on the production in a cup bottom mold one specimen was produced between the 1850s (though likely after the 1880s) and 1920s (Lindsey 2014c). The numbers inside of a diamond mark used by the Illinois Glass Company indicate at least one specimen was produced between 1911 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). Another specimen was produced between 1915 and 1978 based on the Obear-Nester "N" inside of square maker's mark (Bottle Research Group 2014). It is uncertain when production of the remedy ceased, but advertisements for the product can be seen through at least 1948 (Fike 2006:109). The remaining four vessels in this category are representative of at least four bottles of Fellows' Compound Syrup of Hypophosphites. Based on when the compound was sold, these bottles were produced post ca. 1872 (Fike 2006:226). It is unknown when production ceased for the compound but advertisements appear until at least 1980 (*ibid*). Aqua bottles were common prior to the 1920s so this could indicate that the bottles were produced prior to this time (Lindsey 2014d).

### **Bladder, Liver and Kidney Related Products**

At least eight items in the collection are identifiable as containing products advertised for diseases of the bladder, liver and kidneys. Based on the presence of two base fragments and six body fragments, at least five bottles of Electric Brand bitters are represented at 34GR177 (Figure 7.10).



Figure 7.9. Left: Bottle of Dr. Kings New Discovery from 34GR177; Right: Advertisement for Dr. Kings New Discovery in the Granite Enterprise, December 9, 1910.

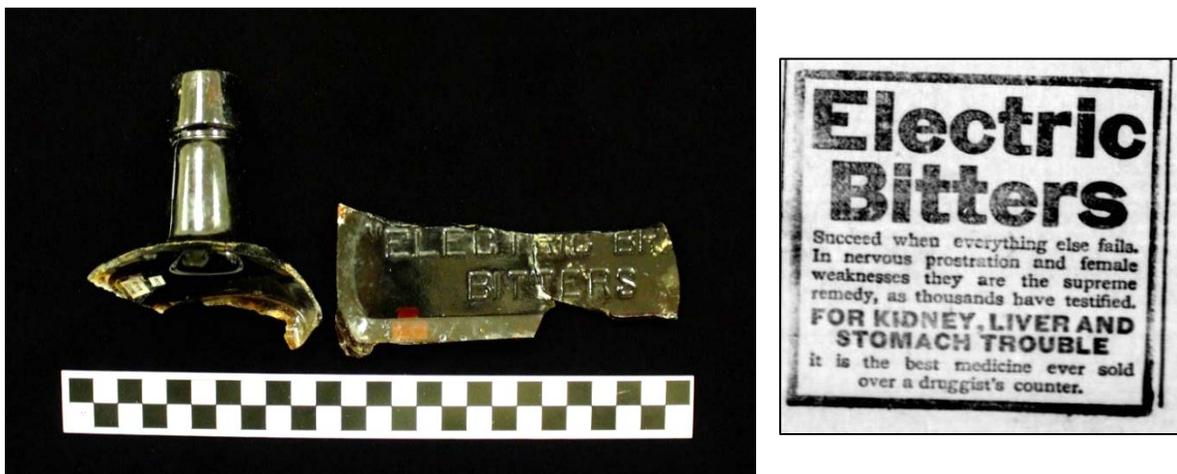


Figure 7.10. Left: Fragments of an Electric Brand Bitters Bottle from 34GR177; Right: Advertisement for Electric Bitters from the Granite Enterprise December 9, 1910.

Based on the “Electric Brand Bitters” embossing on each of the bottles, they were produced between 1906 and 1917 (Wendt 2013). While the remedy was in production between 1880 and at least 1938, the name of the product was changed from Electric Bitters to Electric Brand Bitters in 1906, and then again changed from Electric Brand Bitters to Electric Brand Laxative in 1917 (*ibid*).

The remaining three vessels in this category includes at least one bottle of Foley’s Kidney & Bladder Remedy is represented at 34GR177. Based on product advertisements and when the product was introduced, this bottle was produced between the 1890s and at least the 1920s (Fike 2006:59; Wilson and Wilson 1971:115). The product at one point was named cure instead of remedy and this could indicate that this bottle postdates 1907 (Lindsey 2014a; Smithsonian National Museum of American History 2015d). At least one bottle containing Dr. Kilmer’s Swamp Root is represented in the assemblage. Based on the “REMEDY” embossing found

on the body, the bottle was produced post 1918 (Fike 2006:302). The remedy was previously titled ‘Cure’ instead of ‘Remedy’ and was likely changed due to the implementation of the Pure Food & Drugs Act of 1906 (Digger Odell Publications 1998; Fike 2006:302; Lindsey 2014a). The aqua coloring of the bottle could indicate production prior to the 1920s as aqua colored bottles were very common prior to this time (Lindsey 2014d). Finally at least one bottle containing an unknown brand of a liver and kidney remedy is represented at 34GR177 as indicated by the embossed base and body fragment in the collection. The solarization of the specimen with embossed “liver and kidney remedy” indicates that it was produced between ca. the late 1880s and ca. 1920 (Lockhart 2006). Additional research yielded no information regarding the brand for this remedy.

### **Women’s Ailments Related Products**

Products advertised as specific for women’s ailments are represented by 15 items comprising 6.4 percent of the identified Patent and Proprietary Medicine products. Seven (46.6 percent) are represented by fragments of Lysol bottles which was advertised as a feminine hygiene product in the early-twentieth century (Eveleth 2013). One complete bottle and six base fragments, represent at least seven bottles of Lysol. Due to the presence of the suction scars visible on each base, the bottles were produced post 1909 (Fike 2006:4). Lehn & Fink was acquired by Sterling Drug, Inc. in 1966. These bottles were probably produced prior to this merger indicating a production range between 1909 and 1966 (Collins and Gwilt 2000:26; Fike 2006:4). One specimen was likely produced between 1925 and 1966 as it lists the location as Bloomfield, New Jersey, where Lehn & Fink began their operations around 1925 (Bennett 2015a).

At least two bottles of Lydia E. Pinkham’s Vegetable Compound are represented at 34GR177 (Figure 7.11). Based on the embossing on the body, one vessel, Specimen #329 from Area 2, was produced between ca. 1880 and 1920 (Linden 2015). The “VEGETABLE COMPOUND” embossing was found on bottles during this time before being replaced with Lydia’s signature and a reminder to purchase a new bottle (*ibid*). Because the second vessel has the “I” inside of diamond maker’s mark of the Illinois Glass Company on its base, it was produced between ca. 1915 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). At least three bottles containing McElree’s Wine of Cardui are represented in the assemblage. The difference in color of each body shard indicates that the fragments are likely not from the same vessels. The solarization of one specimen indicates that bottle was produced between ca. the late 1880s and ca. 1920 (Lockhart 2006). Due to the fragmented state of the remaining specimens, only a general production date between 1882 and 1982 could be assigned (Fike 2006:55). Aqua bottles were very common prior to the 1920s, which may indicate that Specimen #191 from Area 2 was produced prior to this time (Lindsey 2014d). Based on the presence of three body fragments, at least one bottle of Dioviurnia is represented at 34GR177. Based on the fragmented state of each specimen, only a general production date of at least ca. 1888 through at least ca. 1915 could be provided (The Eclectic Medical Journal 1890; JAMA 1915:166).



**Figure 7.11. Top: Fragments from a Lydia Pinkham's Vegetable Compound bottle from 34GR177; Bottom; complete Lysol bottle from 34GR177.**

All of the products discussed above were being produced over the duration of the first two decades of the twentieth century. Many began production in the late-nineteenth century and many continued production after 1920. The analyzable attributes of the bottles and fragments of Patent and Proprietary medicines indicate most of the above items were produced in the early-twentieth century. One bottle of Lysol displays a Lehn and Fink mark indicating production after 1925.

## Miscellaneous Medicines

A minimum of 75 individual vessels could not be confidently place in the medicinal categories discussed above. However, based on identification of the product or the manufacturer, it could be determined that the bottles and jars contained a medicinal product. At least 13 of these containers could be identified as to the product.

At least four cobalt blue bottles of Bromo-Seltzer are represented in the assemblage. Judging from the embossing found on each of the body shards, these bottles were produced between ca. 1900 and 1922 (Figure 7.12). Lockhart, Schulz, Lindsey, Schriever, and Serr (2014:12) lists bottles of Bromo-Seltzer containing body embossing of “BROMO-SELTZER / EMERSON / DRUG CO / BALTIMORE MD” in production from ca. 1900 through 1922 when it was then replaced with heel embossing until ca. 1956. Based on the Maryland Glass Company “M” inside of a circle maker’s mark on the base fragments, two specimen were produced between 1916 and the 1950s (Fike 2006:111; Lockhart, Schulz, Lindsey, Schriever, and Serr 2014:10). Another specimen has no heel embossing which was in use on the drug’s bottles from 1920 to 1956, so it is unlikely that this base postdates 1920 (*ibid*). All glass bottles for the drug were probably replaced by plastic ca. 1956 (Whitten 2015c).



**Figure 7.12. Left: Fragments of Bromo-Seltzer bottles from 34GR177; Top Right: Advertisement from the Granite Enterprise March 12, 1903; Bottom Right: Advertisement from the Mangum Sun Monitor, March 26, 1903.**

At least one bottle of Glycozone is represented at 34GR177 and based on when the company manufactured this product, the bottle was produced between ca. 1885 and at least 1980 (Fike 2006:164). This specimen did not contain any additional diagnostic information to further narrow the production date.

Based on the presence of one body fragment, at least one vessel containing Gude's Pepto-Mangan is represented in the collection. Based on when the remedy was sold, the vessel was produced between 1891 and at least 1985 (Fike 2006:176). The aqua coloring of the specimen may indicate that the vessel was produced prior to the 1920s (Lindsey 2014d).

Based on the presence of one base fragment, at least one bottle of Frazier's Distemper Remedy is represented at 34GR177. The solarization of the vessel indicates that it was produced prior to 1920 (Lockhart 2006). The Pure Food and Drug Act was implemented in 1907 and made use of certain words such as "cure" prohibited for most medicines (Fike 2006:3). However, enforcement of this was rare and the word continued to be used until the Sherley Amendment was implemented in 1913 (Fike 2006:4). This could indicate that the vessel was produced between ca. 1907 and 1920 as the remedy was once named Frazier's Distemper Cure (Fike 2006:98).

The presence of one base fragment and one body fragment derived from the same vessel indicates that at least one bottle of Grove's Tasteless Chill Tonic is represented at 34GR177. Based on the presence of the "I" inside of diamond maker's mark of the Illinois Glass Company on the base fragment, this vessel was produced between ca. 1915 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3).

At least one bottle of Dr. Miles Restorative Nervine is represented in the assemblage. Based on when the remedy was introduced and its production in a cup bottom mold, this bottle was produced between 1882 and the 1920s (Fike 2006:190; Lindsey 2014c). A more narrowed date range from the product's name changes could not be determined as advertisements often referred to the product by all three names. The aqua coloring may indicate a pre-1920s production as aqua bottles were very common prior to this time (Lindsey 2014d).

At least two bottles of hydrogen peroxide are represented at 34GR177 (Figure 7.13, right). The machine-made process of manufacture indicate both bottles postdate ca. 1905 (Lindsey 2014c).

At least two complete bottles of Jamaica Ginger are represented at 34GR177 (Figure 7.13, left). Based on the presence of a suction scar, at least one specimen was produced post ca. 1905 (Lindsey 2014c). Based on the tooled finish and production in a cup bottom mold, it could be determined that the other specimen was produced between ca. 1885 and the 1920s (Lindsey 2014b, 2014c). Fike (2006:16), in addition to Lindsey (2014a), indicate that Jamaica Ginger was popular during the last half of the nineteenth century and into the first few decades of the twentieth century and was rarely bottled in any shape other than that of this specimen



**Figure 7.13. Left: Two bottle of Jamaica Ginger From 34GR177; Right: Hydrogen peroxide bottle from 34GR177.**

At least four glass containers are represented in the assemblage that likely contained tablets or salts (Figure 7.14). The product was not identifiable, however the specimens were identified as possible tablet or salt bottles based on figures and descriptions demonstrated in Fike (2006:15). Based on the presence of two complete specimens, one nearly complete specimen, and one complete base, at least four bottles containing tablets or salts are represented at 34GR177. Based on the machine-made process of manufacture, all four vessels were produced post 1909 (Fike 2006:4). Two vessels were produced between 1919 and 1929 based on the box “O” mark of the Owens Bottle Company (Lockhart et al. 2010:56). Another vessel, was produced between ca. 1915 and 1929 based on the presence of the “T” inside of diamond mark of the Illinois Glass Company (Lockhart, Lindsey, Whitten, and Serr 2005:3). The contents of the bottles were determined based on matching bottle profiles to that of Figure 6.2 in Fike (2006:15). These bottles were popular during the first two decades of the twentieth century (*ibid*).



**Figure 7.14. Top: Examples of Tablet/Salts bottles from 34GR177; Bottom: Homeopathic vials from the 34GR177.**

Four specimens, representing four vessels, were identified as homeopathic vials that were probably used for dispensing homeopathic medicines (see Figure 7.14a-d). Based on the presence of three complete and one nearly complete specimen, at least four vials containing a homeopathic remedy are represented at 34GR177. Additional analysis was completed on each specimen to determine if any could derive from the same vessel. These vials were likely in use from the 1870s through the 1940s (Lindsey 2015a).

A total of 65 individual vessels were determined to relate to medicinal or pharmaceutical products based on the attributes they portray such as a bottle shape or a mark of a company known to the medical industry. A significant percentage (32.3 percent/n=21) of these items are from the Parke Davis & Company. Another ten (15.4 percent) represent vessels from the Wyeth Company.

Based on the presence of one complete bottle and 20 complete or fragmented bases, at least 21 vessels containing a product of Parke Davis & Company are represented at 34GR177. Based on the presence of the “PD&CO” mark present on each of the bases, all of the vessels were produced between 1875 and 1920 (Griffenhagen and Bogard 1999:127). Furthermore, 18 of the 21 vessels contain suction scars and one of the 21 vessels has a machine scar, indicating production between ca. 1909 and 1920 (Fike 2006:4; Griffenhagen and Bogard 1999:127). Further research could not determine the meaning of the numbers embossed on each base. They may indicate mold numbers used by the glass producer or a mold number used by the company

Based on the presence of one complete and one nearly complete bottle in addition to nine base fragments, at least ten vessels containing a Wyeth product are represented at 34GR177. Based on the “WYETH” mark on each of the vessels, they were produced between ca. 1880 and 1910 (Toulouse 1971:549). The cup bottom mold seams on each of the bases confirm this date (Lindsey 2014c). One vessel has a suction scar indicating production in either 1909 or 1910 (Fike 2006:4; Toulouse 1971:549).

At least four vessels containing a Lloyd Brothers product are represented in the assemblage determined by the presence of one complete jar and three base fragments. Based on the Lloyd Brothers mark on all of the bases, the vessels were produced between 1885 and 1920 (Griffenhagen and Bogard 1999:125). Furthermore, all of the vessels, with the exception of one, were machine-made, and therefore have production dates between ca. 1909 and 1920 (Fike 2006:4; Griffenhagen and Bogard 1999:125).

The presence of four base fragments with embossing of the initials “S&D” suggest that at least four vessels possibly containing a Sharp & Dohme product are represented at 34GR177. Based on the “S&D” mark on each of the bases, the vessels were produced between 1860 and 1920, the timeframe that the company used this mark (Griffenhagen and Bogard 1999:127). Because

the company produced such a wide variety of products, the exact contents of the vessels could not be determined, however it is almost certain that the bottle contents were pharmaceutical in nature as it appears that the company's sole focus was on pharmaceutical products (Fike 2006:179; Merck Sharp & Dohme Corporation 2015).

Based on the presence of two complete bottles and four base fragments, at least four bottles containing a Foley & Company product are represented in the 34GR177 collection. Due to the presence of the "B8" inside of diamond mark on three of the bases and both complete bottles, it can be said that the vessels were produced between 1911 and 1929 when the mark was used by the Illinois Glass Company (Lockhart, Lindsey, Whitten, and Serr 2005:3). The remaining vessel was produced in a cup bottom mold indicating production between 1890 and the 1920s (Lindsey 2014c; Fike 2006:59).

The presence of one complete bottle, two nearly complete base fragments, and six body fragments indicate that at least four vessels containing a Rexall Drug Store product are represented at 34GR177. Based on the presence of the Obear-Nester "N" inside of box maker's mark on the two base fragments and the complete bottle, these vessels were produced between 1915 and 1978 (Bottle Research Group 2014). The six body fragments were produced between 1903 and the 1970s (Bachynsky 2008). In 1937, William Nester patented a bottle design containing latticed panels on each side of graduation marks (Nester 1937). Rexall Drug Store bottles were made from this patent (Griffenhagen and Bogard 1999:45). This would indicate that all of the vessels recovered were probably produced prior to the 1937 patent as the latticed panels are not found on any of the specimens recovered from the collection (Griffenhagen and Bogard 1999:45; Nester 1937).

Based on the presence of one complete bottle, at least one bottle containing a product of the H.K. Mulford Company is represented at 34GR177. Based on the "RCS" embossing on the base, the bottle was produced during the 1890s, when the company used this mark (Griffenhagen and Bogard 1999:127).

The presence of one base and body fragment indicates that at least one vessel containing a product of the Grand Dispensary Medical Company is represented at 34GR177. Based on when the Dispensary was in operation, the vessel was produced between 1904 and 1922 (Indiana Historical Bureau 2015).

One bottle finish and attached body containing Nyal embossing was recovered providing evidence that at least one bottle containing a Nyal Quality medicine is represented at 34GR177. Based on the machine-made process of manufacture, the vessel was produced between ca. 1905 and at least 1937 (Lindsey 2014b; Vintage Ad Browser 2015b). The Owens Automatic Bottle Machine was not capable of producing narrow-neck medicine bottles until after 1909,

however it is uncertain if this vessel was produced on an Owens machine or another bottle machine (Fike 2006:4).

Based on the presence of one base fragment and two threaded screw caps, at least two vessels containing a Norwich product are represented at 34GR177. Based on the production of the bottle base made in a cup bottom mold and the incorporation of the company, one specimen was produced between 1890 and the 1920s (Chenango County Historical Society 2015; Lindsey 2014c). Based on the incorporation of the company and the popularity of the threaded screw caps, the lids were likely produced post 1890 (Lindsey 2014b).

The presence of one complete bottle and one base fragment attest that at least two vessels containing a product of the National Remedy Company are represented in the assemblage. Based on when the company was established and the tooled process of manufacture, the complete bottle was produced between 1884 and ca. 1920 (Fike 2006:210; Lindsey 2014b). Based on the production in a cup bottom mold and the establishment of the company, the remaining vessel was also produced between 1884 and the 1920s (Lindsey 2014c). A wide variety of products were produced by this company so the exact contents of these bottles could not be determined.

One vessel possibly containing a product of the Upjohn Pill and Granule Company is represented at 34GR177. Based on the possible production in a cup bottom mold and the establishment of the company, this vessel may have been produced between 1886 and the 1920s (Lindsey 2014c).

At least one bottle containing an unknown medicinal remedy of Dr. Kilmer is represented at 34GR177. Based on the production in a cup bottom mold, the bottle was produced between the 1870s (likely after the 1880s) and 1920 (Digger Odell Publications 1998; Fike 2006:208; Lindsey 2014c).

Based on the presence of one base fragment, at least one bottle containing a product of the Haller Proprietary Company is represented at 34GR177. The solarization of the specimen indicates the bottle was produced between 1888 and ca. 1920 (Lockhart 2006; Nielson 1993).

Due to the presence of one base fragment, at least one vessel containing a Tilden & Company product is represented in the collection. Based on the "TILDEN" mark on the base, the vessel was produced between 1873 and 1876, the timeframe that the company used this mark (Griffenhagen and Bogard 1999:127). Because the company produced a wide variety of products, the exact contents of the vessel could not be determined, however it is believed that this bottle contained a type of medicine.

At least one vessel containing a product from the United States Medicine Company is represented at 34GR177. Because this company was established in 1884, this vessel would have been produced post 1884 and was likely produced prior to the 1920s based on the aqua coloring the bottle exhibits (Keister 2011:236; Lindsey 2014d).

Based on the presence of two body fragments (refit as one), at least one vessel containing a P.L. Abbey Company product is represented at 34GR177. This vessel was likely produced between 1897 and ca. 1911 when the company name was changed and then likely dissolved, (Palmieri III 1997:113, 117).

Two vessels containing a product of Eli Lilly and Company are represented by bas fragments in the assemblage. Based on the “EL & CO” embossing on both bases, the vessels were produced between ca. 1897 and ca. 1907 (Fike 2006:143). Round bottles from the company, such as these one, contained fluid extracts or other liquids (*ibid*).

Based on the presence of one complete bottle, at least one vessel produced by the Metro Glass Bottle Company possibly containing a medicinal or pharmaceutical product is represented at 34GR177. Based on the presence of the “M” inside of keystone mark, the vessel was produced between 1935 and 1949 (Bottle Research Group 2014). The contents of the bottle are unknown; however, the profile of the bottle is similar to those shown as common prescription and medicinal bottles in Fike (2006:15-16).

One complete bottle produced by the Fairmount Glass Works which possibly has a medicinal or pharmaceutical product is represented at 34GR177. Based on the presence of the “F” mark on the base in addition to the cup bottom mold production, this vessel was produced between the late 1910s and 1920s (Lindsey 2014c; Lockhart, Schriever, Lindsey, and Serr 2015:77). The “F” mark was in use by the Fairmount Glass Works in addition to the Owens West Virginia Bottle Company; however, the absence of a suction scar and the presence of the “4” indicate that this vessel was likely produced by the Fairmount Glass Works rather than the Owens West Virginia Bottle Company (Lockhart, Schriever, Lindsey, and Serr 2015:78). The mark was used by this company from the late 1910s through 1964 (Bottle Research Group 2014). Furthermore, the 1920 catalog for the Fairmount Glass Works shows a wide-mouth homeo French Square bottle that compares favorably to this specimen

The range of production dates for most all the Proprietary and Patent medicines include beginning dates in the early-twentieth or late-nineteenth century (Table B-1). Only 40 (13 percent) of the 300 individual items have beginning production dates after 1910 and of those 40 items only one has a post 1920 beginning production date and most have beginning production date prior to 1915.

The 235 individual objects in the Miscellaneous Pharmaceutical and Medicinal related glass artifacts category (Table B-2) bear similarity to the Patent and Proprietary Medicine category with most items having production beginning dates in the early-twentieth and late-nineteenth century. However, a significant percentage of these items a total of 89 (37.9 percent) of the items have post-1910 beginning production dates. However, only 4 individual items bear attributes that establish post 1920 manufacturing date.

In addition to the glass containers, three metal items and one ceramic item recovered from 34GR177 are included in the Medicinal related items. The three metal items are caps to hot water bottles (Figure 7.15). Based on the presence of one cap cover, at least one Davol vessel is represented at 34GR177. Based on the “TRADE/ DAVOL/ MARK” logo embossed on the cap cover, the vessel possibly predates 1916. Advertisements for the company’s products feature the logo on the cap cover by 1915 but by 1916 a new Davol Quality Service logo replaces the Trademark logo in company advertisements (American Exporter 1915:175; Pearson 1916:170). At least two Schrader water bottle stoppers are represented in 34GR177. The stopper in Area 1 was patented in 1892, indicating that specimen postdates 1892 (Schrader 1892). The stopper in Area 2 had been developed by 1902 but the patent was not filed until 1905 and granted in 1906 (Schrader 1906). This could indicate the stopper possibly postdates 1902.



**Figure 7.15. Left: Davol water bottle cap; Center: Schrader water bottle stoppers; Right: Ceramic pill tile fragment. All items from 34GR177.**

One ceramic pill tile fragment marked with units of measurement was collected at 34GR177 under Specimen #18 from Area 2C. The fragment consists of one corner of a measuring slab indicating a number “24” in black print, which indicates a 24 pill cutting scale. Below the number “24” are black tick marks separated out into 1/4” square blocks, which were used in measuring out the prescribed dose of medicine. The pill tile sherd recorded in the collection is thicker-bodied, and if complete, would have appeared as a square, and similar to the size of a square-shaped kitchen cutting board. A pill tile with the same black lettering as the pill tile in the collection is pictured online (Museum Victoria 2016) and dates to ca. 1900.

## Druggist & Prescription Bottles

A total of 170 artifacts representing a minimum of 157 individual druggist and prescription bottles are present in the 34GR177 assemblage. At least 103 are identifiable as prescription ovals, a popular bottle during the late-nineteenth and early-twentieth centuries (Lindsey 2014a). Approximately half of these (n=52) are represented by “Lyric” bottles produced by the Illinois Glass Company (Lockhart, Lindsey, Whitten, and Serr 2005:4). The bottles came in a variety of sizes and were machine-made graduated ovals that were produced by the company from 1911 to 1929 (*ibid*).

Based on the recovery of 10 complete bottles, one nearly complete bottle, and 42 complete, nearly complete, or fragmented bases, at least 52 Lyric bottles are represented at 34GR177 (Figure 7.16). Due to the presence of the “LYRIC” mark on each of the bases, all vessels were produced between 1911 and 1929, as this is when the Illinois Glass Company manufactured this type of bottle (Lockhart, Lindsey, Whitten, and Serr 2005:4). Nine of the vessels are solarized indicating that their production could be narrowed to between 1911 and 1920 (Lockhart, Lindsey, Whitten, and Serr 2005:4; Lockhart 2006). The Lyric bottles were produced in 15 different sizes and at least six of the sizes are present in the collection (Illinois Glass Company 1920:14). Base fragments were compared to the bases of complete vessels to determine size. Four vessels were the 1/2-ounce size, six vessels were 1-ounce, 16 vessels were 2 ounces, 16 vessels were 3 ounces, six vessels were possibly 4 ounces, two vessels were 6 ounces, and three were of an unknown size.



**Figure 7.16. Base fragments from Sanitized Lyric prescription ovals from 34GR177. Manufactured by the Illinois Glass Company circa 1911. Note solarized base on the left.**

Another 10 specimens represent “Sanitized Lyric” bottles which are the pre-machine Lyric bottles likely produced in 1911 by the Illinois Glass Company (Lockhart, Lindsey, Whitten, and Serr 2005:4). Ten specimens, representing 10 vessels, were identified as belonging to Sanitized Lyric bottles (Figure 7.17). Based on the presence of one complete bottle and nine complete or fragmented bases, at least 10 Sanitized Lyric bottles are represented at 34GR177. These bottles were likely produced ca. 1911 prior to the machine manufacture of the Lyric bottles (Lockhart, Lindsey, Whitten, and Serr 2005:4). Base sizes were compared to those of the Lyric bottles to determine bottle size and four different sizes are represented in the collection. One vessel is a 1/2-ounce, two are 2 ounces, two are 3 ounces, two are 4 ounces, and two are an unknown size. Four of the bottles are solarized amethyst.



**Figure 7.17. Examples of Lyric prescription oval bottles from 34GR177 manufactured by the Illinois Glass Company between 1911 and 1929. Note solarized of bottle on the right.**

At least seven Aseptic prescription bottles are represented at 34GR177 evidenced by the presence of three complete bottles and four base fragments. Because of the presence of an “ASEPTIC” mark on each base, all vessels were produced between ca. 1905 and the mid-1920s (Bottle Research Group 2014).

Based on the presence of two complete bottles and nine base fragments, at least 11 Victor Prescription Ovals are represented at 34GR177. Based on the “VICTOR” mark on each of the bases, the vessels were produced between 1901 and ca. 1921 (Bottle Research Group 2014).

Seven Blue Ribbon prescription ovals are represented by the presence of two complete bottles, two body fragments, and three base fragments. Based on the presence of the “BLUE RIBBON” embossing on the bases, these vessels were produced between 1908 and the 1920s (Bottle Research Group 2014). If the remaining body specimens did contain the “BLUE RIBBON” mark, and it is likely that they did, they would date to the same time; however, the bases are not present so it cannot be determined for certain. One specimen is solarized indicating it was produced between ca. the late 1880s and ca. 1920 (Lockhart 2006).

Based on the presence of one complete bottle and three base fragments, at least four Red Cross pharmaceutical bottles are represented at 34GR177. Based on the “Red Cross” mark on all of the bases, these vessels were produced between 1900 and 1922 (Bottle Research Group 2014).

Another 34 glass vessels are identifiable as druggist and prescription bottles due to exhibiting graduation markings along the side of the bottle. These marks can provide valuable dating information. Graduation markings with the druggist capacity mark indicates almost certain production post 1900 while bottles with the capacity in “cc’s” without the stylized prescription capacity or graduation marks can date from the 1890s (Lindsey 2014a). These markings were used until at least the mid-twentieth century (*ibid*).

Based on the presence of 12 base fragments, at least 12 graduated vessels produced by the Illinois Glass Company are represented at 34GR177. Based on the presence of the “I” inside of diamond mark on each of the bases, including those not reported on, were produced between ca. 1915 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3).

Two complete bottles and six base fragments indicate at least eight graduated bottles produced by the Obear-Nester Glass Company are represented at 34GR177. Based on the presence of the “N” inside of a box mark, all vessels were produced between 1915 and 1978 (Bottle Research Group 2014).

At least four vessels possibly produced by the Hagerty Brothers are represented at 34GR177. Both the Bottle Research Group (2014) in addition to Griffenhagen and Bogard (1999:124) list

the “H-B” mark as that of the Hagerty Brothers in use during the 1880s. However, the 1880s timeline is contradicted by the presence of suction scars on all of the bases, as the Owens Automatic Bottle Machine was not capable of producing small mouth medicine bottles until 1909 and later (Fike 2006:4). The Hagerty Brothers continued producing glass containers for the pharmaceutical industry until their closure in 1953 so there is a possibility the mark could still be theirs, just used later than the timeline indicated (Griffenhagen and Bogard 1999:100).

Based on the presence of three base fragments, one body fragment and five complete or nearly complete bottles, at least eight graduated ovals produced by an unknown manufacturer are represented at 34GR177. Because five of the bottles exhibit mouth-blown characteristics and the capacity embossing, production of these bottles took place between the late 1890s through the 1920s (Lindsey 2014a, 2014b). Based on the machine-made process of manufacture, the remaining three vessels were produced post 1909 (Fike 2006:4). Machine-manufacture of small-mouth druggist bottles did not occur until this time (Lindsey 2014a). The body fragment has no known traits to indicate process of manufacture. Because of this it can only be determined that it postdates the 1890s (Lindsey 2014a).

Based on the presence of six complete bottles, one nearly complete bottle, and 13 base fragments, at least another 20 vessels probably containing a medicinal or pharmaceutical related product are represented in the assemblage. While not attributable to a company, some information can be gleaned from the manufacturing process evidenced on these items. Based on the production in a cup bottom mold, seven of the 20 vessels were produced between the 1850s and 1920s, more likely after the 1880s as this type of production was more common after this time (Lindsey 2014c). Of the seven cup bottom vessels, two contained a mark of the Whitall Tatum Company in use from ca. 1901 to ca. 1924 (Lockhart et al. 2006:3). The remaining 13 vessels contain Owens suction scars indicating post ca. 1909 production (Fike 2006:4). Of the 13 vessels with suction scars, seven contain a mark of the Illinois Glass Company in use from 1911 to 1929, two have an Owens Bottle Company mark in use from 1919 to 1929, and one contained the “I-O” diamond mark of the Owens-Illinois Glass Company in use from 1929 to ca. 1960 (Bottle Research Group 2014; Lockhart, Lindsey, Whitten, and Serr 2005:3; Lockhart et al. 2010:56).

An interesting facet gleaned from the analysis of the druggist/prescription bottles is that 50 or 21.3 percent of the items are identifiable as Lyric style bottles manufactured by the Illinois Glass Company beginning in 1911. These bottles were available in a variety of sizes, many of which are represented in the GR177 sample. The bottles were available by the dozen, gross or case and were bought by doctors and drug businesses whom applied their own label and filled the bottle with their own product. The production date roughly coincides with the practices of Drs Abbott and Taman at Granite Sulphur Springs during the summer of 1912. They very well may have packaged and sold their own medicines. While it may be difficult to definitely

attribute these to the Dr's in 1912, they do seem to provide indications that medical practices at the springs after 1911.

Overall the Medicinal and Pharmaceutical group provides a good deal of information. Analysis of this group indicates a variety of medicines are represented that were available nationally. The analysis also establishes that products associated with digestive ailments are well represented in the assemblage. Digestive related medicines comprise a significant percentage (43.8 percent) of the Patent and Proprietary medicines in the assemblage that could be identified as marketed for specific ailments. Cough and cold related medicines comprise 30 percent of the identified medicinal products. Products associated with women's ailments accounts for 9.4 percent, consumption related products 6.9 percent, with kidney/bladder related and salves account for 5 percent each.

A total of 46 different products are identifiable among the Patent and Proprietary medicines assignable to specific ailments and another 9 are present among the miscellaneous medicines. Another 22 companies known to manufacture medical products but for which a specific product could not be identified are represented in the 34GR177 assemblage. Products relating to digestive disorders are represented by 15 different companies/products, coughs and colds by 13 companies and or products, women's ailments by 8, kidney and salves by 4 each and consumption by 2 products.

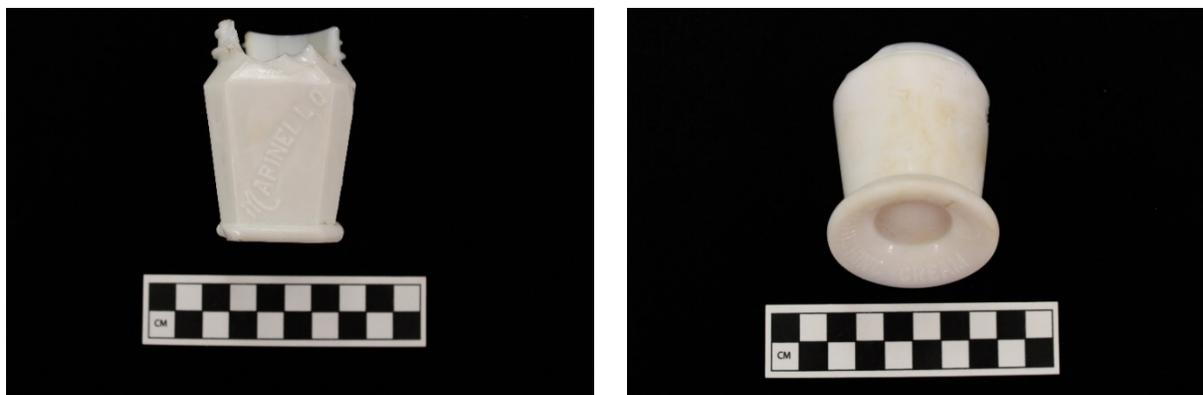
The 235 individual druggist and prescription bottles in the assemblage which are not patent or proprietary medicines provide further evidence that the medical practices and activities are well represented 34GR177 assemblage. These items are medically related containers available to doctors and druggist at the time for using in filling with their own products and applying paper labels. For example the 1920 Illinois glass company catalog list 3 oz. Lyric bottles for sale at \$9.50 per gross (144). Lyric bottles made after 1911 are well represented in the assemblage. These bottles as well the other prescription ovals in the assemblage comprise a significant portion of the medically related glass containers. Their presence could be the result of medicines consumed by individuals or be the result of waste from a medical or pharmaceutical practice.

The one ceramic item in this group, a fragment of a pill tile used to measure and cut pills provides evidence of a medical practice employing the item is dispensing pills. The three metal caps for water bottles were manufactured in the early part of the twentieth century and provide evidence for the presence of multiple bottles.

## Personal Hygiene

The functional category of Personal Hygiene Related artifacts identified 121 individual items comprised mostly of glass bottle fragments, but includes metal items such as lids for bath and body powders as well as ceramic soap dishes. A significant portion of the items 45.5 percent (N=55) consists of milk glass jars the contained skin care and cosmetic products (Figures 7.18 & 7.19). Of the 55 items, only 5 have post 1920 dates for the beginning of production (identifiable by a Hazel Atlas Glass Company mark), and only 2 items have beginning production dates of post 1910. The remainder have beginning production dates in the early-twentieth or late-nineteenth century.

Brands and companies represented include Velvetina Vanishing Cream (n=1). Marinello Seven Creams (n=1), Pond's Cosmetic Cream (n=3), Palmers Vegetable Cosmetic Lotion (n=1), Peach Blow Cream (n=1), Pitkin's Greaseless Velvet Cream (n=1), Hinds Honey and Almond Cream (n=6), the remaining 33 could not be attributed to a particular product. All are milk glass containers with some exhibiting an amethyst hue indicative of solarization.



**Figure 7.18. Left: Marinello jar from 34GR177; Right: Velvetina jar from 34GR177.**



**Figure 7.19. Left: Examples of Pond's jars from 34GR177; Right: examples of unidentified milk glass cosmetic/skin cream jars from 34GR177.**

A total of 14 items represent perfume bottles, all of which began production in the early-twentieth or late-nineteenth century. Two containers of the Djer-Kiss, a company in France are represented in the assemblage (Figure 7.20). Based on a 1923 advertisement showing the containers of Djer-Kiss products, it can be determined that all three specimens probably contained the Djer-Kiss perfumed sachet as they compare favorably to those in the ad (The Buffalo Courier [BC] March 1923). Due to incomplete fragments, only a general date range can be assigned to these bottles. With the 1903 trademark for commercial use in the United States and the knowledge that the Djer-Kiss line was in production into the 1960s, it can be determined that these bottles were likely manufactured between ca.1903 and ca. the 1960s. One container of the Harmony of Boston Company is identifiable in the assemblage. Based on when this line of perfume was sold and the solarization of the glass, this vessel was produced between 1906 and ca. 1920 (Hetherington 2014d; Lockhart 2006). The remaining 11 items could not be attributed to a particular product beyond being identifiable as containing a perfume type product.



**Figure 7.20. Left: Fragments of Djer Kiss perfume bottles from 34GR177; Right: Perfume related items from 34GR177.**

At least nine examples of glass containers of hair care products were recovered. Three contained Lucky Tiger Dandruff Remedy & Tonic, a company which began marketing their products as early as 1917 (Smithsonian National Museum of American History 2015f). At least three vessels of Ed. Pinaud Eau de Quinine Hair Tonic are represented in the assemblage (Figure 7.21). These products were imported from France. Based on the embossing on the base of the complete bottle, which reads “PROPERTY OF H&G KLOTZ & CO.,” it was produced between 1908 and 1930. The Klotz brothers took control of the Ed.Pinaud Company in 1908 and were replaced by Roger Goldet in 1930 after they declared bankruptcy (Ed.Pinaud 2014). Due to the fragmented state of the remaining body shards, only a general date was attainable. Advertisements for the hair tonic first begin ca. 1897 so it is possible that the vessels were likely produced between ca. 1897 and the 1960s (Ed.Pinaud 2014; Fadely 2015b). One container of Glover’s Imperial Mange Medicine, and one of LaCreole Hair Dressings are represented. The La Creole product exhibits a mark of the Illinois Glass Company “I” inside

diamond maker's mark, the vessel was produced between ca. 1915 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3).



**Figure 7.21. Left: Bottle of Ed. Pinaud Eau de Quinine Hair Tonic from; Top Right; unidentified shaving stick container; Bottom right: Listerine bottles. All items from 34GR177.**

Three items relating to shaving are represented including a portion of a ceramic shaving mug and portions of metal containers of shaving sticks. One is identifiable as Palmers Lotion Shaving product. Based on company advertisements and when face products were added to the product line, this vessel was likely produced between ca. 1871 and ca. 1940 (Hetherington 2014a). However, aluminum was not in wide use commercially until an 1889 patent for the inexpensive production of the metal so a pre-1889 date seems unlikely (Bellis 2015a)

Among the nine oral care related items in the assemblage, at least seven bottles of Listerine are represented (see Figure 7.21). Two of the complete bottles contain the “N” inside of square mark of the Obear-Nester Glass Company in use from 1915 to 1978 (Bottle Research Group 2014). The remaining bottle has the numbers in diamond maker's mark used by the Illinois Glass Company and the base fragment has a portion of a diamond mark used by the company as well. Both of these vessels date from ca. 1911 to 1929 (Lockhart, Lindsey, Whitten, and

Serr 2005:3). It can only be determined that the remaining three body shards postdate ca. 1881, when the Lambert Pharmacal Company began production of the product (McNeil-PPC, Inc. 2015).

A total of ten items related to Toiletry powders are recognizable in the assemblage. Most are represented by metal caps (Figure 7.22). At least one vessel containing Mary Garden talcum powder is represented at 34GR177. Based on advertisements and a lawsuit filed by Mary Garden, this vessel was produced between ca. 1916 and 1933 (Hetherington 2011b). Advertisements featuring Mary Garden for cosmetics and toilet powders first appeared in 1916 (*ibid*). At least one vessel containing Riveris Talcum Powder is represented at 34GR177. It is uncertain when the powder was manufactured but advertisements appear by 1908 through the early 1910s, making it possible that this vessel could date to the same time. A Colgate Company is present and Based on when the patent was filed for the design of the lid, it was likely produced post 1904 (Colgate 1904). The remaining seven items in this category, mostly metal caps are classed as relating to powders by attributes such as a pattern of several small holes through which the powder was dispensed.

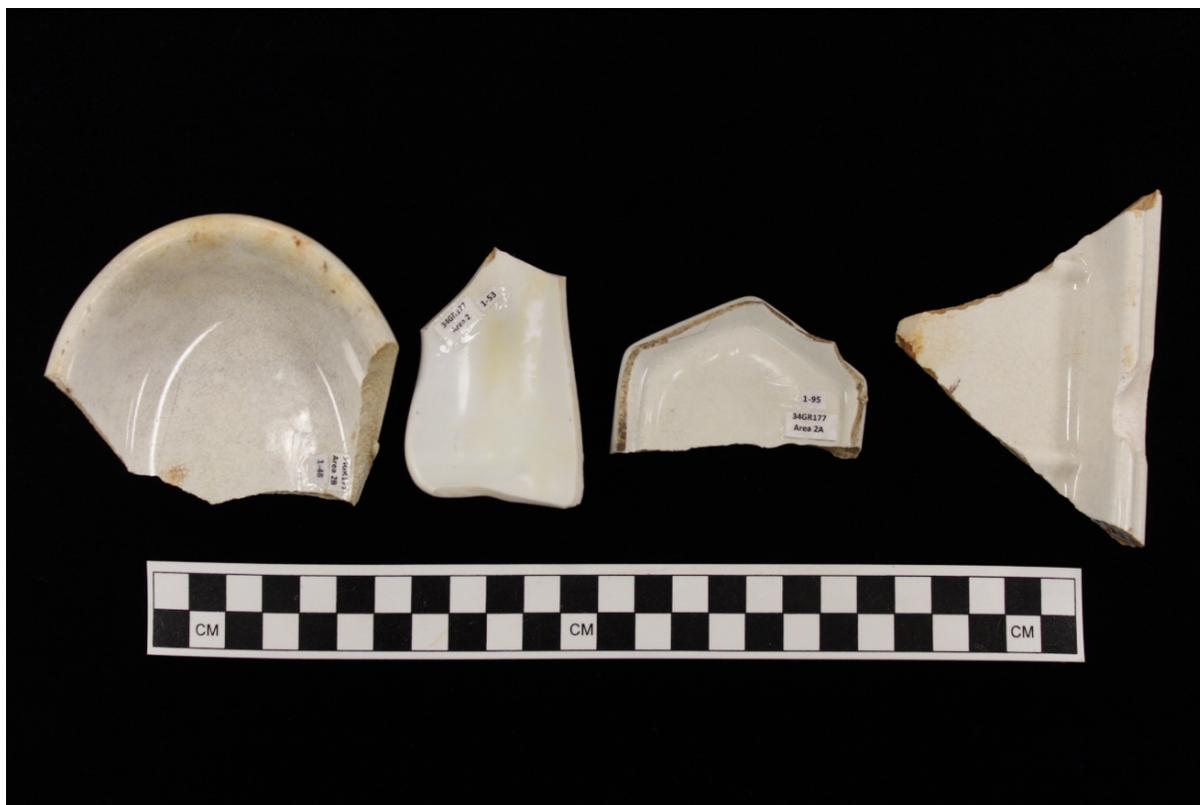


**Figure 7.22. Metal lids and caps from various toiletry powder containers at 34GR177.**

A metal lid from the B.J. Johnson Soap Company is present, Based on when the company was known as the B.J. Johnson Soap Company, the vessel was produced between ca. 1895 and 1918 (Hetherington 2015). At least four vessels from the Franco-American Hygienic Company are represented in the collection. Based on when the company was founded, all

vessels were produced post 1889 (Currey 1918). It is unknown exactly when the company went out of business, but advertisements for sales representatives occur as late as 1927 (Popular Mechanics 1927:56). The base fragment, Specimen #614 from Area 2A, contained a portion of an Owens suction scar indicating post ca. 1905 production (Lindsey 2014c).

The recovery of 7 items that can be identified as soap dishes is significant in associating the 34GR177 assemblage to Granite Sulphur Springs (Figure 7.23). These include 6 ceramic and 1 of solarized glass, all with beginning production dates in the early-twentieth and late-nineteenth century. One exhibits a mark of the West End Pottery Company with a specific “W.E.P.CO./CHINA” mark of the West End Pottery Company was in use on ceramics produced by the company from 1893 to 1910 (DeBolt 1994:159; Lage 2004:366). Two ceramic soap dish fragments have marks indicating Hotel ware.



**Figure 7.23. Fragments of ceramic soap dishes from 34GR177.**

Another interesting item in this category are the three early-twentieth century Merry Widows condom tins (Figure 7.24). While not uncommon, the recovery of three suggest a prevalent use at some point. There is archival documentation of B. H. Wall, one of the owners of the Hotel at the Springs in 1910, was convicted in Greer County court of running a “house of ill fame” at Granite Sulphur Springs (MS November 17, 1910). It would certainly be a possibility that these items may relate to that brief brothel operation. It is possible that some of the other items in this category relate to that event as well such as the perfumes and abundance of skin and cosmetic creams.



**Figure 7.24. Left: Merry Widows Condom tins from 34GR177; Right; Article in the Mangum Star November 17, 1910 regarding the case of B. H Wall.**

The personal Hygiene groups accounts for 6.7 percent of the items identifiable as to a functional group. It is dominated by milk glass containers which contained skin care and cosmetic products. Perfume containers are also well represented. A variety of Hair care and toiletry powders are also present. The artifact analysis identified at least seven separate soap dishes which would seem constitute with activities associated with a bath house. The three condom tins, while not necessarily an unusual items to occur in an early-twentieth century dump could potentially be indicative of activities known to occur at Granite Sulphur Springs.

### **Food Preparation and Storage**

Among the food preparation and storage category we have identified a total of 186 individual glass items, 75 ceramic items and 66 metal individual items for a total of 327 individual items among the total of 866 artifacts in the category.

### **Canning Jars**

Roughly half (n=94; 50.5 percent) of the 186 individual glass items is comprised of canning jar fragments. A variety of jars and manufacturers are represented by most of the items

including Ball Perfect Mason (n=3), Ball Mason (n=5), Mason Patent Jar (n=5), Hero Mason Jar (n=2), Drey Perfect Mason (n=4), Atlas Strong Shoulder Mason Jar (n=9), Atlas E-Z Seal (n=4) and Kerr Economy Jar (n=13). Present, but in small numbers are Schram Automatic Sealer Jar (n=2) and Presto Mason Jar. With the exception of the two Presto Mason Jars in the assemblage which began production in 1927, all others have beginning manufacture dates before 1920 and include several types which ceased manufacture by 1920 (Table B-5). At least nine Kerr Economy Jars produced between 1904 and 1912 (Whitten 2015g) are present in the assemblage as well as at least two Hero Mason Jars and lid liners made between 1884 and 1900 are also present (Toulouse 1969; 1971).

Based on the presence of two body fragments and one base fragment, at least three Ball Perfect Mason jars are represented at 34GR177. Based on the “PERFECT/ MASON” embossing, all of the vessels were produced post ca. 1913 (Clay 2009; Whitten 2015f). The solarization of one specimen in addition to the “PERFECT/ MASON” embossing indicates production between ca. 1913 and ca. 1920 (Clay 2009; Lockhart 2006; Whitten 2015f).

Based on the presence of eight body fragments at least five Ball mason jars are represented in the assemblage. Two specimens, are likely Ball logo No. 11, indicating production between 1910 and 1923 (Lockhart, Schriever, Serr, and Lindsey 2013a:69). The remaining jars were too fragmented to determine which specific Ball mark was in use. The typical Ball script was first used in 1896 indicating production after this time (*ibid*). All of the shards were aqua in color, which may indicate production prior to the 1930s, as colorless glass began to phase out aqua on canning jars around this time (Lindsey 2014d).

The presence of nine body fragments represent a minimum at least five Mason’s Patent jars. Based on the Mason’s Patent embossing on all of the vessels, they were produced between ca. 1858 and the early 1920s (Whitten 2015e). One specimen was possibly produced between at least ca. 1909 and the early 1920s as it is possibly the “Ball Blue” color (Clay 2009; Lindsey 2014d; Whitten 2015e). This color was in use by Ball from at least 1909 through 1937 and is a more intense light blue than most aqua colors seen (Clay 2009; Lindsey 2014d).

Based on the presence of two base fragments, one body fragment, and four canning jar lid liners, at least two Hero Mason jars are represented at 34GR177. Based on the presence of post bottom mold seams on both bases as well as when the Hero line was patented, both bases were produced between 1867 and ca. 1900 (Toulouse 1969:146, 1971:250). The body fragment contains a portion of an embossed “Hero Cross,” indicating production between 1882 ca. 1900 (Toulouse 1969:146-148, 1971:250). The canning jar lid liners also contain the “Hero Cross,” indicating production between 1882 and 1918 (*ibid*).

The presence of five body fragments and two lid liner fragments indicate that at least four Drey Mason jars are represented at 34GR177. Based on the “Drey/ PERFECT/ MASON” embossing, these vessels were produced between ca. 1918 and 1925 (Roller 1983:110). The

centering of the “PERFECT/ MASON” embossing on these vessels could identify them as Drey jars rather than Ball jars. The “MASON” is aligned much further to the right on Drey jars than on Balls jars and the embossing is much more faint (Schroeder 1987:17, 30). The lid liners did not yield any additional diagnostic information and could only be given a general production date between 1904 and 1925 (Cole 2002).

A total of nine Atlas Strong Shoulder Mason jars are represented at 34GR177 by the presence of 20 body fragments. Based on when the jars began production and the closing of the Hazel-Atlas Glass Company, these vessels were produced between ca. 1915 and 1964 (Lindsey 2015c; Whitten 2015d). Sixteen of the specimens recovered were aqua. Aqua canning jars were produced through the 1930s before being replaced with colorless glass so these jars could likely predate 1930 (Lindsey 2014d). Three specimens were solarized amethyst, which would indicate their production between ca. 1915 and ca. 1920 (Lindsey 2015c; Lockhart 2006; Whitten 2015d). One specimen was colorless.

Based on the presence of four complete or fragmented bases and one body fragment, at least four Atlas E-Z Seal jars are represented in the 34GR177 assemblage. Based on when the jars were in production, all vessels were produced between 1896 and 1964 (Toulouse 1969:22, 1971:55; Whitten 2015d). Aqua canning jars were seen through the 1930s before being replaced with colorless glass so the jars could likely predate 1930 (Lindsey 2014d). One base, Specimen #294 from Area 1, contained a valve or ejection mark, indicating production between the early 1900s and the 1940s, possibly later (Lindsey 2014c).

Based on the presence of 14 base fragments, two of which refit, and one body fragment, at least 13 Kerr Economy jars are represented at 34GR177. Nine of the vessels contained the “PORTLAND, ORE.” Embossing, indicating that they were produced between 1904 and 1912 when the company held offices in this location (Whitten 2015g). The remaining five base fragments contain the “SAND SPRINGS, OKLA.” embossing indicating a post 1912 production based on when the company opened their glass manufacturing plant in this location (*ibid*). The plant remained open through at least 1955, however, the jars were likely produced through ca. 1920 (Everett 2009; Whitten 2015g). All nine of the bases containing the Portland embossing were solarized. The body shard was also solarized, indicating production between 1904 and ca. 1920 (Lockhart 2006; Whitten 2015g). The base fragments were identified as Kerr Economy jars based on the “KERR GLASS MFG CO” embossing found on the base, which Whitten (2015g) indicates as an indicator of the Kerr Economy line.

At least one Kerr Self Sealing jar is represented at 34GR177 by one body fragment. The specimen did not yield any additional diagnostic information and it can only be determined that it postdates ca. 1914 (Roller 1983:461).

At least two Schram Automatic Sealer canning jars are represented by two body fragments. Based on when the jars were in production, both vessels were produced between 1920 and

1925 (Toulouse 1969:277). One specimen exhibits the original Schram Automatic Sealer jar design and possibly dates to the earlier end of the 1920 to 1925 timeline (*ibid*).

Based on the presence of one complete lid and two body fragments, at least two Presto Supreme Mason jars are represented at 34GR177. Based on when this line of jars were in production, both jars were produced between 1927 and 1946 (Lockhart, Lindsey, Whitten, and Serr 2005:7; Toulouse 1971:246).

A variety of jars and manufacturers are represented by most of the items including Ball Perfect Mason (n=3), Ball Mason (n=5), Mason Patent Jar (n=5), Hero Mason Jar (n=2), Drey Perfect Mason (n=4), Atlas Strong Shoulder Mason Jar (n=9), Altas E-Z Seal (n=4) and Kerr Economy Jar (n=13). Present, but in small numbers are Schram Automatic Sealer Jar (n=2) and Presto Mason Jar. With the exception of the two Presto Mason Jars in the assemblage which began production in 1927, all others have beginning manufacture dates before 1920 and include several types which ceased manufacture by 1920 (Table B-5). At least nine Kerr Economy Jars produced between 1904 and 1912 (Whiten 2015g) are present in the assemblage as well at least two Hero Mason Jars made between 1884 and 1900 are also present (Toulouse 1969; 1971).

At least 69 canning jars are represented in the assemblage for which the brand or the manufacturer could not be positively identified from the collected fragments. A total of 16 of the fragments exhibit marks that provide some information regarding manufacturer.

Based on the presence of 10 base fragments and three rim fragments, at least seven vessels identified as vacuum seal jars are represented at 34GR177. Additional analysis was completed on each specimen to determine if any could derive from the same vessel. Based on the patent information discernable on the jar fragments, they were produced post ca. 1903 (Lorenz 1903). The patent refers to the vacuum seal of the jar, which was filed in 1902 and granted in 1903 (*ibid*). Five of the vessels are solarized and would have been produced between ca. 1903 and ca. 1920 (Lockhart 2006; Lorenz 1903).

The presence of three body fragments and four base fragments indicates at least four canning or fruit jars produced by the Hazel-Atlas Glass Company are represented in the assemblage. Additional analysis was completed on each specimen to determine if any may have derived from the same vessel. Based on the manufacture by the Hazel-Atlas Glass Company, these vessels were produced between 1902 and 1964 (Whitten 2015d). One specimen could be the Atlas Mason Improved or the Atlas Mason's Patent indicating a production of ca. 1900 to 1920 (Toulouse 1969:24). At least four specimens contain the "A" inside of "H" maker's mark that was not in use by the company until 1924 (Whitten 2015d).

One base fragment from a probable canning or fruit jar produced by the Owens Bottle Company is represented at 34GR177. Based on the presence of the box “O” mark with numbers, this jar was produced between 1920 and 1925 (Lockhart et al. 2010).

Based on the presence of the two base fragments, at least two jars produced by the Illinois Glass Company are represented at 34GR177. One fragment contains the “I” diamond mark of the company, indicating production between ca. 1915 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). The other exhibits the number inside of diamond mark indicating production between 1911 and 1929 (*ibid*).

The presence of 76 base fragments and 19 body fragments indicates at least 39 canning or fruit jars of an unknown manufacturer are represented in the 34GR177 assemblage. This is addition to the 63 individual jars representative of identified manufacturers discussed above. A total of 44 of the bases and 13 of the body shards recovered were aqua in color, indicating that all possibly pre-date the 1930s (Lindsey 2014d). Of the 44 bases, 25 contained valve or ejection marks, indicating production between the early 1900s and possibly the 1930s (Lindsey 2014c, 2014d). Five exhibit post bottom seams indicating production between the 1840s and ca. the early 1900s, most likely between ca. 1870 and ca. 1900 (Lindsey 2014c). Seven contain a suction scar indicating production between 1905 and possibly the 1930s (Lindsey 2014c). Three bases recovered were possibly “Ball blue” in color, indicating production between ca. 1909 and 1937 (Clay 2009; Lindsey 2014d). One of these bases contained a suction scar (Specimen #230, Area 1) and the other a machine scar (Specimen #88, Area 1B). Six of the bases recovered were light green in color. Five contained valve or ejection marks indicating production between ca. the early 1900s and ca. the 1940s, possibly later while the other contained a machine scar indicating a post ca. 1896 manufacture (Lindsey 2014c; Toulouse 1969:394). Six base fragments and two body fragments are solarized amethyst indicating production between ca. the late 1880s and ca. 1920 (Lockhart 2006). All six of the bases contained valve or ejection marks, narrowing their production to between ca. the early 1900s and ca. 1920 (Lindsey 2014c; Lockhart 2006). Eight of the recovered bases were recovered were colorless. One contained a suction scar indicating production post 1905 and three contained a valve or ejection mark indicating production between ca. the early 1900s and ca. the 1940s, possibly later (Lindsey 2014c). The remaining colorless bases contained unknown processes of manufacture. Eight recovered bases are green in color ranging from light to medium. Four of these bases contained a valve or ejection mark, indicating production between ca. the early 1900s and ca. the 1940s, possibly later (*ibid*). One exhibits a machine scar indicating a post ca. 1896 production (Toulouse 1969:394) and one green base fragment contained a suction scar, indicating a post 1905 manufacture The last body shard recovered was solarized amethyst, indicating production between ca. the late 1880s and ca. 1920 (Lockhart 2006).

## Condiments

At least two specimens are horseradish mustard or apple butter bottles produced between 1897 and 1903 and a Heinz bottle containing an unidentified product made after 1905 (Figure 7.25). The remainder of the Heinz product bottles were produced after 1918 but with the exception of three colorless ketchup bottles ceased production in the 1920's. Two mustard dressing bottles have a tight production range of 1918-1921.

The presence of two base fragments indicates at least two bottles containing Heinz mustard dressing are represented at 34GR177. Based on the base plate number 133, the bottles held 8 ounces of mustard dressing and were produced between 1918 and 1921 (Cartwright 2006).

At least two vessels containing Heinz horseradish sauce, mustard, or apple butter are represented in the assemblage by two base fragments. Based on the base plate number of 79, the bottles contained horseradish, mustard, or apple butter (Cartwright 2006). The base plate also indicates the bottles were hand blown in the Sharpsburg, Pennsylvania factory between 1897 and 1903; however, one vessel contains a possible valve or ejection mark which would indicate machine-manufacture between the early 1900s and 1940, possibly later (Cartwright 2006; Lindsey 2014c).

The presence of three base fragments indicates at least three vessels containing Heinz ketchup are represented at 34GR177. Base plates 57 and 255 indicates the bottle contents as ketchup, with each bottle containing 14 ounces (Cartwright 2006). Base plate 57 indicates production between 1895 and 1910; however, the vessel contains the box "O" mark of the Owens Bottle Company which would indicate production between 1919 and 1929 (Lockhart et al. 2010:56). Base plate 255 indicates production between 1918 and 1943 (Cartwright 2006). One specimen contains an "I-O" diamond mark of the Owens-Illinois Glass Company, narrowing production to between 1929 and 1943 (Bottle Research Group 2014; Cartwright 2006).

At least one bottle containing Heinz pickles, mincemeat, or apple butter is represented in the collection. Based on the "8..." embossing on the base and the "O" inside of box maker's mark of the Owens Bottle Company, it can be determined that the base plate number was possibly 86. This is the only base plate number beginning in 8 that coincides with the time during which the "O" in box maker's mark was in use by the company. Base plate 86, and possibly this container, held pickles, mincemeat, and apple butter and was in use from 1908 to 1919 (Cartwright 2006). The "O" inside box mark was in use by the Owens Bottle Company from 1919 to 1929 (Lockhart et al. 2010). This indicates that the bottle could have been produced in 1919 (Cartwright 2006; Lockhart et al. 2010).



**Figure 7.25. Left: Heinz product bottle; Top right: Heinz mark on base of bottle shown to the left; Bottom right; Heinz brown mustard bottle. All items from 34GR177.**

The occurrence of one complete bottle indicates at least one vessel containing Heinz brown mustard is represented at 34GR177. Base plate number of 195 indicates this bottle contained 6 ounces of the Heinz brown mustard and was in use from 1918 to 1924 (Cartwright 2006). The bottle was described as an “Egyptian” style bottle (*ibid*).

Based on the presence of one complete bottle and one base fragment, at least two vessels containing Durkee Salad Dressing are represented at 34GR177. Based on the presence of the suction scar in addition to the “pottery mark” logo on each of the bases, the vessels were produced between ca. 1908 and 1929 (Lockhart, Serr, Lindsey, and Schriever 2015:222).

Other items among the condiments include seven ketchup bottles from unidentified manufacturers but identifiable as made by automatic bottle machine after 1905 (Figure 7.26). Two of these are solarized. A French’s mustard bottle from after 1915 is present as is a Lea & Perrins Worcestershire sauce bottle produced between 1905 and the 1920’s.



**Figure 7.26. Examples of ketchup bottles of unidentified manufacturers in the 34GR177 assemblage.**

At least 11 individual extract bottles are present in the assemblage. Based on the presence of one body fragment, at least one vessel containing a Steinwender Stoffregen extract is represented at 34GR177 (Figure 7.27). Based on the slight solarization and the company's name change, this vessel was produced between ca. the late 1880s and 1895 (Leonard 1906:578; Lockhart 2006). It is unknown when the company went out of business, but advertisements can be seen until at least 1919 (National Waterways Magazine 1919:46).

Based on the presence of two complete bottles, one base fragment, and one body fragment, at least four bottles containing a Van Duzer Company extract are represented at 34GR177 (see Figure 7.27). Based on the presence of an Owens suction scar, the complete vessels and the base fragment were likely produced between ca. 1905 and at least 1922 (Lindsey 2014c; California Grocers Advocate 1922:20). The remaining vessel could only be assigned a production date based on company dates from 1850 to at least 1922 though a production date on the later end of that time frame seems more likely (California Grocers Advocate 1922:20; The Spice Mill 1921:2096).



**Figure 7.27. Top left: Fragment of Steinwender Stoffregen Company bottle; Bottom left; Fragment a Gebhardt's Eagle Brand Chili Powder bottle; Right; Van Duzer's Extract bottles. All items from 34GR177.**

Based on the presence of one complete bottle, four base fragments, and two body fragments, at least five vessels containing a Sauer's Extract are represented at 34GR177. The complete vessel and one base fragment contain a "fin," or a small protrusion of glass at the base of the heel, as well as a very faint oval which Lockhart, Serr, Schriever, and Lindsey (2013:393) describe as the third type of Sauer's Extract bottle produced by the American Glass Works.

This indicates that the bottle was produced between 1908 and 1925 when the company was in operation producing machine-made and mouth blown extract bottles for the C.F. Sauer Company (Lockhart, Serr, Schriever, and Lindsey 2013:385). One base fragment from contains three inset panels which Lockhart, Serr, Schriever, and Lindsey (2013:392) describe as the second type of Sauer's Extract bottle produced by the American Glass works. The item is solarized indicating that it was produced between 1908 and ca. 1920 (Lockhart 2006; Lockhart, Serr, Schriever, and Lindsey 2013:392). Specimen #183 from Area 1A, is the fourth type of Sauer's Extract bottle described by Lockhart, Serr, Schriever, and Lindsey (2013:394) which still contain the "fin" and faint oval without side inset panels. This information, in addition to the solarization of the vessel, indicates it was produced between 1908 and ca. 1920 (Lockhart 2006; Lockhart, Serr, Schriever, and Lindsey 2013:385). The remaining base, is nearly identical to Specimen #183 but does not contain the fin indicating the vessel was produced between 1908 and ca. 1936 (Lockhart, Serr, Schriever, and Lindsey 2013:395). Of the two body fragments recovered, one was solarized indicating production between 1887 and ca. 1920 (C.F. Sauer 2015; Lockhart 2006). The remaining body shard contained no additional diagnostic information and it could only be determined it was produced after the company was established in 1887 (C.F. Sauer 2015).

Because of the presence of two base fragments, at least two vessels containing Gebhardt's Eagle Brand chili powder are represented in the assemblage (see Figure 7.27). Based on the presence of the "I" inside of diamond mark of the Illinois Glass Company on both bases, the vessels were produced between ca. 1915 and 1929 (Lindsey 2014c; Lockhart, Lindsey, Whitten, and Serr 2005:3).

Based on the presence of one base and body fragment, at least one vessel containing Black's Superior Bouillon is represented at 34GR177. The base exhibits an "O" inside of box mark of the Owens Bottle Company in the center of the base indicating the vessel was produced between 1919 and 1929 (Bottle Research Group 2014; Lockhart et al. 2010:56).

Based on the presence of five base fragments, at least five vessels containing a Cleveland Fruit Juice Company product are represented at 34GR177. The Cleveland Fruit Juice Company was in operation by at least 1907 (Midland Druggist 1907:1054). The company produced an assortment of products including crushed fruits, beverages, and syrups for soda fountains in addition to ice cream and sherbet later on (Ice Cream Review 1963:70; The Southern Pharmaceutical Journal 1916a:25). Based on when the company was in operation, all vessels were produced between at least ca. 1907 and ca. 1963 (Ice Cream Review 1963:70; Midland Druggist 1907:1054). Three of the vessels are solarized, indicating production between ca. 1907 and ca. 1920 (Lockhart 2006; Midland Druggist 1907:1054). The exact contents of the jars are uncertain, but they most likely contained the company's crushed fruits.

Two fruit juicers are represented in the assemblage (Figure 7.28). One exhibits a patent date of 1889. Based on the presence of solarization, a general date range for the manufacture of both juicers can be applied from ca. late 1880s to ca. 1920 (Lockhart 2006).



**Figure 7.28. Fragments of two glass fruit juicers from 34GR177.**

The presence of three complete bottles and five complete or fragmented bases indicates at least eight bottles possibly containing olives are represented at 34GR177 (Figure 7.29). Two of the complete bottles contain suction scars, indicating production post 1905 (Lindsey 2014c). The remaining complete bottle was produced in a cup bottom mold and is solarized, indicating production between the 1850s and ca. 1920s, probably dating after the late 1880s (Lindsey 2014c; Lockhart 2006). Two base fragments contain possible machine scars and are solarized, indicating production between ca. 1905 and ca. 1920 (*ibid*).



**Figure 7.29. Glass olive bottles from 34GR177.**

Two additional base fragments contain a valve or ejection mark and are solarized, indicating production between ca. the early 1900s and ca. 1920 (*ibid*). The remaining base (Specimen #272 from Area 1), did not contain any additional diagnostic information.

The presence of one base fragment indicates at least one bottle possibly containing pickles is represented at 34GR177. The solarization, in addition to the numbers in diamond mark of the Illinois Glass Company, indicates the vessel was produced between 1911 and ca. 1920 (Lockhart 2006; Lockhart, Lindsey, Whitten, and Serr 2005:3).

## **Kitchen Storage and Preparation Ceramics**

According to each header count in the analysis, a total of 75 individual vessels were identified among the 199 artifacts in this functional group. Only 12 of the vessels exhibited marks that could be identified as to manufacturer, all of which are Bristol glazed wares. Among the minimum of 75 identified vessels are 25 (33.3 percent) wide mouthed crocks, 12 (16 percent) mixing bowls and 9 (12 percent) jugs. A total of 35 (46.6 percent) of the 75 vessels are Bristol glazed stoneware. Two salt glazed stoneware vessels and 7 (9.3 percent) Albany glazed vessels were identified. A total of 8 vessels exhibit both Albany and Bristol glazes (10.6 percent).

A total of eight Albany-glazed specimens (interior and exterior) representing at least seven Albany-glazed (interior and exterior) vessels are represented in the 34GR177 collection, including three jugs, one mixing bowl, and three unidentified vessels. Enough variation in the appearance of intact rims, overall vessel shape, or variations in Albany shades between vessels, assisted in determining that at least seven Albany-glazed vessels are represented.

In total, 15 Bristol and Albany slip-glazed sherds (glazes found in combination with one another) were identified. Together they represent at least eight vessels, including one wide-mouthed crock, one jug, and six unidentified vessels. Enough variation was noticed between the intact rims, overall vessel shapes, or variations in Albany and Bristol shades between specimens to determine that at least eight Albany and Bristol-glazed vessels are represented at 34GR177.

A minimum of 35 Bristol glazed containers are represented among the Bristol glazed fragments recovered from 34GR177. A total of 23 Bristol glazed vessels are wide mouthed crocks making up 95 percent of the wide mouthed crocks represented in the assemblage. Four of the seven mixing bowls are Bristol glazed wares as well as two jugs. Bristol glazed vessels comprise 46.6 percent (n=35) of the food storage ceramics. Bristol/Albany glazed vessels comprise 10.6 percent (n=8) of the assemblage in this functional category and Albany glazed vessels 9.3 percent (n=7). Blue-molded stoneware account for 17.3 percent (N=13) of this functional category and exhibits a wide range of designs and functional vessels.

Among the Bristol glazed stoneware, are 11 vessels made by the Monmouth Pottery Company/Western Stoneware Company including 8 crocks, 1 mixing bowl 2 unidentified vessels (Figure 7.30). Based on the observable marks on the fragments, a ca. 1901 date can be applied to all vessels at the very earliest, with the majority, if not all vessels dating to 1906 and later (Martin and Cooper 1983:14). At least one vessel made by the Galesburg Pottery company is present in the assemblage (Figure 7.31). While the vessel represented in the assemblage could not be identified, the Galesburg Pottery Company was in existence from 1891-1897 (Carl Sandburg Historic Site Association 2015) providing a tight date range for the manufacture of the vessel. The vessel made by the Buckeye Pottery Company was produced

between 1882 and 1941, as this date range represents the years the company was in business (Greer 1981; Lehner 1988:63).



**Figure 7.30. Examples of crock fragments of the Western Stoneware Company found at 34GR177.**



**Figure 7.31. Left: Fragment of a Galesburg Pottery Company vessel; Right: fragment of a crock made by the Buckeye Pottery Company. Both items from 34GR177.**

The two salt glazed vessels include one wide mouthed crock and one unidentified vessels. The Albany glazed vessels include three jugs, one mixing bowl and three of unidentified function. The eight vessels exhibiting both Albany and Bristol glazes include one wide mouthed crock, one jug and six which remain unidentified as to form or function.

There is at least one blue glazed stoneware mixing bowl present in the assemblage and eight blue and white banded stoneware vessels. These latter items have blue and white banding over Bristol or Albany glazed.

A blue molded stoneware is present in the assemblage and at least 13 different vessels are identifiable. Among these are three mixing bowls, two bowls, one salt holder, one butter crock and six for which the vessel form could not be determined. However, the molded blue ware does have distinct patterns that can be described including a salt holder with the Blackberry Pattern, a Wedding Ring Pattern mixing bowl, at least two Cows and Fence Pattern butter crocks, a vessel of Apple Blossom Pattern, a Reverse Picker Fence Pattern mixing bowl.

The Kitchen Storage ceramic assemblage is dominated by Bristol glazed ware most of which are large mouth crocks. There are at least three 3 gallon, two 2 gallon, one 4 gallon, two each of 5 and 6 gallon and one 10 gallon crocks present in the assemblage. Mixing bowls and gallon sized jugs are also well represented. While the minimum number of ceramic vessels in the kitchen storage group is dominated by Bristol glazed wares (46 percent) assemblage also includes some Albany (9.3 percent) and Albany/Bristol glazed wares (10.7 percent) are present as well. Blue molded stoneware is well represented in the assemblage as well and comprises 17.3 percent of the minimum number of identified vessels. Bristol glazed wares, which are well represented at 34GR177, was the predominant glaze-type used on utilitarian stoneware in the United States beginning during the late nineteenth century and throughout the twentieth century (Greer 2005:212)

### **Food Storage/ Preparation (Metal)**

A total of 66 metal items were identified as associated with food storage and preparation. The largest category of these items are stove related parts (n=31/ 46.9 percent) including 18 pieces of cast iron stoves, 5 pieces of gas fueled stoves and 8 stove pipe flue parts. Due to the small sizes of the fragments it is difficult to identify the number of stoves represented, however, it appears that several stoves are represented. It is likely the cast iron stove parts represent wood or coal fired stoves. Stove legs, stove doors burner plates, shaker grates and structural pieces are identified in the assemblage. While little in the way of detailed diagnostic information can be gleaned from the stove fragments, the specimens compare well with stoves illustrated in late-nineteenth and early-twentieth century catalogs. Three of the stove flue related items could be identified further by the information present on them. Two items were identifiable as being made by the Griswold Manufacturing Company and were produced after 1915. Another flue part was made by the Stover manufacturing Company between 1881 when the company was formed and 1916 when the company changed its name to Stover Manufacturing and Engine Works (Vintage Machinery 2016).

The occurrence of five fragments of gas fired stoves indicate their use as well. Gas fired stoves, including small portables stoves were becoming more popular beginning in the early-twentieth century. The five pieces are from burners and burner grates and compare well those illustrated in early-twentieth century catalogs advertised as cook stoves

At least 11 separate vessels of enameled cookware are present in the assemblage. At least five bowls are present and four pans and two kettles. The enameled wares include blue and white swirled and blue and white and black and white speckled.

Only 12 cans are represented in the food storage category. Hole-in-cap cans are represented by at least five items and sanitary type cans by at least three items. One item represented an overlapping side seam can with stamped ends indicating production between 1847 and 1904 (Rock 1984). The hole-in-cap cans were in use during the early-twentieth century and replaced by sanitary cans by 1920. One can retains a mark or logo use by the American Can Company in the early-twentieth century.

At least four wind key cans are present in the assemblage by the discarded keys.

Among the other metal items in this category are three strainers and percolator baskets for making coffee and the hand crank assemblage from a Wonder Ice Cream maker/freezer manufactured by Simmons Hardware (Figure 7.32). This latter item compares well with Wonder Ice Cream freezers items from the early-twentieth century.



**Figure 7.32. Hand crank apparatus from a Wonder Ice Cream freezer.**

Cast iron stove parts from both wood/coal fired and gas fired stoves are present in the assemblage. While difficult to arrive at a minimum number of stoves represented, there is little doubt that several are represented. One of the more striking elements of the metal Kitchen Storage groups is the low number of cans (n=12) represented in the collection. The recovered

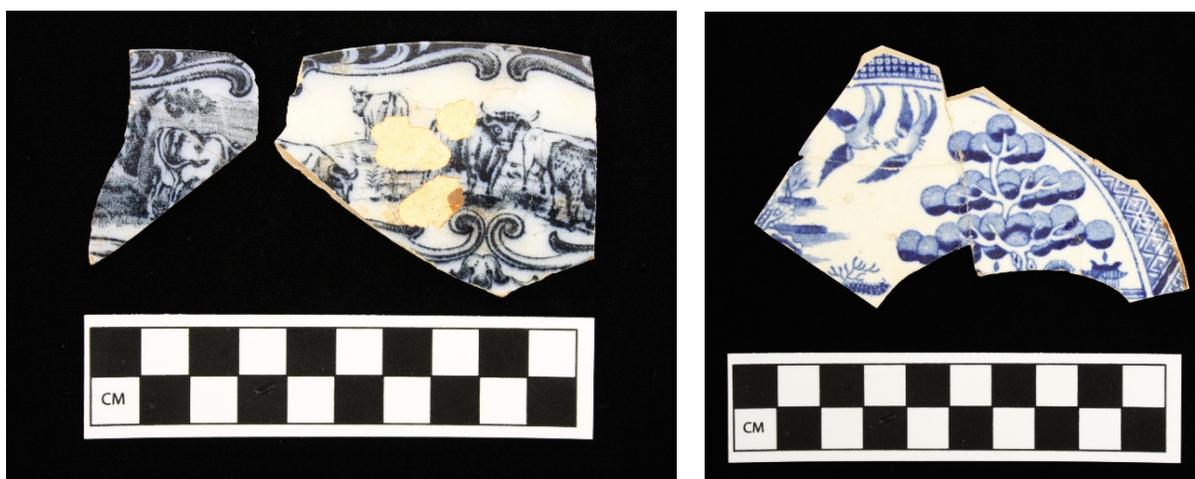
cookware consists of enameled ware which was very common during the early-twentieth century.

### **Kitchen Food Serving Group**

A total of 273 individual objects are identifiable among the 534 artifacts in the Kitchen Serving category. The category is comprised of 174 (63.4 percent) individual ceramic items, 81 (29.7 percent) separate items of glass and 18 (6.6 percent) individual metal items.

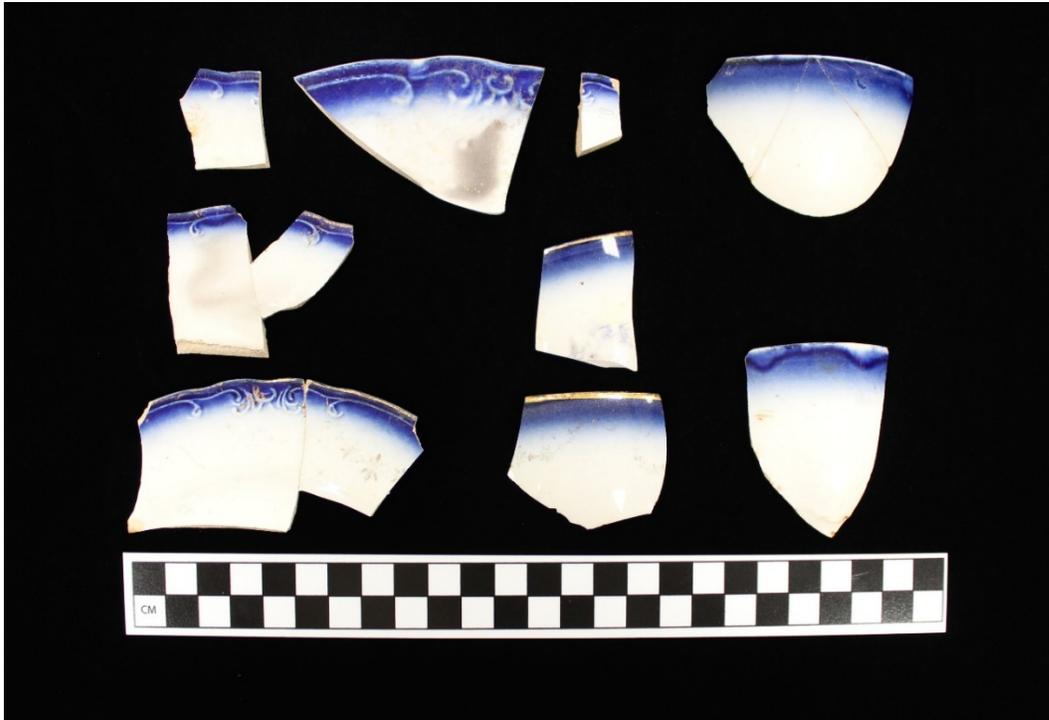
Among the recovered ceramics in the Kitchen Serving group are Ivory ware, Porcelain and White ware. The wares include Transfer ware, Decal ware, had painted wares and plain white ware. Several patterns and colors are represented in the 37 vessels identified as Transfer wares. Green transfer wares account for 10 (27 percent) of the 37 vessels and Flow Blue accounts for 24 (64.9 percent) of the transfer wares. The remainder is comprised of one black transferware and one red printed transferware and one blue printed transferware.

Several patterns are identifiable among the 24 individual Flow Blue vessels including at least one plate or platter of Cows Pattern (Figure 7.33, left) with a WEDGEWOOD & Co Ld/ENGLAND mark, three individual items of Willow Pattern (Figure 7.33, right), four vessels of La Francaise Variety (Figure 7.34), and one item of Trilby or Meissen Pattern, at least one item with Abbey Pattern and one plate exhibiting the Lugano Pattern (Figure 7.35) with a LUGANO/ROYAL/SEMI PORCELAIN mark in use between 1912 and 1920 (Snyder 2004:111; Godden 1964:539). One pattern, the Long Branch Pattern is identifiable on a minimum of three vessels including a bowl fragment with a LONG BRANCH/J&G MEAKIN/HANLEY/ENGLAND mark on the base. The “Cows” pattern was a design of Wedgwood & Company of Tunstall, England (Gaston 1983:62). Because the company was in business between 1860 and ca. 1960s, the vessel can be dated to this time period (Godden

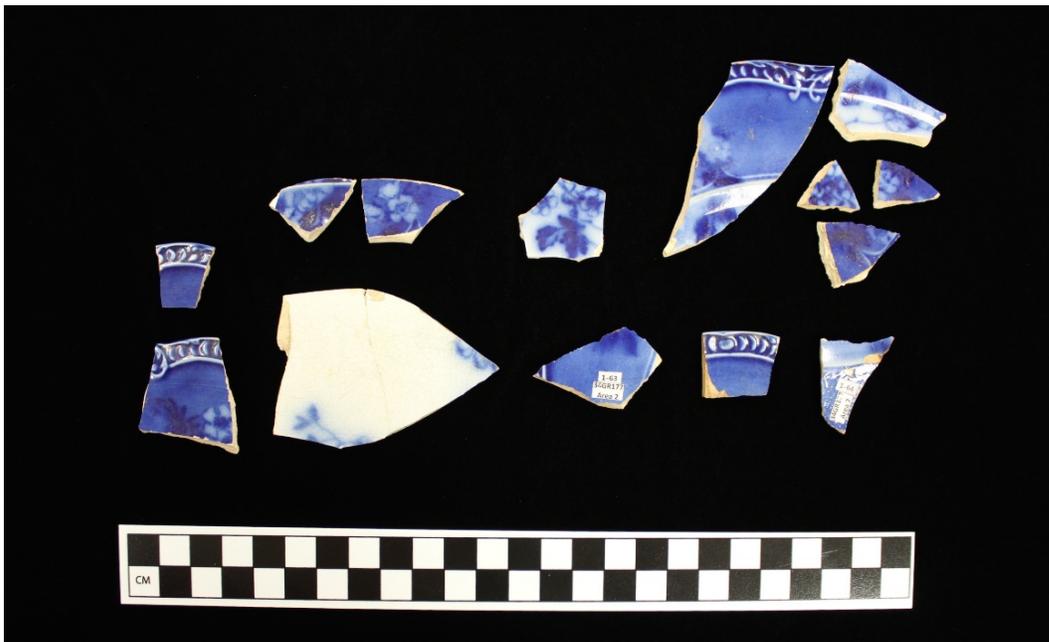


**Figure 7.33. Left: plate or platter with the flow blue transfer-printed Cows pattern by Wedgwood and Company; Right: plate base sherd with flow Blue Willow transfer-printed pattern. All from 34GR177.**

1964:655-656). The other blue transfer ware fragments displayed no makers mark, but the patterns are consistent with popular patterns in use in the late-nineteenth and early-twentieth century.



**Figure 7.34. Examples of flow blue band with a gold gilded La Francaise pattern from 34GR177.**



**Figure 7.35. Examples of Lugano Pattern Flow Blue wares from 34GR177.**

Among the green-printed transfer ware are at least 10 individual items including four plates, one possible bowl, one tea cup and four unidentified objects (Figure 7.36). At least three of the vessels are identifiable as the “Long Branch” pattern manufactured by the J & G Meakin Company in Hanley England. Long Branch-patterned transferware was produced beginning ca. 1890 (Lage 2004:214; J & G Meakin China & Pottery 2016). Although it isn’t known when J & G Meakin ceased production of the pattern, considering that the pieces parallel similar green transfer prints manufactured during the late nineteenth and early twentieth centuries, it is possible that the pattern was produced into the early twentieth century (Majewski and O’Brien 1987:145; Henry and Garrow 1982b:300).



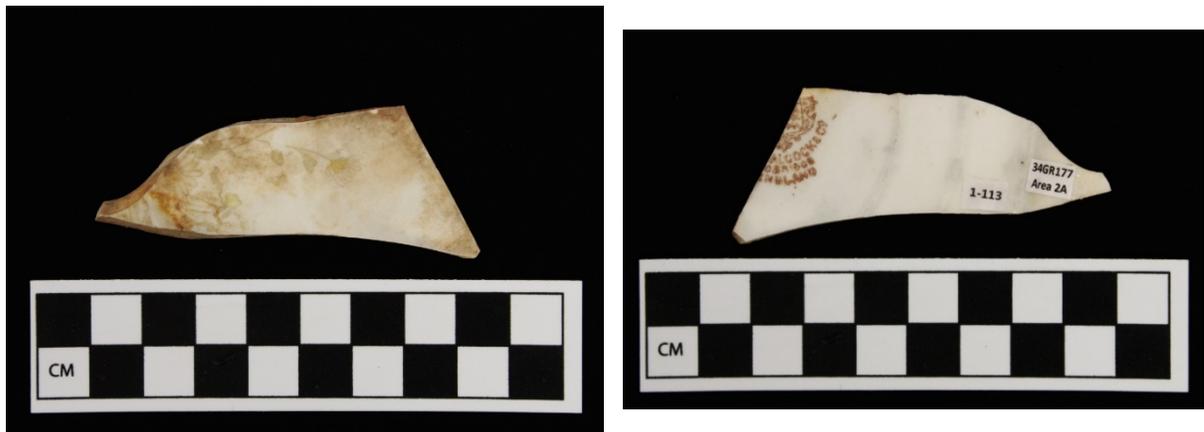
**Figure 7.36. Ceramic sherds from 34GR177 with the J & G Meakin green Long Branch pattern green transfer-printed pattern**

The remaining 10 individual items represented by green transfer ware are unidentified as to pattern or maker. The majority of the green transfer-printed wares in the collection parallel what Garrow (1982:234) and Henry and Garrow (1982a:468) describes as later period transfer-prints with monochrome border designs and molded border decoration. It is probable that the prints in the collection are revival-period pieces from the late nineteenth to early twentieth century; however, without any indication of a manufacturer’s mark or the presence of a complete vessel, it is difficult to confirm those dates.

Little information can be gleaned from the one black-printed transfer ware or the single blue printed transfer ware item. The single red-printed transfer ware vessel represented in the collection includes a scenic design of flowers, leaves and branches, a pasture, and a deer. While not confirmed, the specimen may be a product of J. H. Davis Potteries of Hanley, England, in business from 1881 to 1891 (Godden 1964:193).

Decal wares account for 62 (35.6 percent) separate vessels among the 174 ceramic items. The category includes 12 plates, 7 bowls, 6 tea cups, 1 footed bowl, 1 possible plate, 1 possible tureen, and 15 unidentified vessels.

Floral decorations account for 43 (64.1 percent) of the individual vessels of decal ware. Some makers marks are present on the recovered fragments including a plate with a Henry Alcock & Company/England mark used from 1891-1910 (Birks 2015b; Godden 1964:27) (Figure 7.37), a plate fragment with a National China Company mark used from 1900-1915 (DeBolt 1994:100), an unidentified vessel fragment with a W.S. George Company mark in use after 1920 to about 1940 (DeBolt 1994:226; Lehner 1988:163), and a base sherd with a mark used by the Edwin M. Knowles China Company used from 1901-1909 (DeBolt 1994:68-69).



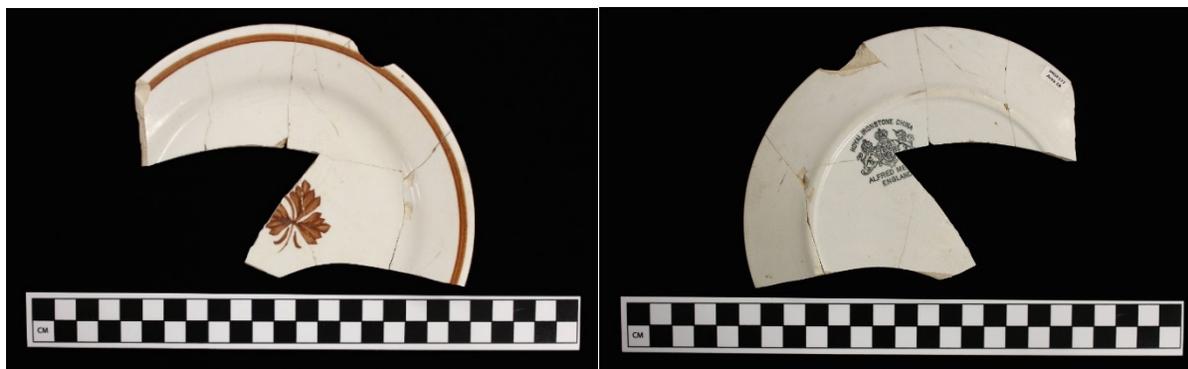
**Figure 7.37. Plate sherd from 34GR177 with floral decal decoration and mark of the Henry Alcock & Company/England mark used from 1891-1910.**

At least four vessels exhibit a Floral with Fruit decal decoration including one bowl, one plate and two unidentified vessels. One of the specimens retains a mark in use by the Jaeger and Company from 1898 to around 1923 (Marshall 2015). Decal ware with geometric designs account for three vessels, two of which, a bowl and a plate exhibit a mark in use by the Rosenthal company for the Selb-Bavaria from 1907-1956 (Lage 2004:281).

The remaining 32 individual vessels represented by decal ware fragments are unidentifiable as to maker. All exhibit floral pattern designs. The style and variety of floral decals represented in the assemblage were likely produced between the 1880s and the 1920s, and possibly later. According to Jacobs (1983:22), the height of popularity for decal decoration was between 1880 and 1920.

At least 12 vessels of Ivory ware are present in the assemblage including three bowls, two plates, one creamer and three unidentified vessels. At least four patterns are identifiable including the Chelsea Pattern, represented by one plate and likely produced around 1933 (Page et al. 2003:194-195), at least three items of Ravenna Pattern by the Homer Laughlin China Company made in the 1930's (Page et al. 2003:149), one vessel of Doric Pattern made after 1923 (Lehner 1988:414), and at least four separate vessels of Tudor Rose Pattern, including a bowl fragment with a Tudor Rose mark. This pattern is attributed to the Homer Laughlin China Company likely made after 1931. There are three specimens of Ivory ware with unidentified patterns, however makers marks are present on these specimens and include a Homer Laughlin China Company mark used after 1929, a Steubenville Pottery Company mark in use from 1930-1960, and a mark from the Edwin M. Knowles China Company that includes a date mark indicating it was manufactured in 1928 (DeBolt 1994:68-69). All these patterns postdate 1920 with most manufactured after 1930.

A small number of hand painted wares are present in the assemblage including two plates and two bowls. Three of the four vessels are identifiable as a Tea Leaf design and one has a makers mark used by the Alfred Meakin Company/England used from 1891-1910 (Godden 1964:11; DeBolt 1994:9; Heavilin 1981:91) (Figure 7.38). Another Tea Leaf design has a partial mark from either the Alfred Meakin or the J. & G. Meakin Company. The remaining vessel fragment had no mark.



**Figure 7.38. 34GR177 example of hand painted Tea Leaf design from Alfred Meakin Company, England.**

A minimum of 29 vessels in the kitchen serving category are represented by fragments of press molded wares. They display no decoration other than the molded relief designs (Figure 7.39). While 12 are vessels of unidentified function, there are seven plates, five pitchers, two tea cups and two bowls in the assemblage. One of the vessel fragments contains a makers mark used by the W. H. Grindley Company from 1914-1925 (Godden 1964:294). No marks are present on the remainder of the sherds.

A total of 40 individual vessels of plain-bodied white ware are represented among the 64 fragments in this group. They comprise 23 percent of the ceramic kitchen serving category present in the assemblage. A total of 23 of the identified vessels exhibit makers marks from

American manufacturers. Seven of these were made by the Dresden Pottery Works of East Liverpool, Ohio. Two have Dresden/Hotel China/Warranted marks that were in use from 1900 through 1910 (DeBolt 1994:43) (Figure 7.40). The remaining five have Dresden/China marks used by the company from 1908 to 1915 (DeBolt 1994:44).

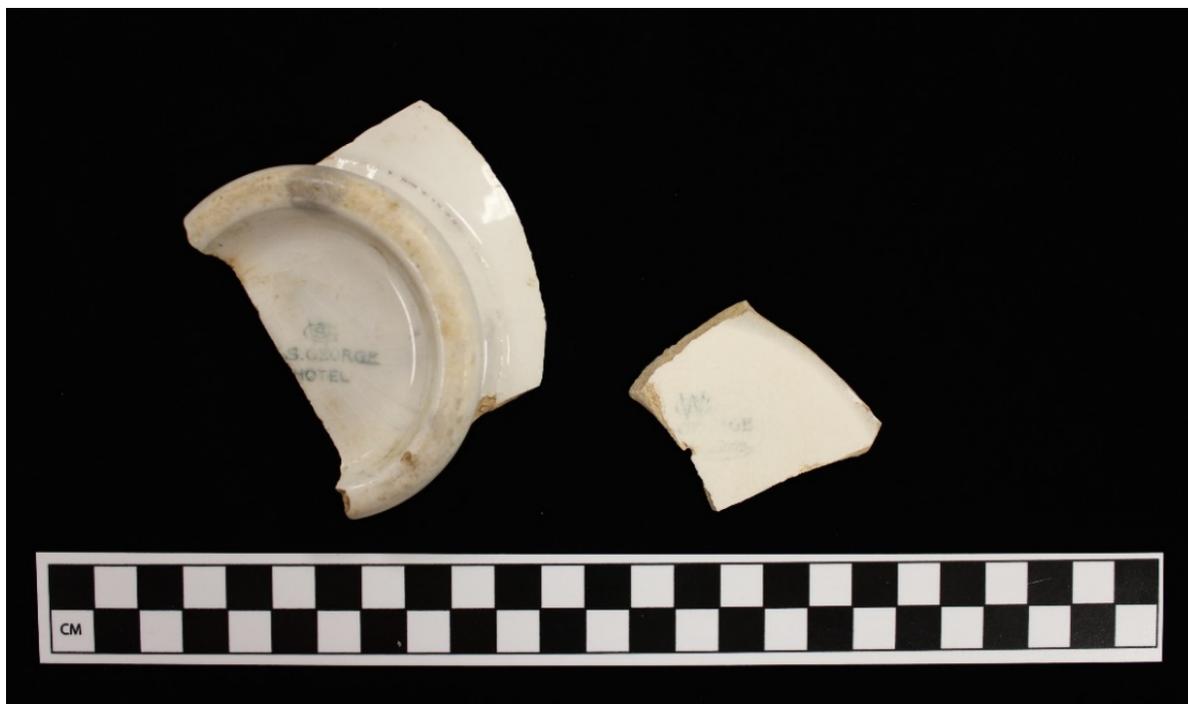


**Figure 7.39. Examples of ceramic molded relief design handles recovered from 34GR177.**



**Figure 7.40. Fragmented platter from 34GR177 with Dresden Pottery Works 'Hotel China' mark used from circa 1900-1910.**

Two vessels have marks used by the W. S. George Pottery Company from 1910 to around 1920 including a mark indicating hotel ware (DeBolt 1994:226; Lehner 1988:163) (Figure 7.41). One vessel from the Edwin M. Knowles China Company displays a mark in use from 1915-1930 (DeBolt 1994:68-69). Two vessels have marks from the Homer Laughlin China Company. One mark includes the words “hotel china” and was used between 1901 and 1915 (Lage 2004:174; Lehner 1988:247). The other exhibits a mark in use from 1911-1920 (Page et al. 2003:72). A bowl produced by the H. R. Wyllie China Company sometime between 1910 through the late 1920’s (Lehner 1988:529). Two unidentified vessels made by the Knowles, Taylor, Knowles Company are present in the assemblage. One vessel displays a mark that likely dates between ca. 1905 and ca. 1925 (Lage 2004:170; Lehner 1988:238-239) while the other exhibits a mark which probably dates between ca. 1890 and ca. 1904 (Lehner 1988:238-239; DeBolt 1994:71).



**Figure 7.41 White ware fragments from 34GR177 with marks from the W.S. George Pottery Company. Mark on left used from around 1910-1920, mark on the right from around 1920 to as late as 1940.**

One vessel displays a mark used by the French China Company of Liverpool, Ohio for “La Francaise” wares produced between 1916 and 1929 (Lage 2004:109). An unidentified vessel exhibits a mark indicating it was manufactured by the D.E. McNicol-Smith Company of East Liverpool Ohio between 1899 and 1901 (DeBolt 1994:95) (Figure 7.42). A plate fragment displaying a mark of the Mount Clemens Pottery company of Mount Clemens, Michigan was manufactured from the 1920s to the 1940s, and probably dates closer to ca. 1930 and ca. 1935 (Lehner 1988:307; DeBolt 1994:99). An unidentified vessel exhibits a mark from the T. A.

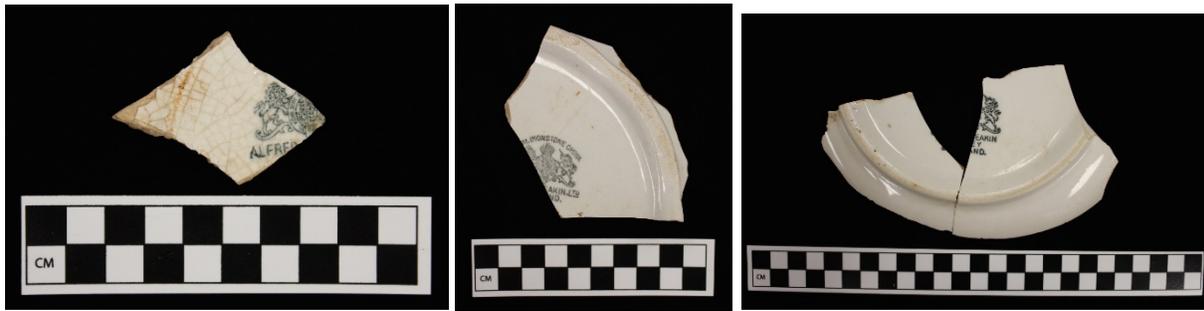
McNicol Pottery Company which includes a date mark indicating its production in 1925 (DeBolt 1994:95). Another unidentified vessel has a mark used by the Shenango China Company of New Castle, Pennsylvania which likely dates between 1906 and 1920 (DeBolt 1994:198). An unidentified vessel displays a mark used by the West End Pottery Company of East Liverpool, Ohio between 1893 and 1910 (DeBolt 1994:159; Lage 2004:366).



**Figure 7.42. Left: White ware fragment from 34GR177 with mark used by the D. E. McNicol-Smith Company from 1899-1901; Right; white ware platter from 34GR177 with mark used by the Wheeling Pottery Company from 1896-1904.**

The last two vessels from American manufacturers were made by the Wheeling Pottery Company of Wheeling, West Virginia. One has a mark in use between ca. 1893 and ca. 1904 (Lage 2004:369; Wilby 2004:274) and the other a mark used 1894 and ca. 1904 (DeBolt 1994:161).

At least four vessels made by English manufacturers are represented in the assemblage. One plate made by the Johnson Bros., Hanley Ltd. Company displays a mark indicating a post 1913 manufacture (Godden 1964:356). An unidentified vessel is represented by a mark used by the Alfred Meakin Company probably between ca. 1891 and the early 1900s (Godden 1964:425-426; Lage 2004:212-214). Two unidentified vessels exhibiting a Meakin mark were produced either by Alfred Meakin, Charles Meakin, or J. & G. Meakin and were produced ca. 1891 and later due to the presence of the word “England” in the mark (Godden 1964:11; DeBolt 1994:9) (Figure 7.43). A total of two plain-bodied, German manufactured porcelain sherds representing two unidentified vessels were reported in the 34GR177 collection. A vessel made by the Rosenthal Company dates between 1907 and 1956 (Lage 2004:281). The other items displays a mark from the Weimar Porzellan G.m.b.H. Company. Based on the presence of a specific style of a Weimar Porzellan G.m.b.H. mark, this specimen was manufactured between 1905 and 1924 (Marshall 2015).



**Figure 7.43. Examples of white ware from 34GR177 exhibiting marks representative of various England based “Meakin” companies.**

Another eight plain ware vessels displaying partial marks could not be identified due to lack of the entire mark. There are 15 separate vessels of plain ware identified on which the fragments bear no marks.

There are a minimum of 15 separate vessels of kitchen serving items present in the assemblage that are of Chinese and Japanese export porcelain. The vessels include five plates, two bowls, one tea cup, two salt or pepper shakers, and five unidentified. Ten of the 15 items a “Geisha Girl” pattern that was produced on a wide variety of dinnerware, tea sets, and toiletry sets, and was often sold at dime stores or given away as promotional items (Kovel et al. 2015f) (Figure 7.44). A general date range for production of Geisha Girl-patterned wares in the collection can be assigned from the late nineteenth century until the 1950s (Litts 1988:8, 11). Four specimens display a “Blue Phoenix” design, a blue-and-white printed pattern found on kitchenware that was popular between ca. 1900 and ca. 1940 (Kovel et. al 2015g). The final item of Asian import is a body sherd with a Noritake manufacturers mark used from 1911 or later (Kovel and Kovel 1986:74; Lage 2004:239).



**Figure 7.44. Examples of porcelain sherds from 34GR177 with “Geihsa Girl” patterns.**

Two fragments of white ware with “OvenServe” marks are present in the assemblage. OvenServe was a line of kitchen serving ware and bakeware registered as a trademark name on July 31, 1933 (Page et al. 2003:185). The line was produced until at least 1947 (*ibid*). Based on this information, both OvenServe pieces from the collection were manufactured beginning as early as ca. 1933 until at least 1947 (Page et al. 2003:185).

Represented among the 108 glass kitchen food serving artifacts are 81 individual items of glassware. The assemblage are 23 stemware drinking glasses, 17 tumblers and/or mugs, seven bowls, five pitchers, three plates, one compote, one footed oval dish, one plate or cup saucer, one saucer or bowl, one root beer stein, one shot glass, one lidded dish, one footed sherbet bowl, sugar bowl, or creamer, one sugar bowl, pitcher, or lidded dish, and 16 unidentified vessels.

A total of 11 (13.6 percent) of the 81 items are classed as Depression glass an inexpensive glassware made in large quantities, primarily in the Depression-era years in the United States during the 1920s through the early 1940s (Kovel et al. 2015b; Wiggins 2016a). The Depression Glassware is represented by at least two plates, one bowl, one tumbler, one stemware drinking glass, one small bowl and five unidentifiable vessels.

The majority of food serving glassware items are of pressed glassware and include 43 individual items comprising 53 percent of the glassware in the kitchen serving category. The assemblage includes, 17 tumblers and/or mugs, 6 bowls, 4 stemware glasses, 1 compote, 1 footed oval dish, 1 pitcher, 1 sugar bowl, pitcher, or lidded dish, 1 lidded dish, 11 unidentified vessels.

Three patterns are identifiable on four items of pressed glassware including one of Dewey Pattern, one of Thumbprint Pattern, and two of Grape Pattern. The thumbprint pattern item is a stemware drinking glass with a mark of the Bartlett-Collins Glass Company of Sapulpa Oklahoma. A 1915 to ca. 1920 date range can be applied this specimen based off of the year the company opened for business and the presence of solarization (Lockhart 2006; Lockhart, Schriever, Serr, and Lindsey 2013b:93).

Most of the pressed glassware (n=39) could not be put into defined patterns. A total of 17 or 43 percent of these items are tumblers or mugs. Three exhibit marks of the Capstan Glass Company ware in use between 1918 and 1938 (Bottle Research Group 2014) (Figure 7.45). One items displays a mark of the Hazel-Atlas Glass Company that indicates this specimen was produced between 1920 and ca. 1964 (Toulouse 1971:239; Whitten 2015d). While the fragments representing the remaining 13 drinking glasses have no marks, five are solarized and can be assigned a manufacture date between ca. late 1880s and ca. 1920 (Lockhart 2006).



**Figure 7.45. Examples of pressed glassware tumblers from 34GR177. Photograph on the right is a mark of Capstan Glass Company on the base of the tumbler on the right.**

Three stemware glasses identified among the pressed glassware are solarized indicating a manufacturing date range can be assigned for their manufacture between ca. late 1880s and ca. 1920 (Lockhart 2006) (Figure 7.46). One of the items exhibits a makers mark of the Heisey Glass Company, which refines the date range of manufacture for this specimen between ca. 1905 and 1915 (Bottle Research Group 2014).



**Figure 7.46. Pressed glass stemware drinking glasses from 34GR177. Item on the right exhibit a mark of the Heisey Glass Company in use from 1905-1915. Note the solarization of all specimens.**

Two pitcher fragments attest to the presence of a pressed glassware pitcher. Due to the presence of solarization, one particular vessel dates from ca. late 1880s through ca. 1920 (Lockhart 2006).

Six of the press ware glass items are bowls, all of which are solarized indicating manufacture between ca. late 1880s through ca. 1920 due to the presence of solarization (Lockhart 2006).

Among the 25 non pressed glass ware food serving items made of glass are the fragments of at least 18 stemware drinking glasses. Among the remaining six items are three pitchers, a plate and a root beer stein. While no makers marks are present on the stemware fragments, 10 (55.5 percent) of them are solarized and a date range of manufacture between ca. late 1880s and ca. 1920 can be applied to 10 of the glasses (Lockhart 2006).

The three pitchers are represented by two of colorless glass and one of milk glass. The root beer stein is represented by a base with a mark used by the J. Hungerford Smith Company in Rochester, New York. The Company produced Rochester Root Beer Root Beer and introduced and advertised a stein in 1915 for drinking root beer. The solarization of the vessel, in addition to their introduction by the company, indicates production between 1915 and ca. 1920 (Lockhart 2006; The Northwestern Druggist 1915:98).

### **Metal Food Serving**

Only 18 metal objects related to kitchen/food serving are in the assemblage, most (n=12) of which are eating utensils including eight spoons, and three, possibly four forks. One fork was made by the Pairpoint Manufacturing Company sometime between 1880 and 1938. A Wm. A. Rogers/German Silver spoon was made between 1890 and 1929 (Busetto 2015). Another spoon was manufactured for the Cream Of Rye Company around 1911 (Sterling Flatware Fashions and Facts 2015). Another spoon was made by the Hibbard, Spencer, Bartlett and Company which operated from 1882 to 1962 (Heuring and Heuring 2010).

Four individual vessels of enameled serving ware are present in the assemblage. Two cups a pan and a coffee pot are represented by the recovered artifacts. A mottled gray, a black with white speckles, and blue and white swirled finishes are observable.

Two aluminum cups are represented, one by a lid to a Fred Harvey Company collapsible cup. The Fred Harvey Company developed restaurants along the Atchison, Topeka and Santa Fe Railroad in the first half of the twentieth century.

With exception of a few items such as the 11 individual items of Depression Glassware and the two fragments of "Ovenware", most all the ceramic, glass and metal Kitchen Food Serving Group display makers marks, decorative patterns or other attributes such as solarization that indicate a manufacturing range during the first two decades of the twentieth century. Some items such as the whiteware fragments with marks used by the D. E. McNicol-Smith Company

from 1899-1901, and the Wheeling Pottery Company from 1896-1904, have manufacturing end dates early in the twentieth century.

Both the ceramic and the glassware assemblage contain a variety of items including plates, cups, bowls, platters, pitchers, tumblers and stemware. The latter item, stemware drinking glasses are well represented in the assemblage. The recovered ceramics contain a wide variety of decorative patterns including imported and domestic transferware and Decal ware. Imported items include vessels from England, Germany and Japan.

### **Faunal Remains**

A number of faunal remains were recovered by the investigation. Most are from domestic animal including cow and pig. At least one bird, one dog and one horse are also represented. The pig and cow bone display evidence of hand or machine sawn butchering and represent consumed meat cuts. Among the cut pig bones (n=43) are seven pieces which appear to derive from the loin of the pig where pork chop type cuts containing part of a vertebrae and part of a rib are obtained. At least two other pig remains are from similar cuts. The most represented element in the pig cuts are thin, disc shaped pieces cut from a femur (n=13) likely representing ham steaks (Figure 7.47). Several pig ribs (n=12) are also present, some of which exhibit saw cuts.



**Figure 7.47. Examples of faunal remains from 34GR177. Most are likely pig.**

Cow bone is represented by 10 specimens, half of which are rib fragments. Aside from the one tooth the others exhibit cut marks. Two shells were recovered including one scallop and one oyster. Whether these relate to consumed food items is unknown but certainly possible.

In addition to the faunal remains, two peach pits are present in the assemblage.

### **Beverages**

A minimum of 145 beverage containers are represented in the 34GR177 assemblage. Most all are glass containers, however, a ceramic root beer dispenser is present. Both alcoholic and non-alcoholic beverages are represented. At least 53 alcohol beverage containers are identifiable comprising 36.5 percent of the identified beverage vessels. Of these, 21 can be

identified as liquor bottles and six contained beer. Another 26 items could not be identified further beyond being alcohol related.

### Alcohol

Among the 21 liquor bottles at least three companies are represented. A total of five body sherds and eight base fragments represent a minimum of six individual bottles from the Hayner Whiskey Company in the assemblage (Figure 7.48). Four of the five body sherds are solarized indicating a pre-1920 manufacture date. Four of the base fragments contained suction scars indicating production between 1905 and 1920 (Lindsey 2014c; Munsey 2013:14). Two of those four base fragments were solarized amethyst. Two bases contained the “F” mark of the Owens West Virginia Bottle Company in addition to suction scars, indicating production between ca. 1908 and 1919 (Lockhart, Schriever, Lindsey, and Serr 2015:80). One of the two bases was solarized amethyst. The remaining two bases contained the numbers in diamond mark used by the Illinois Glass Company, indicating production between 1911 and 1920 (Lockhart, Lindsey, Whitten, and Serr 2005:3; Munsey 2013:14). One of the two bases was solarized amethyst.



**Figure 7.48. Left: Fragments of Hayner brand whiskey containers from 34GR177; Right: fragments of Four Roses Bourbon containers from 34GR177. Note solarization of Hayner items.**

One Hiram Walker Whiskey bottle with an Illinois Glass Company mark used from 1915-1929 is identifiable. At least six Four Roses Bourbon containers are represented by 12 bottle fragments (Figure 7.48). One of the bases was produced in a cup bottom mold, indicating production between ca. 1888 and the 1920s (Lindsey 2014c; Reigler 2013:117). Four bases contained the numbers in the diamond mark used by the Illinois Glass Company, indicating production between 1911 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). The remaining base and six body fragments contained no additional diagnostic information and it could only be determined that they were produced while the distillery was in operation between ca. 1888 and ca. 1943 (Four Roses Bourbon 2015; Reigler 2013:117).

An additional eight bottles whiskey bottles manufactured by the Charles Boldt Glass Company are present in the assemblage (Figure 7.49). Based on the presence of suction scars and the “B” marks, it can be determined that all vessels were produced between 1910 and 1919

(Lockhart, Schulz, Serr, and Lindsey 2007:3). Charles Boldt was the only company with a “B” mark licensed to produce bottles on an Owens machine and the mark can be seen on pint whiskey flasks and cylinder whiskey bottles produced within a nine year time frame, between 1910 and 1919 (*ibid.*).



**Figure 7.49. Solarized amethyst bases from 34GR177, likely for whiskey manufactured by the Charles Boldt Glass Company.**

Among the identified six beer containers at least four companies are represented. A Standard Brewing Company bottle made between 1905 and 1920 is present, as well as a Falstaff Beer bottle produced between 1905 and 1919 (Lockhart et al. 2010:50; St. Louis Convention & Visitors Commission 2011) (Figure 7.50). Three vessels of the Peter Schoenhofen Brewing Company are identifiable in the collection (Figure 7.50). Based on the post bottom mold production in addition to the start of the company, all vessels were produced between 1867 and the early 1900s (Brooks 2016; Lindsey 2014c). A Hamm’s Beer bottle fragment is present, however, no other diagnostic information could be gleaned.



**Figure 7.50 .Left: Falstaff brand beer bottle from 34GR177; Right: bottle base identified as coming from the Peter Schoenhofen Brewing Company.**

A total of 26 containers are represented in the 34GR177 assemblage which can be identified as containing an alcohol product, but the product could not be identified. It is likely most are liquor bottles. The bottle manufacturer could be identified on 14 of the specimens. Eleven of the specimens had a maker's mark of the Illinois Glass Company (Figure 7.47). Five of the bases were solarized and contained the numbers inside of diamond mark indicating they were produced between 1911 and 1920 (Lockhart 2006; Lockhart, Lindsey, Whitten, and Serr 2005:3). Five additional bases also contained the numbers inside of diamond mark indicating production between 1911 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). The remaining base was solarized and contained the "T" inside of diamond mark, indicating production between ca. 1915 and 1920 (Lockhart 2006; Lockhart, Lindsey, Whitten, and Serr 2005:3).

One bottle exhibits a mark used by the Owens-Illinois Glass Company from 1920 through 1960. The bottle contains embossing regarding the Federal Law that forbids reuse of the bottle which began in 1934. One container made by the Owens West Virginia Bottle Company was produced between 1908 and 1919 (Lockhart, Schriever, Lindsey, and Serr 2015:80) (Figure 7.51). One vessel fragment represents a container made by the United Glass Company with the embossing regarding the Federal Law that forbids reuse which dates the bottle to post 1934 (Figure 7.48).



**Figure 7.51. Left: Base of an unidentified alcohol bottle manufactured by the Illinois Glass Company between 1911-1920 (note solarization); Right: Owens West Virginia Bottle Company manufactured bottle base containing an unknown alcoholic beverage made between 1908**

Another 12 alcohol related containers are recognized among the beverage containers and fragments in the assemblage. They do not exhibit maker's marks allowing for firm association with known makers or companies producing alcoholic beverages. However, all display some information, attributes or characteristics indicative of their use for alcoholic beverages (Figure 7.52)



**Figure 7.52. Left: Post 1934 liquor bottle manufactured by the Owens-Illinois Glass Company; Right: glass bottle with a tooled, straight brandy or wine bottle finish. Likely a shoo-fly or coffin flask and probably contained a spirit or liquor.**

### Soda

A total of ten specimens are present in the collection can be attributed to branded soda beverages. Three Coca-Cola bottles are represented including two non-hobble skirt or straight sided bottles (Figure 7.53). This particular style of bottle with the Coca-Cola embossed in this particular location indicate the bottles were produced between ca. 1902 and 1915 (Coca-Cola Company 2015; Lynch 2015). The third example is from a hobble skirt type bottle indicated its manufacture after 1917 (Lockhart and Porter 2010:48).



**Figure 7.53. Right: Coca-Cola bottle fragments from 34GR177, hobble skirt design on far left, straight sided examples to the right; Right: Nehi soda bottle fragments from 34GR177.**

At least two Nehi Company bottles are represented in the assemblage (see Figure 7.53). Based on the silk stocking design, these vessels would have been produced between ca. 1925 and the mid-1950s with a date of post 1940 seeming very unlikely due to the introduction of Applied Color Labels (Lockhart 2010:395).

One Dr. Pepper bottle is represented which exhibits the embossed clock design indicating it was produced after 1926 (Kovel et al. 2015a; Market Street Media LLC 2015a).

Based on the presence of one half complete bottle, consisting of two refit pieces, and one complete base, at least two bottles containing a Nu-Icy soda are represented at 34GR177. Based on when the drink was introduced, both vessels postdate 1927 (Lee 2016). In addition one bottle of Keen Soda is present. Little information could be found regarding this particular artifact. It is known Keen Soda was marketed in Texas by at least 1926 (University of North Texas Libraries 2015).

A ceramic Hires Root Beer syrup dispenser is represented in the assemblage (Figure 7.54). While no production date range was found for this particular artifact, ceramic syrup dispensers were in wide use in the early-twentieth century.



**Figure 7.54. Left: Fragments of a ceramic Hires Root Beer Dispenser from 34GR177; Right: Illustration of intact Hires dispenser.**

### **Other Beverages**

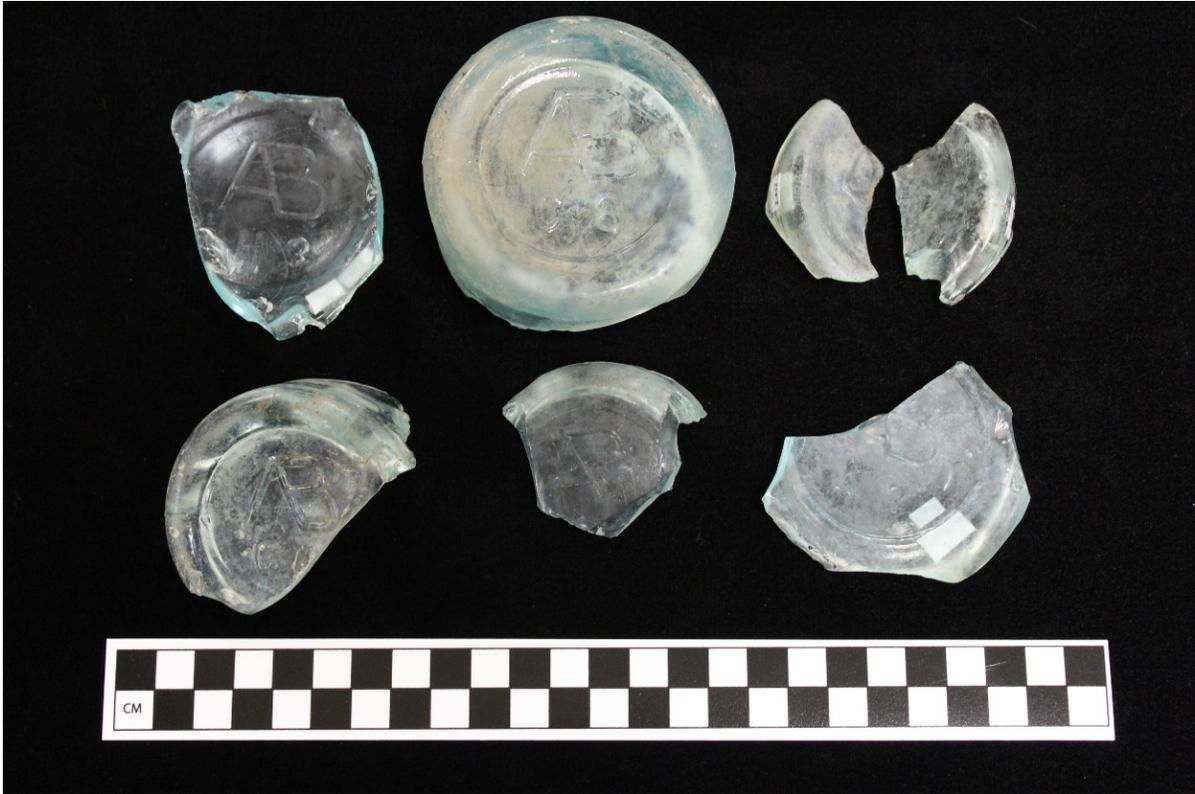
A total of 82 bottles are identifiable as beverage containers are present in the assemblage which contained beverages other than soda or alcohol, or contained products which could not be positively identified. For example a bottle maker may have manufactured similar shaped and marked bottles for both soft drinks and alcoholic drinks. In addition, local bottlers are known to have bottled a variety of soft drinks.

The remains of at least two bottles containing grape juice or grape drink were recovered. A Walker's Grape Juice container which was only produced from 1909-1911 (Cattell and McKee 2012:35) is represented in the assemblage. In addition a bottle fragment of Royal Purple grape drink is present. Royal Purple grape juice was manufactured by the Lawton Fruit Juice Company of Lawton, Michigan. The beverage was in production by early 1904 (The Wine and Spirit Bulletin 1904:27). Royal Purple bottles have been recovered from an early-twentieth century context at site 34NB68, in Noble County, Oklahoma (Langley-Ware et al 1999).

At least five containers of milk are represented in the artifact assemblage. One base from a Midwest Glass Casket Company containing milk is represented at 34GR177. Based on when the company manufactured milk bottles, this vessel was produced between 1917 and 1919 (Doug & Linda's Dairy Antique Site 2016). Based on the presence of four base fragments, at least four vessels containing milk are represented at 34GR177. Based on the presence of valve or ejection marks on each of the bases, all vessels were produced between ca. the early 1900s and the 1940s and possibly later (Lindsey 2014c). Two vessels are solarized indicating production between the early 1900s and ca. 1920 (Lindsey 2014c; Lockhart 2006).

Based on the presence of 21 base fragments, at least 20 bottles produced by the American Bottle Company are represented at 34GR177 (Figure 7.55). Based on when the company used the "A B Co" mark it was determined that two vessels, Specimens #230 from Area 1 and #237 from Area 2A were produced between 1905 and 1914 (Lockhart, Schulz, Lindsey, Serr, Whitten, and Schriever 2007:340). Because the company used the connected "AB" mark between 1906 and 1917, we can determine that the remaining vessels were produced during this period. (Lockhart, Schulz, Lindsey, Serr, Whitten, and Schriever 2007:338). The "A B Co" mark was used mainly on beer bottles and rarely on some soda bottles while the connected "AB" mark was generally used on export beer bottles (Lockhart, Schulz, Lindsey, Serr, Whitten, and Schriever 2007). Because beer was sold in both amber colored bottles and aqua colored bottles, it is impossible to determine with certainty which of these bottles in the collection contained beer and which of these bottles contained soda (Lindsey 2014d).

Based on the recovery of two complete and two nearly complete bottles, 16 complete or fragmented bases, and 10 body shards, at least 22 bottles associated with the Mangum Bottling Works are represented at 34GR177. Two of the 22 bottles are associated with the Mangum Ice Cream Works and Bottling Works at Mangum which began advertising as such after 1920. Based on when the Mangum Bottling Works began and the presence of solarization, six of the vessels were produced between 1904 and 1920 (Lockhart 2006; MS 19 May 1904). The two complete bottles were produced between ca. 1905 and ca. 1930 based on their machine-made crown bottle finish in addition to when the company was no longer in existence (Lindsey 2014b). The remaining specimens contained no additional diagnostic information but contain attributes similar to those illustrated by Fletcher (2006:35) and it can be determined that they were likely produced when between 1904 and ca. 1920 when the company began advertising and an Ice Cream and Bottle works.



**Figure 7.55. Examples of bottle bases from 34GR177 with the connected “AB” mark of the American Bottle Company used from 1906-1917.**

One bottle fragment representing the Hobart Bottling Works is present in the assemblage. The Bottling works was in business by 1902 when it begins to be mentioned in local newspapers (Hobart Weekly Chief March 29, 1902) and is depicted on the 1904 Sanborn Map for Hobart. The fragment bears similarity with the pre-1920 bottles illustrated by Fletcher (2006:26)

Based on the presence of one nearly complete bottle and 12 base fragments, at least 13 bottles produced by William Franzen & Sons at the Northern Glass Works are represented at 34GR177. Additional analysis was completed on each specimen to determine if any may have derived from the same vessel. William Franzen replaced the maker’s mark of the logo for the Northern Glass Works with that of his own after he became the owner of the company in 1900 (Toulouse 1971:536). The mark or partial mark, “WF &S/ MIL” can be seen on all William Franzen & Sons’ specimens identified at 34GR177. Based on this mark, all bottles were produced between 1900 and 1926 (*ibid.*). Ten of the vessels contain post bottom mold seams, this indicates the bottles were produced in the early 1900s (Lindsey 2014c). Because beer was sold in both amber colored bottles and aqua colored bottles, it is impossible to determine with certainty which of these bottles in the collection contained beer and which of these bottles contained soda (Lindsey 2014d).

At least 18 nonalcoholic beverage bottles represented in the collection are not attributable to known manufacturers or beverage companies. Most are bottle bases which based on the shape and thickness of the base are attributed to beverage bottles. One of the more interesting items among these 18 is an amber glass bottle neck with a metal lid and porcelain top with embossing that reads “REUSE PROHIBITED PAT FEB 17 14.” (Figure 7.56). The lid was created to prevent the fraudulent refilling of bottles and was used on whiskey, beverages, or other liquids (Braun 1914).



**Figure 7.56. Unidentified beverage bottle top with metal and porcelain Braun type cap.**

Beverages are well represented in the 34GR177 assemblage with at least 145 individual containers identifiable. Identifiable alcoholic beverages account for 36.5 percent of the containers, most of which are liquor bottles. Most have documented production ranges during the first two decades of the twentieth century. The Hayner Whiskey, Four Roses Bourbon and Charles Boldt manufactured liquor have a manufacturing range spanning the decade from 1910-1920. This is interesting because liquor was legal in Oklahoma Territory until Statehood in 1907 when prohibition was instituted. Since these items postdate 1907 they may represent illegally obtained items. Alternatively, they could represent mail order liquor which could be obtained from out of state for personal use. In fact the Hayner Whiskey Company specialized in mail order whiskey. At least two of the recovered liquor bottles have markings that postdate 1934. Identified beer containers are only represented by six items. However, one should keep in mind that some of the unidentified beverage bottles were made by companies producing both beer and soft drinks bottles.

Other beverages including soda, milk, grape juice, root beer and other unidentified soft drinks comprise 56.5 percent of the beverage group. Coca-cola is represented by both pre 1915 straight sided bottles as well as a post 1917 hobble skirt design. Nehi, Keen and Nu-Icy brands are also present which postdate 1920. However, at least 20 pre 1920 bottles from the Mangum Bottling Works are present which would have contained soda or other soft drinks. A pre 1920 bottle from the Hobart Bottling works is also present. At least 20 bottles produced from 1906-1917 from the American Bottling company are represented which may have contained either soft drinks or beer. In addition at least 13 bottles produced by the William Franzen & Sons Company from 1900-1926 are represented which also could have contained either soft drinks or beer.

### **Architectural**

Some artifacts in the assemblage relate to architecture, including various parts of structures. Nothing major was recovered, but the few items in this category lend some information. A total of 108 individual items can be attributed to the 135 recovered artifacts in this group.

There is some variety in the 30 pieces of flat glass that are in the assemblage. Several pieces of plain clear glass is present. Little information can be gleaned from them other than there is a range of thicknesses indicating that several different window panes are represented or that the panes that are represented displayed variations in thickness. This could indicate production prior to 1920 when the manufacturing process was improved to produce panes of consistent thickness. Of interest among the pane glass are several fragments of decorative glass panes. Etched designs include a mountain motif, starburst designs, sunburst designs, and an unknown design the analysis refers to as “modern tribal” and a pressed glass starburst design. While difficult to date, these decorative panes attest to ornamental motifs used in the structures from which they were installed.

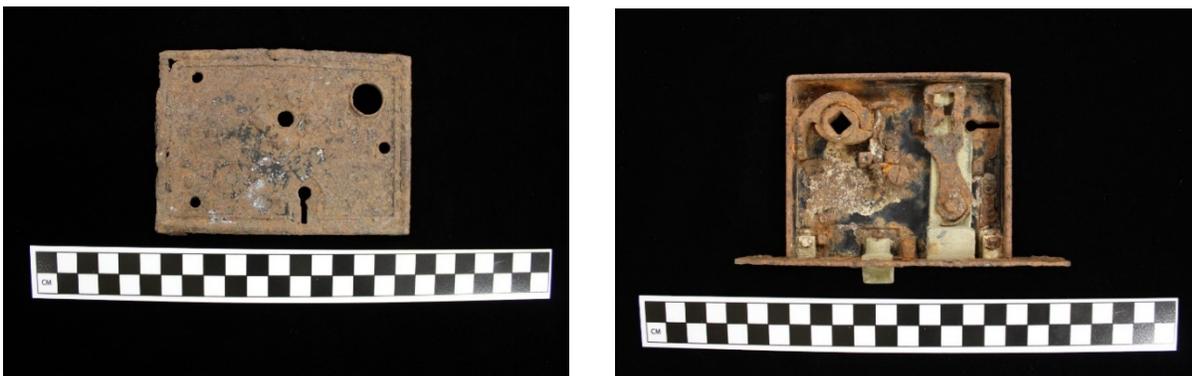
At least 15 individual bricks are identifiable in the assemblage. Both standard and fire bricks were recovered. At least two from the Denton Press Brick Company of Denton, Texas. Based on their marks, both were produced from 1901-1912 (Caraway and Cupit 2009:49). A brick made by the Fulton Fire Brick Company is present, likely made between 1912 and 1927. At least four bricks made by the Hennessey Brick plant in Hennessey, Oklahoma exhibit the Hennessey O. T. mark indicating manufacture prior to Oklahoma becoming a State 1907 (Robison 1980:98). Four bricks made by the Mangum Brick Company are represented in the collection. They would have been manufactured after 1903 when the company began production (Robison 1980:114). At least two bricks made by the W.S. Dickey Clay Manufacturing Company or Kansas City are in the assemblage. From the information gathered on the company, the bricks represented here were manufactured in 1917 or later (Mosier 2007).

Four ceramic door knobs are represented in the assemblage. Three are black glazed and one is white glazed. Among these later items is an “Empire 6 Lever” pad lock manufactured by the Miller Lock Company likely produced after 1906 (Figure 7.57). Other door hardware

present include four door hinges, two of which exhibit decorative designs, six door escutcheons, one door knob stem, and eight items relating to door locks (Figure 7.57). Most all the remaining items cannot be ascribed a date range, however, are similar to hardware items illustrated in early-twentieth century catalogs including wall mounted hooks, and four pieces of pipe fittings.



**Figure 7.57. Front and back plate to “Empire 6 Lever” pad lock manufactured by the Miller Lock Company recovered from 34GR177.**



**Figure 7.58. Lock sets recovered from 34GR177.**

A total of 23 nails are present in the assemblage, of which 22 are wire nails. The six bolts recovered provided little diagnostic information.

The few remaining pieces of architectural items provide only minimal information, such as a fragment of wood siding, glazed tile and composition shingles. One item of interest in the assemblage is a cast iron housing for an awning locking mechanism manufactured by Anchor Industries. The housing exhibits a patent date of December 9, 1902.

### **Dwelling/Lodging Group**

A total of 130 artifacts representing at least 81 separate objects are classed in the dwelling and lodging group. Twenty of the objects related to maintenance activities associated with the

upkeep of a dwelling while the other 61 items relate to furnishings associated with a dwelling or lodging activity.

A total of ten (50 percent) of the maintenance related items are glass containers for furniture polish. Based on the presence of seven base fragments, at least seven bottles containing O-Cedar furniture polish are represented at 34GR177 (Figure 7.59). Based on the solarization and when the O-Cedar products were in use, two bottles, were produced between 1908 and ca. 1920 (Boyle 1916:242; Lockhart 2006). The remaining vessels were likely produced between 1908 and the late 1940s or early 1950s. Because the triangle logo used after 1951 is not present on the specimens found in the collection, all specimens from the collection were manufactured prior to 1951. Three base fragments representing at least three bottles containing Liquid Veneer are identified in the assemblage (see Figure 7.59). Based on the solarization and the presence of a suction scar, one bottle was produced between 1905 and ca. 1920 (Lindsey 2014c; Lockhart 2006). The remaining vessels also contain suction scars indicating production post 1905 (Lindsey 2014c).



**Figure 7.59. Left: Examples of O’Cedar bottle fragments from 34GR177; Right: Top; examples of Liquid Veneer bottle fragments from 34GR177; Bottom; examples of Clorox bottle fragments from 34GR177.**

Several items relating to laundry cleaning are represented in the assemblage. At least one bottle of Mrs. Stewart’s Bluing is represented in the assemblage. Based the machine-made, patent, extract, or flat bottle finish, this vessel was produced between 1907 and 1962 (Lindsey 2014b; Lockhart et al. 2010:50). At least two bottles of Putnam’s Liquid Bluing are represented, one which was produced post 1927. One other bottle of an unidentified bluing brand is present in the assemblage. Based on the numbers in diamond mark present on the base, the vessel was produced between 1911 and 1929 (Lockhart, Lindsey, Whitten, and Serr

2005:3). At least one bottle of Carbona Cleaning Fluid is represented at 34GR177. Based on when the company first sold the cleaning fluid and the production in a cup bottom mold, the vessel was produced between 1908 and ca. the 1920s (Delta Carbona, L.P. 2015; Lindsey 2014c). A metal clothes wringer is also present in the assemblage.

At least two vessels containing Clorox are represented at 34GR177 (see Figure 7.59). Based on their glass container, all vessels were produced between 1918 and 1960. Clorox was introduced in glass bottles in 1918, having previously been sold in 5-gallon stoneware crocks (The Clorox Company 2016).

The remaining maintenance item is a complete bottle of Fly-Tox. The presence of the Owens Bottle Company date code on the base of the bottle provides a year of production. The box “O” mark of the company in between two “8”s indicates production at Owens plant No. 8 in Glassboro, New Jersey in 1928 (Lockhart et al. 2010:60).

A ceramic bird cage feeder is also present and may considered a dwelling maintenance items since it would have been inside of a dwelling. The items displays embossing indicating a patent date of October 27, 1875.

## **Furnishings**

A total of 61 individual items relating to furnishings of dwellings are present in the assemblage. Objects or products covered under “Furnishings” includes items that probably functioned as home furnishings such as decorative accessories, chamber pots, flower pots, storage trunk parts, as well as items pertaining to home lighting such as lamp parts and light bulbs.

At least five separate oil lamps are represented by glass chimney fragments and brass burner parts, one of which was manufactured by the Scoville Manufacturing Company. In addition electric lighting is represented by fragments of at least 12 individual light bulbs. At least nine Edison style screw in bulb bases are present along with one bayonet style base. One of the more informative lighting related artifacts is a part of an Eveready vest pocket flashlight with a January, 10, 1899 Patent date (Figure 7.60).

At least eight ceramic chamber pots appear to be represented by a total of nine lug or bail fragments (Figure 7.61). It was determined that these lugs may have belonged to chamber pots after comparing the ceramic lugs from the collection with complete chamber pots of the same style. They would have consisted of a large mouthed opening that was slightly outward flaring at the rim. The body was globular-shaped and tapered inward slightly towards the top of the pot. The base was typically flat and rounded. This form was usually accompanied by a domed lid and a wire bail handle. Both sides of the pot below the rim had a protruding lug or bail hole where the wire handle would attach itself. At least five appear to represent Bristol glazed pots, two are of whiteware and two are of a blue molded stone ware.



**Figure 7.60.** Base of an Eveready vest pocket flashlight from 34GR177 with a Patent date of January 10, 1899.



**Figure 7.61.** Examples of ceramic chamber pot lug sherds from 34GR177.

Several decorative items are represented including a Carnival glass plate, a press molded glass Rose Bowl which is solarized, and a Jasperware plaque (Figure 7.62). This latter item was advertised as a free gift for subscribing to *Craftsman Magazine* in the early-twentieth century.



**Figure 7.62. Jasperware wall plaque from 34GR177 obtained via a subscription to *Craftsman Magazine*.**

At least four separate clocks are present in the collection including three wind up alarm clocks and one mantle clock. Of the clocks identified, only one clock part exhibits a company mark indicating that this specimen was manufactured by the Waterbury Clock Company. The clock likely dates prior to 1922, before the Waterbury Clock Company was renamed Ingersoll-Waterbury Company (Market Street Media 2016a).

Among the decorative furnishings are at least 13 flower pots among 26 fragments (Figure 7.63). Most all display decorative elements in relief such as geometric shapes and fluted patterns. Similar pots are illustrated in At least one hanging pot is present. Of the 13 flower pots reported, five display a White fluted pattern and may be a product of the Western Stoneware Company. If the pots were confirmed as a Western Stoneware Company product, a post April, 1906 date can be assigned for their manufacture, as this date represents the month and year the company was established (Martin and Cooper 1983:15). One specimen, is a product of the Macomb Pottery Company who were in business between 1880 and 1906 (Lehner 1988:274; Martin and Cooper 1983:159). Based on the Macomb Pottery Company history, this pot was most likely produced between 1880 and 1906.



**Figure 7.63. Examples of decorative clay flower pots recovered. Note item at bottom center with mark of the Macomb Pottery Company produced between 1880 and 1906.**

In addition to flower pots above, at least three jardinières are identified in the assemblage. These decorative pots are glazed majolica earthenware. The wares are similar to those advertised in late-nineteenth and early-twentieth century catalogs (Montgomery Ward 1895:519).

A few pieces of metal hardware derived from storage trunks or traveling chests are present. Pieces derived from at least two separate trunks can be discerned.

One of the more interesting findings among the 20 maintenance related items in the dwelling and lodging group is that half the items are glass containers for furniture polish. This would indicate that the source of these items either had a lot of furniture to maintain or that it was done often, or even both. Both the Liquid Veneer and the O’Cedar brand bottles began production in 1908 and 1904 respectively. There is also evidence in the assemblage for laundry type activities in the way of four containers of bluing and a metal clothes ringer. With the exception of one of the Putnam’s bluing containers which postdates 1927, all the other items have beginning manufacture dates during the first two decades of the twentieth century.

One of the more intriguing finds among the furnishings is the base of an early model Eveready pocket flashlight exhibiting a Patent date from 1899. The significant number of early-twentieth century of decorative flower pots represented in the assemblage is interesting. The fact that they all have decorative elements rather than being simply plain flower pots suggests the source of these items was an activity focused on the use of potted plants as a decorative component of a dwelling as opposed to simply growing plants for which the cheaper plain clay pots would likely be used.

## Writing/Record Keeping

The 19 individual items in the group are associated with writing and record keeping. The group is comprised mostly of glass ink containers (n=15/79 percent). At least one cobalt blue quart sized bottle of S. S. Stafford's ink is represented in the assemblage. These items were produced over much of the first half of the twentieth century. A bottle from the Bankers Ink Company of Kansas City, Missouri is also present in the assemblage. A mark on this bottle of the Illinois Glass Company indicates its production between 1915-1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). At least three Carter's Ink bottles are represented at 34GR177. Based on the machine-made, process of manufacture and the solarization, the complete bottle was produced between ca. 1905 to ca. 1920 (Lockhart 2006; Lockhart et al. 2010:50). One remaining base fragment contains a valve or ejection mark, indicating production from the early 1900s through ca. the 1940s, possibly later (Lindsey 2014c). The final base fragment contains a suction scar and is solarized, indicating production between ca. 1905 and ca. 1920 (Lindsey 2014c; Lockhart 2006). Based on the presence of three complete bottles, one nearly complete bottle, and five base fragments, at least eight Sanford Ink bottles are represented in the assemblage. Based on the machine-made process of manufacture, four vessels were produced post ca. 1905 (Lindsey 2014c). Two of these vessels were aqua, possibly indicating production prior to the 1920s as aqua colored bottles were very common prior to this time (Lindsey 2014d). One vessel contained a valve or ejection mark indicating production between the early 1900s and ca. the 1940s, possibly later (Lindsey 2014c). Another specimen was possibly produced in a cup bottom mold indicating production between the 1850s and 1920s, likely after the 1880s (Lindsey 2014c). The final item is solarized amethyst, indicating production between ca. the late 1880s and ca. 1920 (Lockhart 2006).

Other items in the group include the remains of at least two pencils represented by the metal ferrules. These items prove difficult to precisely date as they have been widely available throughout the twentieth century. The most intriguing find among this group is the Jonas Ford notary stamp (Figure 7.64). Jonas Lee Ford was proprietor of the roller rink at Granite Sulphur Springs from 1908-1911 (GE August 6, 1908; GE March 31, 1911).



**Figure 7.64. Jonas Ford notary stamp recovered from 34GR177.**

## Energy and Power Group

The power and energy group is divided into Direct Current, Alternating Current and Fossil fuels. A total of 146 individual items were identified by the analysis among the 183 artifacts in this category.

Dry cell batteries and related items comprise a significant portion of the assemblage (n=42) related to DC power. A minimum of 35 batteries are represented in the collection. Most are represented by carbon/graphite rods and measurements indicate that most were 5.5 and 6.5 inches in length (Figure 7.65, top). Most are likely Number 6 sized dry cell batteries. Among the batteries are eight which are wrapped together with canvas indicating they formed a battery pack. Another group of five were packed together in cardboard and may have been part of battery cell. A porcelain battery bushing as well as mica washers are part of the battery related assemblage.

In addition to the dry cell batteries, at least two glass containers for Edison Battery Oil are represented in the assemblage (Figure 7.65 bottom). They would have been manufactured after 1915 when the company moved to Bloomfield, New Jersey.

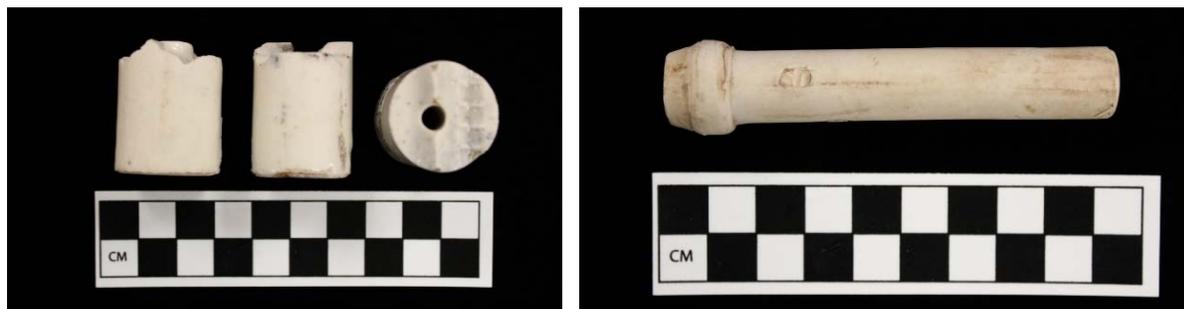


**Figure 7.65. Top: Examples of Carbon/graphite battery rods recovered from 34GR177; Bottom: fragment of a post 1915 Edison Battery oil bottles. All items from 34GR177.**

Several items were recovered from 34GR177 which likely relate to alternating current (AC) power. At least 52 individual items were identified by the analysis. Most are ceramic and glass insulators. The glass insulators (n=11) are of the types commonly found on utility poles. Most are made by the Hemingray Company. Many are fragments from which more detailed information such as style/model numbers are not present. However, one has a number 53 which indicated manufacture from 1938 through the 1950's. Another exhibits a number 16 indicating a telecommunications variant manufactured from the 1890's through the 1920's (Willis 2015).

Most of the recovered ceramic insulators (n=26) are parts of the knob and tube systems commonly used in the early-twentieth century for running wire on the interior of structures. Many exhibit maker's marks which aid in dating production ranges. Among the five ceramic cleats are three from the Electrical Porcelain Company and two from the General Porcelain Company. The production range of the three Electrical Porcelain Company cleat halves reported in the collection is between 1903 and 1911. The year 1903 represents when the company was formed and the year 1911 marks the year that the company was taken over by the General Porcelain Company (Tod 1977:79). The two cleat halves manufactured by R. Thomas & Sons were produced between 1892 and 1957 (Tod 1977:96).

A total of 12 split knob insulators are present in the assemblage by the base half of the split knob. One top half is present (Figure 7.66). While no manufacturer marks are indicated on the base halves, the knob is embossed at the top of its head and reads, "WEDGE/ C.P. CO.PATD." The mark is from the Cook Pottery Company of Trenton, New Jersey, established in 1897 (Tod 1977:77). This specific knob from Area 2 probably dates between 1909 to ca. 1931. On April 27, 1909, patent 919,386 was issued for this specific nail knob type (Gish 2014; Schaub 1909). Four solid knob insulators are present. One exhibits a "T" mark which may indicate its manufacture by the R. Thomas & Sons Company of East Liverpool, Ohio (Tod 1977:113-114). R. Thomas & Sons who was known for their porcelain insulators. R. Thomas & Sons produced porcelain insulators from 1884 until at least 1957 (Tod 1977:96). Five individual ceramic tubes are identified in the assemblage. One exhibits a mark used by the US Electric Company between 1906 and 1910. Another exhibits a mark used by the National electric Porcelain Company between 1911 and 1927 (Tod 1977:89).



**Figure 7.66. Examples of ceramic cleats and a tube recovered from 34GR177.**

Several porcelain electric switch and fixture items are present in the collection. Among four rosettes that likely held switches for lighting are two with a mark used by the Bryant Electric Company and were likely produced between 1888 and 1927. Another lighting fixture exhibits a Patent number issued in 1908. A ceramic housing for a rotary switch manufactured by the Perkins Electrical Switch Manufacturing Company exhibits a Patent dates of June 8, 1909.

A total of eleven ceramic plug fuses were recovered from 34GR177 (Figure 7.67). Most all are labeled and retain patent dates. The earliest date any could have been manufactured is 1909 and most exhibit dates into the nineteen teens.

Evidence for the use of fossil fuels is manifest at 34GR177 mostly the recovery of 35 pieces of coal. In addition, at least four metal containers which likely held liquid fuel are represented.



**Figure 7.67. Examples of ceramic and metal fuse plugs recovered from 34GR177.**

### **Transportation**

A total of 58 individual items related to transportation are represented among 64 transportation related artifacts. Both automobile and horse powered transportation are represented. The presence of horses is evidenced by the recovery of at least 26 horseshoes. At least one buckle which was part of horse tack was also recovered. Two terrets from horse harnesses are present as are two pieces of wagon hardware.

A total of 23 items associated with automobile transportation are identifiable among the 58 individual transportation related items represented in the 34GR177 assemblage. At least ten of the items are identifiable as deriving from Ford Model T automobiles. They include three engine parts, three body parts and four brake shoes. One of the engine parts is a Holley Type G carbonator exhibiting a December 22, 1914 Patent date. This item would post date 1914. Among the remaining parts is a fragment of a leaf spring which may post date 1916. The remaining parts can only be ascribed to general 1908-1929 manufacturing range for Model T's.

At least three Schrader tire valves, often used on Model T's are present in the assemblage. They all exhibit Patent dates indicating beginning manufacture dates of 1916, 1908 and 1910.

Another 10 miscellaneous car parts are present in the assemblage including two spark plugs, a Ford engine valve (possibly Model T) as well as a piston fragment possibly deriving from a Model T engine.

An Oklahoma vehicle license plate from 1928 was also recovered from 34GR177. This item obviously is from 1928 (Figure 7.68).



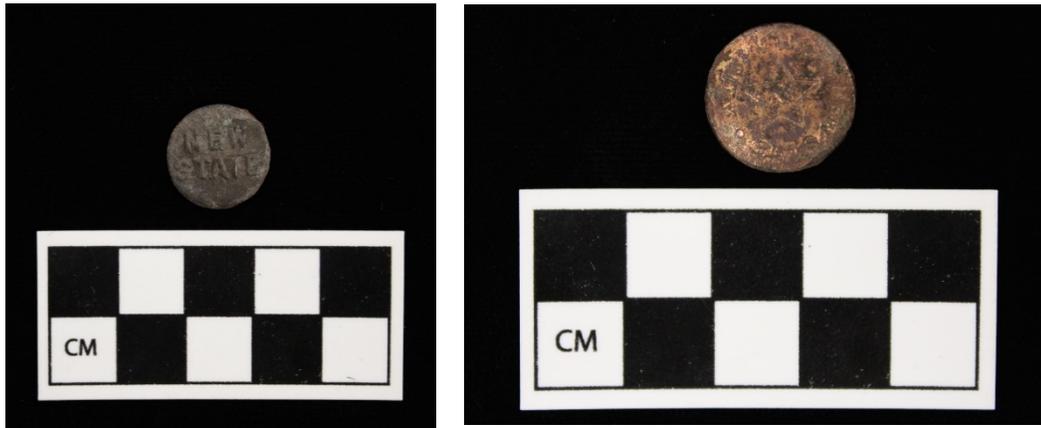
**Figure 7.68. 1928 vehicle license plate from 34GR177.**

### **Personal Group**

Among the personal use group of artifacts, which entails items relating to person use such as clothing, footwear, toys and tobacco, at total of 138 individual items are present in the assemblage. Approximately a third ( $n=46/33.3$  percent) of the items relate to clothing and is comprised mostly of buttons ( $n=25$ ). Ceramic, shell, metal and plastic buttons were recovered. Most buttons are metal, with five of shell, one of ceramic and one of plastic.

Among the metal buttons are two buttons derived from clothing made by the New State Shirt and Overall Manufacturing Company in Oklahoma City (Figure 7.69). The company operated from 1907 to around 1930. Specimen #6 from Area 2B is very similar to the stud button described by Wallis (2000 IIB:102). Because this button was probably one of the earlier styles manufactured by the New State Shirt and Overall Manufacturing Company, the specimen probably dates closer to 1907, around the time when the company began, rather than ca. 1930 when the company was no longer in business (Thuesen 1930:148; Wallis 2000 IIB:109).

Specimen #5 from Area 1 dates anywhere between 1907 and ca. 1930, the period of time when the company was opened for business



**Figure 7.69. New State buttons recovered from 34GR177**

Other metal buttons exhibit brand names. A button is present from a “Union-All” coverall suit manufactured by Lee as early as 1913 (VF Corporation 2016). Four buttons are identifiable as “Cabro Brand”. These buttons were probably in production by at least 1916, as there is an advertisement in an Oklahoma newspaper from 1916 promoting Cabro brand apparel (Herald Sentinel [HS] 17 August 1916). Two metal buttons exhibit “Round House” inscribing. These buttons likely belonged to a pair of Round House brand overalls, a company that has been in business since 1903 (Round House 2015).

A total of 48 items related to footwear are represented in the assemblage. Many of these items (n=26) are small eyelets, hooks and snaps that provide little information beyond their occurrence. Eleven of the items are portions of heels and soles most of which are rubber heels providing no real diagnostic information. A total of nine individual glass containers of shoe cleaners and polish are represented in the assemblage. Based on the presence of two base fragments, at least two vessels containing Barton’s Dyanshine are represented in the 34GR177 assemblage. Based on the presence of the “A” inside of “H” maker’s mark, both vessels were produced between 1920 and ca. 1964 when this mark was in use by the company (Toulouse 1971:239; Whitten 2015d). At least six bottles containing a Whittemore Shoe Polish are represented in the collection. Based on the “WHITTEMORE” embossing on each of the specimens, all vessels were produced between 1870 and 1930 (Whitten 2015h). Three of the complete bottles and the half complete bottle are machine-made, indicating that their manufacture can be narrowed to between ca. 1905 and 1930 (Lockhart et al. 2010:50; Whitten 2015h).

At least 12 individual children’s toys are represented in the assemblage. Two clay marbles were recovered which are unglazed. While difficult to date exactly, glass marble production did not begin in earnest until after 1910 and completely replaced clay marble production by 1920.

At least four ceramic dolls are represented among the nine fragments collected doll fragments (Figure 7.70). At least one represents a German made doll possibly from the Kestner Company. While no marks allowing for a precise date range for manufacture of the dolls, porcelain or bisque dolls were popular in the late-nineteenth and early-twentieth century and considered as play items for young girls. Other items in the toy assemblage likely associated with girls include a small porcelain bathtub, likely for a doll house, a miniature ceramic pitcher, a small cast iron skillet, and portions of at least two small metal toy stoves (Figure 7.71).



**Figure 7.70. Examples of porcelain doll parts recovered from 34GR177.**



**Figure 7.71. Toy stove parts recovered from 34GR177.**

Only one toy which may be considered as representative of play activities of boys is a metal play revolver. A small alligator figurine of glass was also recovered which is likely a toy as well.

Several items relating to tobacco use are represented in the personal group (n=19). Most of the items are remains of snuff bottles (n=14) comprising 73.6 percent of the tobacco related items. Based on the short flare tooled process of manufacture, two of the vessels were produced between 1885 and the early twentieth century (Lindsey 2014b). Based on the machine-made, beaded finishes present on five vessels, a production range between the early twentieth century and at least the 1920s can be assigned (Lindsey 2014b). The short flare finishes were replaced by the beaded finishes on snuff bottles in the early twentieth century (Lindsey 2014b). The remaining vessels contained suction scars indicating a post ca. 1905 production (Lindsey 2014c).

Other tobacco related items include a cigar jar, which based on the solarization exhibited by the jar, it was produced between ca. the late 1880s and ca. 1920 (Lockhart 2006). At least three tobacco tins are present in the assemblage as is one ceramic or bone pipe stem.

Other personal items include a metal body brace plate which exhibits a patent date of August 8, 1893. A glass lens from a pair of goggles is also present. The lens compares well with goggles available in the early-twentieth century and widely used by automobile and motorcycle drivers in the early days of motorized transportation.

### **Entertainment**

A small number of the recovered artifacts are associated with entertainment. At least three harmonicas are represented by reed plates and two reeds from a harmonium type of instrument are present in the assemblage (Figure 7.72, left). It is difficult to apply a precise date range from these items as they display no marks. A metal piece of a Kodak Camera tripod from circa 1903 was also recovered (Figure 7.72, right).



**Figure 7.72. Left: Harmonium reeds recovered from 34GR177; Right: Kodak Camera tripod mounting bracket recovered from 34GR177.**

While the only item among the entertainment related specimens proving any sort of dating information is the Kodak camera tripod manufacture as early as 1903, the harmonicas and the harmonium reeds provide evidence of musical activities associated with the sources of the items.

### **Firearms**

Items evidencing the use of firearms is present in the assemblage. While firearms may be associated with hunting and personal protection, they may also attest to an entertainment activity such as target shooting. At least 17 individual items relating to firearms were recovered. Most (n=15) are cartridge casings representing a variety of calibers. Calibers identified include .22, .32, .38, .41, and .45 along with 12 and 16 gauge shotguns. The company stamps on the cartridges indicate most all had production ranges spanning the late-nineteenth and early-twentieth century. The 12 gauge Peters Cartridge company base contains a mark used from 1910-1927 and the .25 caliber Peters cartridge was produced from 1908-1934. Only one cartridge, a .22 long made by the Precision Made Cartridge Company postdates the early-twentieth century being made after 1983.

### **Promotional Group**

While this group of artifacts is small (n=9) there are some significant items in the group which provide narrow ranges of dates. One item is a fragment of a ceramic calendar plate from 1908. Two items in this group related to early businesses established in Granite (Figure 7.73). A small brick, likely a promotional sample from the Granite Brick Company was recovered (see Figure 7.73). The Granite Brick Company only operated for a short period in 1901. A five cent token from the City Bakery in Granite was also recovered (Figure 7.73). The City Bakery operated from January 1902 until February of 1904 when the name was changed.

A printing plate with double line embossing of “*Westrola*/NATURAL TONED” with a cursive line or scroll extending off of the “*a*” under the word “*Westrola*.” The specimen probably was a stamp plate used for advertisements of the Westrola phonograph by the Wesley Company. The plate also has three small holes, no larger than 1mm in diameter, which suggests that the plate was once secured to a larger object, possibly a stamp block, by way of nails or rivets. A beginning date of 1920 can be applied to Specimen #1 in Area 2C, as this was the year the company began producing instruments (TMW 15 June 1920:138, 15 June 1920:147).

This small grouping of promotional artifacts are very informative. The 1908 calendar plate provides a firm early date. The Granite Brick Company sample dates to 1901 and relates to promoting the short lived brick company. The Granite City Bakery token also relates to early business in Granite since the bakery was only in operation as City bakery from 1902-1904.

Other items in this group are glass measuring cups which were offered as promotional items given away along with purchases of products from the companies providing them. Based on the presence of seven base fragments, at least four Layton’s vessels, including two measuring cups and two drinking tumblers, are represented at 34GR177. Based on the establishment of

the company, in addition to its sale in 1920, all of the vessels were produced between ca. 1901 and ca. 1920 (DTW 16 October 1920:13). Furthermore, the free gift of a measuring cup at the baking classes begins around ca. 1913 indicating the measuring cups could possibly postdate this time (*ibid.*).



**Figure 7.73. Top Left: Fragment of a 1908 calendar plate; Top Right: “Westrola Natural Tones” printing plate; Bottom Left; Circa 1901 small sample brick from the Granite Brick Company; Bottom Right: Circa 1902-04 five cent token from the City Bakery in Granite, Oklahoma. All Items from 34GR177**

At least one measuring cup from the Kellogg’s Company is represented in the assemblage. Based on the introduction of the measuring cup as a cereal premium and when the offer ended, the cup was produced between ca. 1930 and 1937 (Access Intelligence 2015).

While four Layton associated vessels were available at least after 1913 if not before, the one Kellogg’s items postdates 1930.

### **Tools**

Among the tools identified in the assemblage are five tools related to outdoor work such as the maintaining of grounds. These include two hoes, a metal tine rake and an axe. A chisel, flat file, pliers, metal punch and a wagon axle wrench represent hand tools related building and

machinery maintenance. Other than their presence in the assemblage and the similarity to tools available in the early-twentieth century, little diagnostic or datable information is gleaned from the items.

Two glass containers of machine oil are represented in the assemblage. One is a Singer Sewing Machine oil container with a mark used by the Illinois Glass Company on the base, indicating it was produced between 1911 and 1929 (Lockhart, Lindsey, Whitten, and Serr 2005:3). Another identifiable as containing Boye Sewing Machine Oil. Based on the company's establishment and solarization, the vessel was produced between 1906 and ca. 1920 (Lockhart 2006; Simplicity Creative Group 2013).

## Chapter 8 Conclusions

The archival review for the locations of 34GR177 and 34GR114 (Granite Sulphur Springs), revealed that both locations occur on two 160 acre land patents granted to W. W. Marsh in 1900 and 1904. It is likely that the Marsh family began improvements as early as 1895-96 which would have qualified them to file a 160 acre claim on parcels settled under the Texas veterans land grants allowed for by the homesteading bill authored by Jeremiah Cockrell of Texas and approved by the House and Senate in 1897 (Heisch 2009).

The northern portion of the total 320 acres which contains the location of 34GR177, received a Patent in 1904. Therefore, it is likely that the Marshes had constructed improvements somewhere in the N1/2 of the NE ¼ of Section 23 by that time. It remains unknown where the first Marsh homestead was located, but it was likely located on one of the 160 acre parcels for which they received patents. The earliest map for the area is a 1932 Soil Conservation Map which shows a farmstead near the base of the mountain at the west end of the parcel (see Figure 5.1). This is likely the location of the Marsh farmstead. Site 34GR177 is at the eastern boundary of the parcel. There is also mention of the Marsh farm located “across the stock pasture northwest of the hotel” being rented to W. J. Mitchell family in an article about the Springs (Gunning 1972:141). This documentation seems to establish that a farmstead was present on the Marsh parcel on which 34GR177 occurs since circa 1900.

W.W. Marsh sold a 40 acre parcel containing Granite Sulphur Springs in 1908. After his death in 1908 the 160 acre parcel containing 34GR177 as well as the remaining 120 acres of the south parcel minus the 40 acres sold containing Granite Sulphur Springs was transferred to his wife, Kitsey Marsh. The dump site recorded as 34GR177 occurs in the northeastern corner of the parcel along the eroded slope near the head of an eastward draining arroyo that is eroding westward. The location provided a dumping area well away from Granite Sulphur Springs as well the farmstead at the west side of the property. Both locations are about a half a mile away from 34GR177. The eroding slope of the arroyo likely provided a tempting spot to place materials which may stem the erosion of the slope. The fact that both the GR177 and the Granite Sulphur Springs locations were on property owned by W. W. Marsh from 1900-1906 provides a tie to both locations. It is also documented by the archival review that Mr. Marsh opened and promoted the Sulphur Springs to the public soon after the mineral water was discovered in a well in November of 1900. Picnics and gatherings as well as visits by health seekers soon followed.

It is obvious from the results of the analysis that dumping continued at this location well past the 1906 land sale of the parcel containing Granite Sulphur Springs by Marsh to J. Adair. Therefore, Kitsey Marsh must have allowed continued dumping at the GR177 location. Likely as an effort to stem the erosion on the arroyo slope, and the fact that the location was well away

from living areas, and easily accessible from the section line road. However, it cannot be discounted that the Marsh's, or tenants renting their farm, may have begun dumping at the location in the late-nineteenth century. Since it is likely the Marsh family were actively improving the parcels as early as 1893-1896, some items could be associated with that initial settlement activity. However, it would be difficult to glean any of these items out as separate from the remainder of the assemblage since it appears that dumping began at the location soon after Granite Sulphur Springs began to operate after 1900.

There is little evidence in the 34GR177 assemblage for items that ceased production prior to 1900. In fact the ceramic crock from the Galesburg Pottery Company which ceased production in 1897 is the only item in the assemblage which is known to predate 1900. This would seem to indicate that 19<sup>th</sup> century disposal, which may be linked to activities such as the occupation of the line camps and the numerous cattle drives occurring nearby through the late-nineteenth century on the Great Western Trail is not present on the site.

Using the results of the analysis, a review of the functional categories is provided in the discussion below to address the expectations postulated by the research questions and assumptions in Chapter 6 regarding any association with the 34GR177 assemblage and documented activities at Granite Sulphur Springs. The date ranges of manufacture of the vast majority of the recovered identifiable items in all functional categories span the time frame when Granite Sulphur Springs was at its most active (1900-1920). With the exception of a few items which postdate this time frame, most all functional categories contain a significant percentage of items manufactured over the time span of 1900-1920.

In considering the two nonfunctional categories in the analysis including bottle finishes and unclassified items. Some general information regarding the manufacturing process employed in this production can be gleaned from these items as well as provided some supplementary information the items which were identifiable as to a functional category.

The sample of 1,185 bottle finishes from 34GR177 contains a variety of finishes consistent the diversity of types of finishes being produced during the early-twentieth century. Finishes often associated with medicinal and extract products comprise about 44 percent of the finishes in the group. The percentage of finishes that are identifiable as tooled (35 percent) and machine finished (60 percent) also seems to reflect the transition from mold produced to machine produced bottles and jars that took place in the first two decades of the twentieth century. Not only does the analysis of the bottle finishes indicates the assemblage is consistent with the variety of finishes being produced in the early years of the twentieth century, the transition from tooled finishes to completely machine made and finished bottles that was occurring at the time is reflected as well. Further the analysis indicates that finishes usually associated with medicinal uses and products comprise a significant percentage of the assemblage.

This finding supports the assumption proposed in Research Question 1 that manufactured items relating to Granite Sulphur Springs should span the date range 1900-1920. The bottle finish group analysis further supports the notion proposed in Question 2 regarding the presence of medically related items.

The Unclassified Group contains a total of 1002 items from which 749 individual objects are represented. Glass items comprise the bulk of the group (n=625) comprising 83.4 percent of the individual objects identified in the group. Some reveal maker's marks and information regarding manufacturing processes can be gleaned from others.

Among the unclassified group, eight different companies have been identified accounting for 35 individual glass items. These items account for 5.6 percent of the unclassified glass items group. The identified companies include the J.E McBrady Company (n=2), J.R. Watkins Medical Company (n=6), United Drug Company (n=17), Rawleigh's (n=3), Penslar Drug Store (n=3), H.C. Whitmer Company (n=1) and the Kellogg's Company (n=3). While the product or potential function of the objects could not be positively identified, many of the companies were known for producing medical related products.

A total of 220 individual glass containers were identified by makers marks used by the companies that manufactured them. These items comprise 35 percent of the unclassified group. Most all exhibit marks used in the early part of the twentieth century. This includes 100 vessels manufactured by the Illinois Glass Company. The exceptions, meaning items that are of post 1920 manufacture comprise only a small part of this assemblage. Of these 220 items, 68 (30 percent) were produced after 1920. All others have production ranges that span the years of operation of Granite Sulphur Springs. Of the 57 vessels identified as being produced by the various Owens Glass Company operations, only 21 appear to have been manufactured prior to 1920. Of the remaining 36, some may have been produced as early as 1919, but most appear to postdate 1920. Seven were produced by the Owens Illinois Glass company after 1929, one by the Knox glass company in 1932, three produced by Capstan Glass company 1918-38, nineteen by the Hazel-Atlas Glass Company (1923-1964) and one by Three Rivers Glass Company between 1928-1937.

A total of 71 (33.4 percent) of the 212 items for which manufacturing processes could be the only information obtained were identified in the assemblage as being mouth blown into molds. The use of two different mold types could be discerned by the analysis including Post Bottom Molds (n=18), and Cup Bottom Molds (n=50). A few (n=3) were found to be mold blown but unidentifiable as to a type of mold. Both mold types were in common use in the late-nineteenth century and extend in use during the early-twentieth century. The fact that 20 of the 50 Cup

Bottom Mold specimens are solarized amethyst indicates a pre-1920 manufacturing date for many in the sample.

During the early-twentieth century the use of machines to manufacture glass containers became widespread. Particularly after 1905 when the Owens Bottle machine became widely used by bottle manufactures as it increased production and lowered manufacturing costs tremendously. A total of 141 individual items in the Unclassified Group can be attributed to machine manufacture. Three different machine process were identified in the analysis including the Press and Blow machine (n=13), Owens Automatic Machine (n=113) and 1 made by an O'Neill Machine. While only one of these latter types is present, the O'Neill machine was only in use from 1911-1916.

Among the miscellaneous glass items in the Unclassified group are fragments of at least 22 glass jugs. The jugs are of a size indicating they held one gallon capacity. Of the 22, five are solarized amethyst indicating a pre-1920 manufacture. Manufacturing attributes indicate that at least two were made in post bottom molds used in the late-nineteenth and early-twentieth century. Five exhibit suction scars. Of the company marks present on some specimens we know that four were produced by the Illinois Glass Company from 1911-1929. Two others have a mark of the same company used between 1915-1929 and one a mark used between 1910 and 1929. Most all are production dates bracketed by the early-twentieth century and span the operation of Sulphur Granite Springs. The interesting facet of the presence of the glass jugs is that they may represent gallon jugs filled with the Sulphur water for use or for sale which is documented during the tenure of T. S Wilcox, 1909-1911 (Coursey 1937b).

The general trend among the items in the Bottle Finish and the Unclassified groups is that of a variety of manufacturing process are represented which is consistent with the variety of glass manufacturing processes in place during the first two decades of the twentieth century. Both the machine made and mold blow manufacturing processes are represented and the bottle finishes reflect those typically available in the late-nineteenth and early-twentieth century. It should be noted that at least 30 percent of the 220 unclassified glass vessels that display maker's marks postdate 1920. While most of that identified manufacturing ranges span the first two decades of the twentieth century, these items which began manufacture into the 1920's and 1930's evidence dumping at 34GR177 after the operation of Granite Sulphur Springs.

The results of the analysis of the Bottle Finish and Unclassified groups support the notion postulated in Research Question 1 regarding the representation of items known to be manufactured during the span of 1900-1920. The items in these groups are comprised largely of items known to be manufactured during this time. In addition, the findings from these groups provide evidence that medically related items are well represented in the assemblage as postulated in Research Question 2.

Further evidence regarding the presence of a significant amount of medically related items in the 34GR177 assemblage is found in the analysis of the Medical and Pharmaceutical group. Of the total number of 3,121 artifacts from 34GR177 which are classed into functional categories, 2,065 individual objects or vessels are represented. Of the identified vessels and objects, 535 (25.8 percent) are associated with medicine and pharmaceutical activities. The range of production dates for most all the Proprietary and Patent medicines include beginning dates in the early-twentieth or late-nineteenth century. Only 40 (13 percent) of the 300 individual items among the Patent and Proprietary Medicines have beginning production dates after 1910 and of those 40 items only one has a post 1920 beginning production date and most have a beginning production date prior to 1915.

The 235 individual objects in the Miscellaneous Pharmaceutical and Medicinal related glass artifacts category bear similarity to the Patent and Proprietary Medicine category with most items having production beginning dates in the early-twentieth and late-nineteenth century. While a significant percentage of these (n=89/37.9 percent) of the items have post 1910 beginning production dates, only 4 individual items bear attributes that establish a post 1920 manufacturing date.

An interesting facet gleaned from the analysis of the druggist/prescription bottles is that 50 or 21.3 percent of the items are identifiable as Lyric style bottles manufactured by the Illinois Glass Company beginning in 1911. These bottles were available in a variety of sizes, many of which are represented in the 34GR177 sample. The bottles were available and bought by doctors and drug businesses whom applied their own label and filled the bottle with their own product. These items are medically related containers available to doctors and druggist at the time by the dozen, gross or case and for use in filling with their own products and applying paper labels. For example the 1920 Illinois glass company catalog lists 3 oz. Lyric bottles for sale at \$9.50 per gross (n=144). Lyric bottles made after 1911 are well represented in the assemblage. The beginning production date roughly coincides with the practices of Dr. Boyd Abbott and Ella Tatam M.D at Granite Sulphur Springs during the summer of 1912. They very well may have packaged and sold their own medicines. While it may be difficult to definitely attribute these to the Doctors in 1912, they do seem to provide indications of medical practices after 1911. The fragments of a ceramic pile tile in the 34GR177 assemblage provides further evidence of a medical practice associated with the assemblage.

Overall the Medicinal and Pharmaceutical group provides a good deal of information. Analysis of this group indicates a variety of medicines are represented that were available nationally. The analysis also establishes that products associated with digestive ailments are well represented in the assemblage. Digestive related medicines comprise a significant percentage (43.8 percent) of the Patent and Proprietary medicines in the assemblage that could

be identified as marketed for specific ailments. Cough and cold related medicines comprise 30 percent of the identified medicinal products. Products associated with women's ailments accounts for 9.4 percent, consumption related products 6.9 percent, with kidney/bladder related and salves account for 5 percent each. Products relating to digestive disorders are represented by 15 different companies/products, coughs and colds by 13 companies and or products, women's ailments by 8, kidney/bladder and salves by 4 each and consumption by 2 products.

A total of 46 different products are identifiable among the Patent and Proprietary medicines assignable to the specific ailments discussed above and another 9 are present among the miscellaneous medicines. Another 22 companies known to manufacture medical products but for which a specific product could not be identified are also represented in the 34GR177 assemblage.

The one ceramic item in this group, a fragment of a pill tile used to measure and cut pills provides evidence of a medical practice employing the item is dispensing pills. The three metal caps for water bottles were manufactured in the early part of the twentieth century and provide evidence for the presence of multiple bottles in the source of the materials dumped at 34GR177.

The analysis of the materials recovered from 34GR177 indicates medically related items in the 34GR177 assemblage are well represented. The evidence occurs not only within the medical/pharmaceutical functional group, but with the bottle finishes and unclassified groups as well. This finding seems to fulfill the expectation postulated in Research Question 2 that medically related items should comprise a significant component of the 34GR177 assemblage if the collection is the result of activities at Granite Sulphur Springs.

Since the Marsh well first struck Sulphur tinged waters in 1900, the health benefits of the mineral water became widely touted. By 1902, the Sulphur waters at Granite Sulphur Springs were listed in nationally distributed books regarding health spas and medical treatments with mineral waters (Winternitz 1902:364). Since its beginnings health seekers have been camping at the springs and seeking the waters for treating various health conditions. The first mention of a physician at Granite Sulphur Springs was a brief mention the July 21, 1904 edition of the Granite Enterprise. While this was apparently before any buildings were constructed at the location, it serves to document that physicians were present at the springs and were likely attracted by the dozens of people camping at the springs seeking the touted health benefits of the Sulphur waters.

The next documented occurrence of physicians practicing at Granite Sulphur Springs is in the fall of 1906. During this time the Granite Enterprise carried ads for Dr. W. B. Hall who advertised as practicing at the springs along with J.E. Gilbert and M.A. Nixon. They advertised as graduates of the Weltmer Institute, which promoted magnetic healing or practices other than

standard medical practices. The bath house, and restaurant were known to be present by this time. It is likely that the constructed facilities, especially the bath house, served to increase the number of visitors to Granite Sulphur Springs who were seeking health treatments. Since a phone number for Granite Sulphur Springs accompanies the ad it can be assumed that telephone service was available at the springs by 1906.

The next documentation of practicing physicians at Granite Sulphur Springs is in 1912 when Dr. Boyd Abbott and Ella Tatman M.D. advertised as practicing at Granite Sulphur Springs from May through September of 1912. Dr. Abbott advertised as employing chiropractic methods and Sulphur Baths while Dr. Tatman advertised and a specialist in women's diseases.

The analysis of the functional category of Personal Hygiene Related artifacts identified 121 individual items comprised mostly of glass bottle fragments, but includes metal items such as lids for bath and body powders as well as ceramic soap dishes. The personal Hygiene groups accounts for 6.7 percent of the items identifiable as to a functional group. It is dominated by milk glass containers which contained skin care and cosmetic products. Perfume containers and toiletry powders are also well represented. A significant portion of the items 45.5 percent (N=55) consists of milk glass jars that contained skin care and cosmetic products. Of the 55 items, only 5 have post 1920 dates for the beginning of production (identifiable by a Hazel Atlas Glass Company mark), and only 2 items have beginning production dates of post 1910. The remainder have beginning production dates in the early-twentieth or late-nineteenth century.

A total of 14 items represent perfume bottles, all of which began production in the early-twentieth or late-nineteenth century. Three items relating to shaving are represented including a portion of a ceramic shaving mug and portions of metal containers for shaving sticks. At least seven bottles of Listerine are represented among the oral care products. Two were made after 1915 and two after 1911. The remaining three are only known to postdate 1881.

A total of ten items related to Toiletry powders are recognizable in the assemblage. Most are represented by metal caps and are identifiable as types that were manufactured by companies producing products during the early-twentieth century.

The recovery of seven items that can be identified as soap dishes is significant in associating the 34GR177 assemblage to Granite Sulphur Springs. These include six ceramic and one of solarized glass, all with beginning production dates in the early-twentieth and late-nineteenth century. One exhibits a mark used between 1893 and 1910 while two others have partial marks indicating "Hotel Ware".

The three condom tins, while not necessarily unusual items to occur in an early-twentieth century dump could potentially be indicative of activities known to occur at Granite Sulphur Springs.

The Personal Hygiene group exhibits a significant number of jars from skin care and cosmetic products. A similar trend is noted among artifacts in the Person Grooming group recovered by archaeological excavations around spas at Hot Springs Arkansas (Hunt 2008:97). The seven soap dishes recovered by the investigations certainly seems to suggest association with a commercial operation as opposed to personal household use.

Many of the items in the Personal Hygiene group seem to satisfy the assumptions in Research Question 3 that a significant number of hygiene related items would be expected in an assemblage associated with Granite Sulphur Springs. The abundance of cosmetic/skin related products and the soap dishes could be associated with use of the bath house at Granite Sulphur Springs. The recovery of the three condom tins could relate to the brief operation of the “house of ill fame” documented at Granite Sulphur Springs. However, without the recovery of other hygienic items often associated with brothels the archaeological manifestation of the house of ill fame is difficult to demonstrate.

Among the food preparation and storage category are identified a total of 186 individual glass items, 75 ceramic items and 66 metal individual items. This amounts to a total of 327 individual items among the total of 866 artifacts in the category.

Among the food preparation and storage category we have identified a total of 186 individual glass items, 75 ceramic items and 66 metal individual items for a total of 327 individual items among the total of 866 artifacts in the category.

Roughly half (n=94; 50.5 percent) of the 186 individual glass items is comprised of canning jar fragments. A variety of jars and manufacturers are represented among the 47 containers identified as to brand. The items include Ball Perfect Mason (n=3), Ball Mason (n=5), Mason Patent Jar (n=5), Hero Mason Jar (n=2), Drey Perfect Mason (n=4), Atlas Strong Shoulder Mason Jar (n=9), Altlas E-Z Seal (n=4) and Kerr Economy Jar (n=13). Present, but in small numbers are Schram Automatic Sealer Jar (n=2) and Presto Mason Jar (n=2). With the exception of the two Presto Mason Jars in the assemblage which began production in 1927, all others have beginning manufacture dates before 1920 and include several types which ceased manufacture by 1920. At least nine Kerr Economy Jars produced between 1904 and 1912 (Whiten 2015g) are present in the assemblage as well as at least two Hero Mason Jars made between 1884 and 1900 (Toulouse 1969; 1971).

At least 69 canning jars are represented in the assemblage for which the brand or the manufacturer could not be positively identified from the collected fragments. A total of 16 of the fragments exhibit marks that provide some information regarding manufacturer. Of these

16 items, five can be considered as post 1920 manufacture while others exhibit marks used over the course of the first two decades of the twentieth century.

The remaining 76 base fragments and 19 body fragments represent at least 39 canning or fruit jars of an unknown manufacturer are represented in the 34GR177 assemblage. Based upon the exhibited manufacturing attributes, glass color and occurrence of solarization, it appears that most all these items could have been manufactured in the late-nineteenth through early-twentieth century.

At least 32 bottles which contained various condiments were present in the glass items in the Food Storage and Preparation assemblage. The H. J Heinz Company is represented by 15 (46.9 percent) of the specimens including mustard, ketchup, and vinegar containers. All the Heinz Company items exhibit marks in use prior to 1920. At least two specimens are horseradish mustard or apple butter bottles produced between 1897 and 1903 and a Heinz bottle containing an unidentified product made after 1905. The remainder of the Heinz product bottles were produced after 1918 but with the exception of three colorless ketchup bottles ceased production in the 1920's. Two Heinz mustard dressing bottles have a tight production range of 1918-1921. Two vessels of Durkee Salad Dressing produced after 1908 are present, a French's mustard bottle from after 1915 is present as is a Lea & Perrins Worcestershire sauce bottle produced between 1905 and the 1920's

At least 11 individual extract bottles are present in the assemblage. Companies represented here include the Van Duzer Company (n=2), Sauer's Extract (n=5), Gebhardts' Eagle Chili Powder (n=2) and Black's Superior Bouillon (n=1). All have beginning manufacturing dates within the first two decades of the twentieth century.

Five vessels from the Cleveland Fruit Juice Company are also represented and all have beginning manufacturing date ranges within the first decade of the twentieth century. Two solarized glass fruit juicers are also present in the assemblage.

The analysis of the Food Storage and Preparation groups reveals that the assemblage is largely comprised of items that were being manufactured during the first two decades of the twentieth century. At least nine Kerr Economy Jars produced between 1904 and 1912 are present in the assemblage as well at least two Hero Mason Jars made between 1884 and 1900 are also present. Only two Presto Mason Jars in the assemblage began production after 1920 (in 1927). These findings meet the assumption in Research Question 1 regarding that the expectation of items produced 1900-1920 should be well represented in an assemblage associated with Granite Sulphur Springs. The items in the category, in particular the quantity and variety of canning jars supports the assumptions postulated in Research Questions 4 and 8 as well. In fact the findings may indicate that foods canned in canning jars were in use for the many picnics held

at the springs and for the operation of the restaurant and dining hall at the hotel as well. The variety of condiments and extracts present in the assemblage also were manufactured over the course of the first two decades of the twentieth century.

Among the Kitchen Storage and Preparation Ceramics a total of 75 individual vessels were identified among the 199 artifacts in this functional group. Only 12 of the vessels exhibited marks that could be identified as to manufacturer, all of which are Bristol glazed wares. Among the minimum of 75 identified vessels are 25 (33.3 percent) wide mouthed crocks, 12 (16 percent) mixing bowls and 9 (12 percent) jugs. A total of 35 (46.6 percent) of the 75 vessels are Bristol glazed stoneware. Two salt glazed stoneware vessels and 7 (9.3 percent) Albany glazed vessels were identified. A total of 8 vessels exhibit both Albany and Bristol glazes (10.6 percent). A blue molded stoneware is present in the assemblage and at least 13 (17.3 percent) different vessels are identifiable. Among these are three mixing bowls, two bowls, one salt holder, one butter crock and six for which the vessel form could not be determined.

The Kitchen Storage ceramic assemblage is dominated by Bristol glazed wares most of which are large mouth crocks. There are at least three 3 gallon, two 2 gallon, one 4 gallon, two each of 5 and 6 gallon and one 10 gallon crocks present in the assemblage. Mixing bowls and gallon sized jugs are also well represented. Among the Bristol glazed stoneware, are 11 vessels made by the Monmouth Pottery Company/Western Stoneware Company including 8 crocks, 1 mixing bowl 2 unidentified vessels. Based on the observable marks on the fragments, a ca. 1901 date can be applied to all vessels at the very earliest, with the majority, if not all vessels dating to 1906 and later. At least one vessel made by the Galesburg Pottery company is present in the assemblage. While the vessel represented in the assemblage could not be identified, the Galesburg Pottery Company was in existence from 1891-1897 providing a tight date range for the manufacture of the vessel.

The ceramic group in the Kitchen Storage group and Preparation group contains at least 75 individual items. The glazes and characteristics of all the items are consistent with items manufactured during the first two decades of the twentieth century. In fact the lower percentages of Albany and Albany/Bristol glazed items in the assemblage is consistent with the increasing dominance of Bristol glazed wares occurring in the late-nineteenth and early-twentieth century. The 11 items with makers marks were all manufactured after 1901, with the exception of a Galesburg Pottery Company vessel which would have been made prior to 1897. A significant percentage of the assemblage is comprised of wide mouthed storage crocks, mixing bowls and gallon sized jugs. This could be an indication of association with commercial type operations such as a restaurant. The findings could also relate to large picnic and gatherings where items were brought from home.

A total of 66 metal items were identified as associated with food storage and preparation. The largest category of these items are stove related parts (n=31/ 46.9 percent) including 18 pieces of cast iron stoves, 5 pieces of gas fueled stoves and 8 stove pipe flue parts. Due to the small size of the fragments it is difficult to identify the number of stoves represented, however, it appears that several stoves are represented. It is likely the cast iron stove parts represent wood or coal fired stoves. The occurrence of five fragments of gas fired stoves indicate their use as well. Gas fired stoves, including small portable stoves were becoming more popular beginning in the early-twentieth century.

At least 11 separate vessels of enameled cookware are present in the assemblage. At least five bowls are present as well as four pans and two kettles. The enameled wares include blue and white swirled as well as blue and white and black and white speckled.

Only 12 cans are represented in the food storage category. Hole-in-cap cans are represented by at least five items and sanitary type cans by at least three items. One item represented an overlapping side seam can with stamped ends indicating production between 1847 and 1904. The hole-in-cap cans were in use during the early-twentieth century and replaced by sanitary cans by 1920. One can retains a mark or logo use by the American Can Company in the early-twentieth century. The low number of food storage cans in the assemblage is of note. It could be a factor of preservation, however, many metal items are present in the entire 34GR177 artifact assemblage. One explanation could be that the picnic and restaurant activities at Granite Sulphur Springs utilized foods from glass canning containers much more frequently than those stored in cans.

The analysis of the Kitchen Food Storage and Preparation groups from 34GR177 support the assumptions in Research Question 4 and 8 regarding what would be expected of an assemblage resulting from large picnics and the operations of an early-twentieth century restaurant. The evidence for a variety of small stoves which could be used in cooking or heating could be evidence relating to camping. This may be evidence in support of the assumption is Research Question 5 regarding the expectation that camping related items should be associated with any deposits resulting from activities at Granite Sulphur Springs. .

A total of 273 individual objects are identifiable among the 534 artifacts in the Kitchen Serving category. The category is comprised of 174 (63.4 percent) individual ceramic items, 81 (29.7 percent) separate items of glass and 18 (6.6 percent) individual metal items.

Among the recovered ceramics in the Kitchen Serving group are Ivory ware, Porcelain and White ware. The wares include Transfer ware, Decal ware, hand painted wares and plain white ware. Several patterns and colors are represented in the 37 vessels identified as Transfer wares. Green transfer wares account for 10 (27 percent) of the 37 vessels and Flow Blue accounts for 24 (64.9 percent) of the transfer wares. The remainder is comprised of one black

transferware and one red printed transferware and one blue printed transferware. All the identified transfer ware patterns have a broad range of production through the late-nineteenth and early-twentieth centuries. The few maker's marks present among the transfer wares are consistent with manufacture during this times.

Decal wares account for 62 (35.6 percent) separate vessels among the 174 ceramic items. The category includes 12 plates, 7 bowls, 6 tea cups, 1 footed bowl, 1 possible plate, 1 possible tureen, and 15 unidentified vessels. The few makers' marks that occur among these items are also consistent with late-nineteenth and early-twentieth century manufacture. Only one mark, from the W. S. George Company postdates 1920.

The 12 Ivory ware vessels represented in the assemblage display either maker's marks or patterns that postdate 1920 with most manufactured after 1930. The small number of hand painted wares present in the assemblage including three of the four vessels that are identifiable as a Tea Leaf design and one has a makers mark used by the Alfred Meakin Company/England used from 1891-1910.

A total of 40 individual vessels of plain-bodied white ware are represented among the 64 fragments in this group. They comprise 23 percent of the ceramic kitchen serving category present in the assemblage. Maker's marks present on 23 of the items include only one mark, a Mount Clemens Pottery mark, coming into use after 1920. At least eight of the marks are marks which ended on or before 1910.

The vast majority of the ceramic items in the Food Serving are consistent with patterns and makers spanning the late-nineteenth and early-twentieth century. The exception are 12 Ivory ware items representing 6.9 percent of the ceramic food serving items which postdate 1902 and are mostly from the 1930's.

Represented among the 108 glass kitchen food serving artifacts are 81 individual items of glassware. The assemblage includes 23 stemware drinking glasses, 17 tumblers and/or mugs, seven bowls, five pitchers, three plates, one compote, one footed oval dish, one plate or cup saucer, one saucer or bowl, one root beer stein, one shot glass, one lidded dish, one footed sherbet bowl, sugar bowl, or creamer, one sugar bowl, pitcher, or lidded dish, and 16 unidentified vessels. The stemware drinking glasses and 17 tumblers comprise 49.4 percent of the glassware in the serving group. Stemware accounts for 57.5 percent of the glass drinking vessels.

Few maker's marks are present on the fragments representing the vessels. Three of the Capstan Glass Company date after 1918 and one item displays a mark of the Hazel-Atlas Glass Company use dafter 1920. While no makers marks are present on the stemware fragments, 10

(55.5 percent) of them are solarized indicating a date range of manufacture between ca. late 1880s and ca. 1920.

A total of 11 (13.6 percent) of the 81 glass items are classed as Depression glass, an inexpensive glassware made in large quantities, primarily in the Depression-era years in the United States during the 1920s through the early 1940s (Kovel et al. 2015b; Wiggins 2016a). The Depression Glassware is represented by at least two plates, one bowl, one tumbler, one stemware drinking glass, one small bowl and five unidentifiable vessels.

The 81 individual glassware food serving items in the GR177 assemblage provide few marks allowing for more precise range of manufacture dates. It can be assumed that the 11 Depression Glass items which comprise 13.6 percent of the food serving glassware, postdate 1920. With the exception of the four items with marks that begin in 1920 or later, the remaining items are consistent with serving ware available in the early-twentieth century. The solarizing of many of the items indicate a pre-1920 manufacture date. One of the more interesting features of this category is relative abundance of glass stemware drinking glasses represented in the assemblage. Almost half of them are solarized.

The lack of marks on many of the items hampers analysis of production date ranges for these items.

However, the assemblage characteristics are consistent with serving ware available in the early-twentieth century. The exception being the 11 Depression Glass items which evidence post 1930 dumping. The solarizing of many of the items indicate a pre-1920 manufacture date. Therefore, while the evidence for items spanning the 1900-1920 era is not as definitive as some of the categories, the analysis of the food serving glassware items does provide evidence that many of the items were likely deposited during that time.

A minimum of 145 beverage containers are represented in the 34GR177 assemblage. Most all are glass containers, however, a ceramic root beer dispenser is present. Both alcoholic and non-alcoholic beverages are represented. At least 53 alcohol beverage containers are identifiable comprising 36.5 percent of the identified beverage vessels. Of these, 21 can be identified as liquor bottles and six contained beer. Another 26 items could not be identified further beyond being alcohol related.

Beverages are well represented in the 34GR177 assemblage with at least 145 individual containers identifiable. Alcoholic beverage containers account for 36.5 percent of the containers, most of which are liquor bottles. Most have documented production ranges during the first two decades of the twentieth century. The Hayner Whiskey, Four Roses Bourbon and Charles Boldt manufactured liquor containers have a manufacturing range spanning the decade from 1910-1920. This is interesting because liquor was legal in Oklahoma Territory until Statehood in 1907 when prohibition was instituted. Since these items postdate 1907 they may

represent illegally obtained items. Alternatively, they could represent mail order liquor which could be obtained from out of state for personal use. In fact the Hayner Whiskey Company specialized in mail order whiskey. At least two of the recovered liquor bottles have markings that postdate 1934. Identified beer containers are only represented by six items. However, one should keep in mind that some of the unidentified beverage bottles, such as those from the American Bottling Company, were made by companies producing both beer and soft drinks bottles.

Other beverages including soda, milk, grape juice, root beer and other unidentified soft drinks comprise 56.5 percent of the beverage group. Identified soda brands account for 10 items. Coca-Cola is represented by both pre 1915 straight sided bottles as well as a post 1917 hobble skirt design. Nehi, Keen and Nu-Icy brands which postdate 1920 are also present. However, at least 20 pre 1920 bottles from the Mangum Bottling Works are present which would have contained soda or other soft drinks. A pre 1920 bottle from the Hobart Bottling works is also present. At least 20 bottles produced from 1906-1917 by the American Bottling company are represented which may have contained either soft drinks or beer. In addition, at least 13 bottles produced by the William Franzen & Sons Company from 1900-1926 are represented which also could have contained either soft drinks or beer.

The beverage group is comprised mostly of soft drink containers, however, alcoholic beverage containers are well represented. The analysis reveals that most exhibit marks or manufacturing attributes that are consistent with production during the time span 1900-1920. Not only does this evidence lend itself to supporting the assumption in Research Question 1, but also provides evidence regarding Research Question 4. Particularly with the soft drinks. It is well documented in the archival review that soft drinks were widely available at Granite Sulphur Springs especially during major events. It is documented that cold drink stands were present on the grounds and were often leased out for picnic and gatherings. The occurrence of a significant number of pre 1920 style soft drink bottles from the Mangum Bottle Works may be evidence for the sale of soft drinks at Granite Sulphur Springs. Bottles were reused and only broken bottles would have been disposed of.

The evidence regarding the alcohol containers is interesting in that the few marks that are present indicate some of the liquor containers postdate 1907 and the onset of prohibition. While we know that at least two of the liquor bottles postdate 1934 we also know that the six Hayner Whiskey products, and the four products from the Charles Boldt Company were made between 1908 and 1920. These items may represent mail order items which were legally obtainable for private use.

A total of 130 artifacts representing at least 81 separate objects are classed in the Dwelling and Lodging group. Twenty of the objects relate to maintenance activities associated with the upkeep of a dwelling while the other 61 items relate to furnishings associated with a dwelling or lodging activity.

One of the more interesting findings among the 20 maintenance related items in the Dwelling and Lodging group is that half the items are glass containers for furniture polish. This would indicate that the source of these items either had a lot of furniture to maintain or that it was done often, or even both. Both the Liquid Veneer and the O’Cedar brand bottles began production in 1908 and 1904 respectively. There is also evidence in the assemblage for laundry type activities in the way of four containers of bluing and a metal clothes ringer. With the exception of one of the Putnam’s bluing containers which postdates 1927, all the other items have beginning manufacture dates during the first two decades of the twentieth century.

Among the 61 item items relating to furnishings are several miscellaneous glass items such as a decorative bowl, a plate and a milk glass toothpick holder. There is also evidence for at least five individual oil lamps. The more numerous items in the furnishing assemblage are decorative clay flower pots (21.3 percent), and ceramic chamber pots (13.1 percent). An additional three ceramic jardinière-style pots from decorative plant displays comprise 5 percent of the furnishings.

One of the more intriguing finds among the furnishings is the base of an early model Eveready pocket flashlight exhibiting a Patent date from 1899. The significant number of early-twentieth century of decorative flower pots represented in the assemblage is interesting. The fact that they all have decorative elements rather than being simply plain flower pots suggests the source of these items was an activity focused on the use of potted plants as a decorative component of a dwelling as opposed to simply growing plants for which the cheaper plain clay pots would likely be used.

The Dwelling and Lodging group is comprised of items which are very consistent with early-twentieth century furnishings. The relatively high number of chamber pots and decorative flower pots are both informative findings. The chamber pots are common from 1900-1920 and the decorative flower pots are consistent with those available in catalogs from the early part of the twentieth century. In fact one displays a maker mark from the Macomb Pottery Company which was in business from 1880-1906.

The Dwelling and Lodging group appears to derive almost entirely from 1900-1920 era. This fits well with the Research Question 1 assumption regarding the use of Granite Sulphur Springs at this time. Further, it appears that most of these items could be attributable to the Hotel. The furniture polishes and laundry related items could certainly be associated with maintenance activity at the Hotels. In addition the decorative flower pots could likely derive from the hotel as well. The ceramic chamber pots could also relate to use of the Hotel. However, it is just as likely they could derive from other dwellings including camping tents. Research Questions 5 and 8 may be addressed in part by this functional group providing evidence for Hotel maintenance and decoration as well as chamber pot use which could relate to both the hotel and camping activities.

Some artifacts in the 34GR177 assemblage relate to architecture, including various parts of structures and hardware. Nothing major was recovered, but the few items in this category lend some information. A total of 108 individual items can be attributed to the 135 recovered artifacts in this group. Thirty pieces of flat glass comprise 22 percent of the items. While most is rather generic, some decorative flat glass is present

At least 15 individual bricks are identifiable in the assemblage with both standard and fire bricks being recovered. At least two are from the Denton Press Brick Company of Denton, Texas. Based on their marks, both were produced from 1901-1912. A brick made by the Fulton Fire Brick Company is present, likely made between 1912 and 1927. At least four bricks made by the Hennessey Brick plant in Hennessey, Oklahoma exhibit the Hennessey O. T. mark indicating manufacture prior to Oklahoma becoming a State 1907. Four bricks made by the Mangum Brick Company are represented in the collection. They would have been manufactured after 1903 when the company began production. At least two bricks made by the W.S. Dickey Clay Manufacturing Company or Kansas City are in the assemblage. From the information gathered on the company, the bricks represented here were manufactured in 1917 or later.

Ceramic door knobs, door escutcheons, door hinges and other door hardware in the assemblage are all consistent with hardware commonly used in the late-nineteenth and early-twentieth centuries. One pad lock made in 1906 or later is present as is a cast iron housing for an awning mechanism manufactured by Anchor industries as early as 1902.

Of the 23 nails in the assemblage, 22 are wire nails indicative of post 1900 use.

While this functional category is small, the informative items such as the bricks which provide some dates, and the door hardware which is typical of early-twentieth century hardware indicates that many of the architectural items derive from the 1900-1920 era. Little else can be said regarding the research questions other than that the items are consistent with 1900-1920 existence of Granite Sulphur Springs.

A total of 58 individual items related to transportation are represented among 64 transportation related artifacts. Items associated with both automobile (n=23) and horse powered (n=29) transportation are represented. The presence of horses is evidenced by the recovery of at least 26 horseshoes. At least one buckle which was part of horse tack was also recovered. Two terrets from horse harnesses are present as are two pieces of wagon hardware. Among the auto mobile items are at least 10 items deriving from Model T's. A recovered Model T carburetor was manufactured as early as 1914 and three recovered tire valves have beginning manufacture dates from 1908-1916.

The transportation related assemblage reflects both horse powered and automobile related artifacts. Identifiable beginning manufacturing dates for some of the automobile parts span the first two decades of the twentieth century. Horses are well represented by the 26 horseshoes

and wagons only by a few small parts. While these latter items, as well as the automobile parts could relate to activities on a farmstead as well as general transportation they reflect the use of both modes of transportation which is consistent with transportation means through the 1900-1920 era. Therefore, the items in this group support the expectation that discarded items resulting from activities at Granite Sulphur Springs should contain items relating to both horse powered transportation as well as items from early styles of automobiles.

The 19 individual items in the Writing and Record keeping group are comprised mostly of glass ink containers (n=15/79 percent). At least one cobalt blue quart sized bottle of S. S. Stafford's ink is represented in the assemblage. These items were produced over much of the first half of the twentieth century.

Other items in the group include the remains of at least two pencils represented by the metal ferrules. These items prove difficult to precisely date as they have been widely available throughout the twentieth century. The most intriguing find among this group is the Jonas Ford notary stamp. Jonas Lee Ford was proprietor of the roller rink at Granite Sulphur Springs from 1908-1911.

The findings among the writing and record keeping functional group are consistent with expectations of the early-twentieth century. The abundance of ink bottles in the assemblage indicates that the use of ink was a significant activity which contributed to the 34GR177 deposits. While ink was used in most writing and record keeping activities most everywhere in the early-twentieth century, it was likely used extensively at Chautauquas and Summer Normals such as those documented at Granite Sulphur Springs. This finding supports the expectations posed in Research Question 9. The operations of a hotel or physicians practice in the early-twentieth century would likely consume ink as well. The most significant find in this category is the Jonas Ford stamp. This item provides a direct tie to Jonas Ford who operated the Granite Sulphur Springs roller rink from 1908-1911.

Among the Personal use group of artifacts, which entails items relating to personal use such as clothing, footwear, toys and tobacco, a total of 138 individual items are present in the assemblage. Approximately a third (n=46/33.3 percent) of the items relate to clothing and is comprised mostly of buttons (n=25). Ceramic, shell, metal and plastic buttons were recovered. Most buttons are metal, with five of shell, one of ceramic and one of plastic. The variety of materials represented among the buttons, especially the low percentage of plastic buttons which came into dominate use by the mid-twentieth century is typical of the types of buttons in use in the early-twentieth century. Some of the metal buttons are from overalls and are marked with brand names including Cabro, Round House, Union All and New State. All are brands with long production time frames, however are consistent with buttons used by the companies during the first two decades of the twentieth century. The two New State Buttons are from an Oklahoma City based company and named after Oklahoma became a "new State" in 1907.

At least 12 individual children's toys are represented in the assemblage. Two clay marbles were recovered which are unglazed. While difficult to date exactly, glass marble production did not begin in earnest until after 1910 and completely replaced clay marble production by 1920. Other recovered items relating to children's activities include porcelain doll parts and toy stove parts. All are typical of items available during the early-twentieth century.

Items relating to adult activities are present in the way of tobacco related items. At least 14 snuff jars and one cigar jar are represented in the assemblage. All exhibit manufacturing attributes and in the case of the cigar jar, solarization that are consistent with the early-twentieth century.

The personal related items in the assemblage are all consistent with the first two decades of the twentieth century and would have been common during the time frame of Granite Sulphur Springs operations. In addition the evidence for children's activities especially small girls is supportive of the assumptions in Research Question 9. Children were present at large picnics and gatherings as well as small picnics and other events. Only one item, the toy pistol is directly related to young boys and the two marbles could relate to either boy or girl activities. Most of the recovered children's items are related to girls. This could indicate that many of the young girls were occupied with playing with dolls and pretend kitchen related activities while boys may have been more occupied with other documented events at Sulphur Springs such as races, baseball or other more physically active pursuits.

The items in this functional group provide evidence in support of Research Question 9. However, one should keep in mind that the activities represented would be common to other sources such as farmsteads with children.

A small number of the recovered artifacts are associated with entertainment. At least three harmonicas are represented by reed plates and two reeds from a harmonium type of instrument are present in the assemblage. It is difficult to apply a precise date range from these items as they display no marks. A metal piece of a Kodak Camera tripod from circa 1903 was also recovered. This latter find is significant because local papers often mentioned "Kodacking" as an activity occurring at Granite Sulphur Springs. This refers to the use of newly available, affordable more portable cameras which were introduced in the first years of the twentieth century which resulted in a new novel activity of taking photographs.

The power and energy group is divided into Direct Current, Alternating Current and Fossil fuels. A total of 146 individual items were identified by the analysis among the 183 artifacts in this category. Dry cell batteries and related items comprise a significant portion of the assemblage (n=42) and are related to DC power. Most are likely Number 6 sized dry cell batteries.

Several items were recovered from 34GR177 which likely relate to alternating current (AC) power. Most are ceramic and glass insulators. The glass insulators (n=11) are of the types

commonly found on utility poles. Most of the recovered ceramic insulators (n=26) are parts of the knob and tube systems commonly used in the early-twentieth century for running wire on the interior of structures. The production range of the three Electrical Porcelain Company cleat halves reported in the collection is between 1903 and 1911. The two cleat halves manufactured by R. Thomas & Sons were produced between 1892 and 1957. Five individual ceramic tubes are identified in the assemblage. One exhibits a mark used by the US Electric Company between 1906 and 1910. Another exhibits a mark used by the National electric Porcelain Company between 1911 and 1927. The remaining ceramic insulators have broader production ranges, however, all were being produced during the era 1900-1920. Several porcelain electric switch and fixture items are present in the collection. Among four rosettes that likely held switches for lighting are two with a mark used by the Bryant Electric Company likely produced between 1888 and 1927. Another lighting fixture exhibits a Patent number issued in 1908. A ceramic housing for a rotary switch manufactured by the Perkins Electrical Switch Manufacturing Company exhibits a Patent date of June 8, 1909.

Evidence for the use of fossil fuels is manifest at 34GR177 mostly by the recovery of 35 pieces of coal. In addition, at least four metal containers which likely held liquid fuel are represented.

The findings among the power and energy group reveals evidence for the use of coal, a strong indication for the use of dry cell batteries, and evidence for electrical wiring within a structure or structures. All items are consistent with energy sources commonly used in the first two decades of the twentieth century. This finding supports the notion in Research Question 1 that items from Granite Sulphur Springs should largely date within this time frame. The abundance of dry cell batteries provides evidence that activities involving the use of the batteries is associated with 34GR177. This may evidence of the use of portable lighting devices used in camping which supports the assumption in research Question 5 regarding evidence for camping. We do have an early-twentieth century flashlight represented in the 34GR177 assemblage. The batteries could also related to use of the telephone. The early advertisements for Granite Sulphur Springs included a phone number so it appears that a phone was in use at the Springs. It also cannot be ruled out that they were used in early-twentieth century medical devices which were a popular trend in the late-nineteenth and early-twentieth century. However, no other evidence for the use of such devices was found at 34GR177.

Items evidencing the use of firearms is present in the assemblage. While firearms may be associated with hunting and personal protection, they may also attest to an entertainment activity such as target shooting. At least 17 individual items relating to firearms were recovered. Most (n=15) are cartridge casings representing a variety of calibers. Calibers identified include .22, .32, .38, .41, and .45 along with 12 and 16 gauge shotguns. The company stamps on the cartridges indicate most all had production ranges spanning the late-nineteenth and early-twentieth century. The 12 gauge Peters Cartridge company base contains a mark used from 1910-1927 and the .25 caliber Peters cartridge was produced from 1908-1934. Only one cartridge, a .22 long made by the Precision Made Cartridge Company

postdates the early-twentieth century being made after 1983. A butt plate and muzzle cleaning apparatus attest to the maintaining of fire arms as well.

This functional group is small and little information can be drawn from the items. With the exception of one post 1983 .22 caliber shell casing all the other items have marks in use over the span of the first decades of the twentieth century. It can be said a variety of calibers are represented which could be a clue that arms from multiple individuals are represented. If the items are associated with activities at Granite Sulphur Springs they could be evidence of target shooting as it is doubtful that hunting and or self-defense were practiced at the Sulphur Springs and no such events are documented. However, target shooting is indicated in a circa 1909 postcard from Sulphur Springs.

While the promotional group of artifacts is small (n=9) there are some significant items in the group which provide narrow ranges of dates. One item is a fragment of a ceramic calendar plate from 1908. Two items in this group relate to early businesses established in Granite. A small brick, likely a promotional sample from the Granite Brick Company was recovered. The Granite Brick Company only operated for a short period in 1901. A five cent token from the City Bakery in Granite was also recovered. The City Bakery operated from January 1902 until February of 1904 when the name was changed. These latter two items are significant in that they represent businesses which emerged soon after the founding of Granite in 1900. If these two items relate to gatherings at Granite Sulphur Springs, then they would be activities occurring during the early period before structures were present. If so, they could be an indication that local businesses and entrepreneurs used such occasions to promote their businesses.

The final category we consider are the faunal remains. The category is dominated the remains of domestic animals with most evidencing hand or machine sawn cuts of meat. Pig is the most represented animal, with most of the cuts representing pork chops and ham steaks are consistently similar.

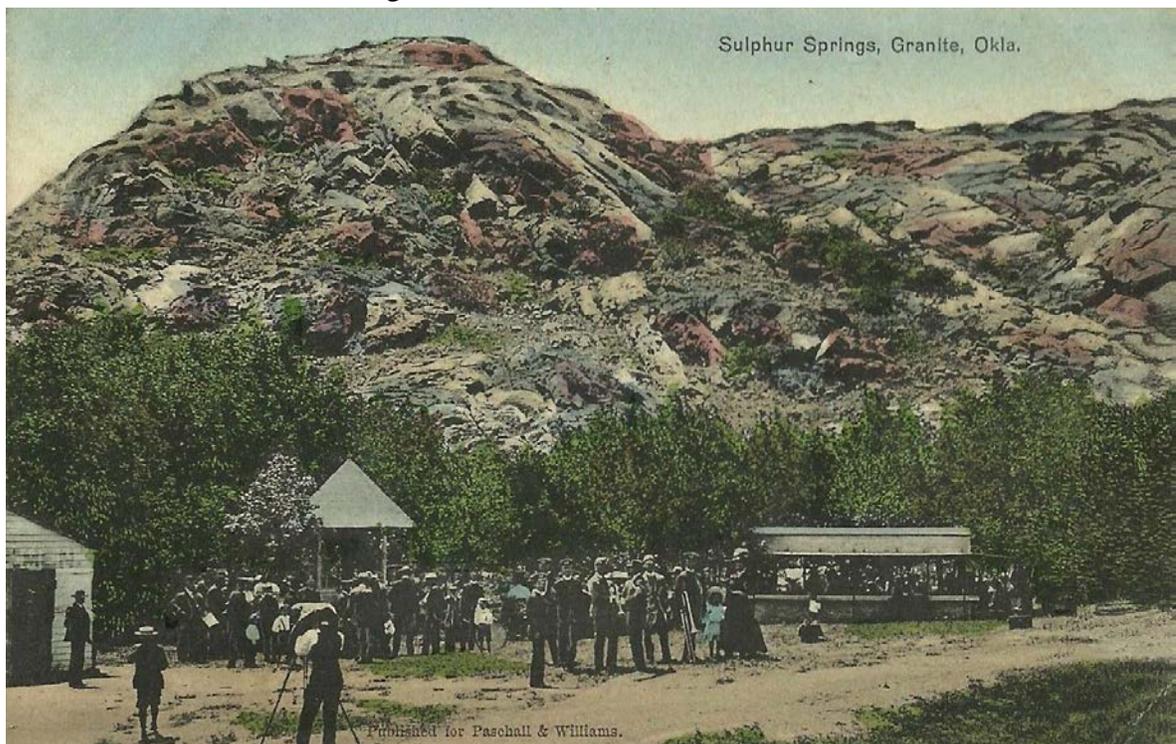
The faunal remains, particularly the number of sawn, flat, round bone derived from the femurs of pigs would be consistent with what could be expected from a restaurant or dining hall providing a menu of consistent items. This evidence lends support to the notion that discarded remains from the restaurant operation at Granite Sulphur Springs would produce an assemblage of remains consistent with that recovered from 34GR177.

The analysis of the assemblage of items recovered by the investigations at 34GR177 reveals that the bulk of the items in all functional categories are datable to the 1900-1920 era. Many have production ranges that extend beyond 1920 and some have beginning production dates prior to 1900. There a few items such as some glass containers and Depression glassware that postdate 1920 and would extend into the 1930's. The items provide an indication of post 1920 dumping at the site, however, these items do not comprise a significant portion of any of the

functional categories. However, the preponderance of evidence indicates that the vast majority of items were likely discarded during the first two decades of the twentieth century when Granite Sulphur Springs was operating as a health resort and the location of many large gatherings comprised of people from Granite, Mangum and other local settlements. Therefore, it is a supportable conclusion that site 34GR177 is largely comprised of discarded items associated with the operations and activities at Granite Sulphur Springs, located one half mile south/southwest and on the other side of a hill from 34GR177.

In spite of the disturbances to the 34GR177 deposits over the years, the items still retained information significant to the early settlement of Granite. The effort reported here also demonstrates that archival research can at times, provide the information needed to interpret and associate an isolated dump location from the early-twentieth century. If not for the context provided by the archival review, the items recovered from 34GR177 would provide little information beyond a basic description and documentation of their occurrence.

We will close this chapter with reference to the circa 1909 postcard below (Figure 8.1). This view of Granite Sulphur Springs illustrates activities and items consistent with activities and items reflected in the assemblage from 34GR177.



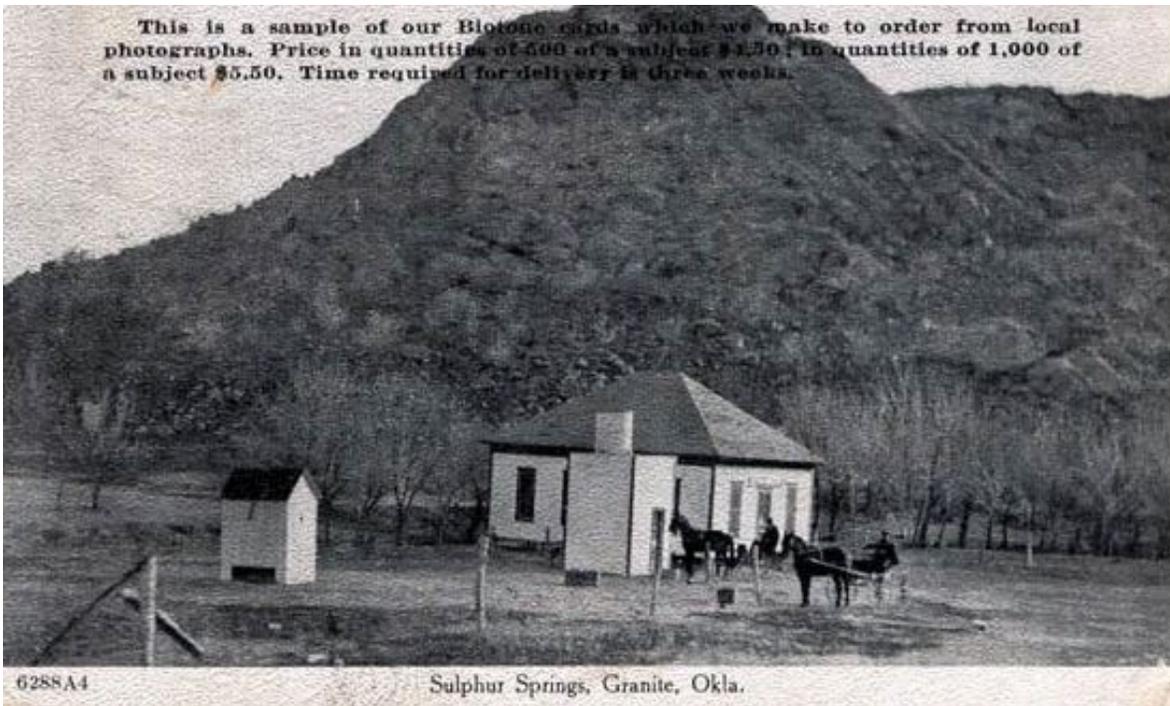
**Figure 8.1. Circa 1909 postcard view of Granite Sulphur Springs. The southwest corner of the roller rink is to the left and the gazebo is seen left of center. Building to the right may be the restaurant. Several musicians are present as are several children. A camera tripod is in use by a fellow in the foreground and wood trunk with metal hardware is visible just to the right and in front of the restaurant.**



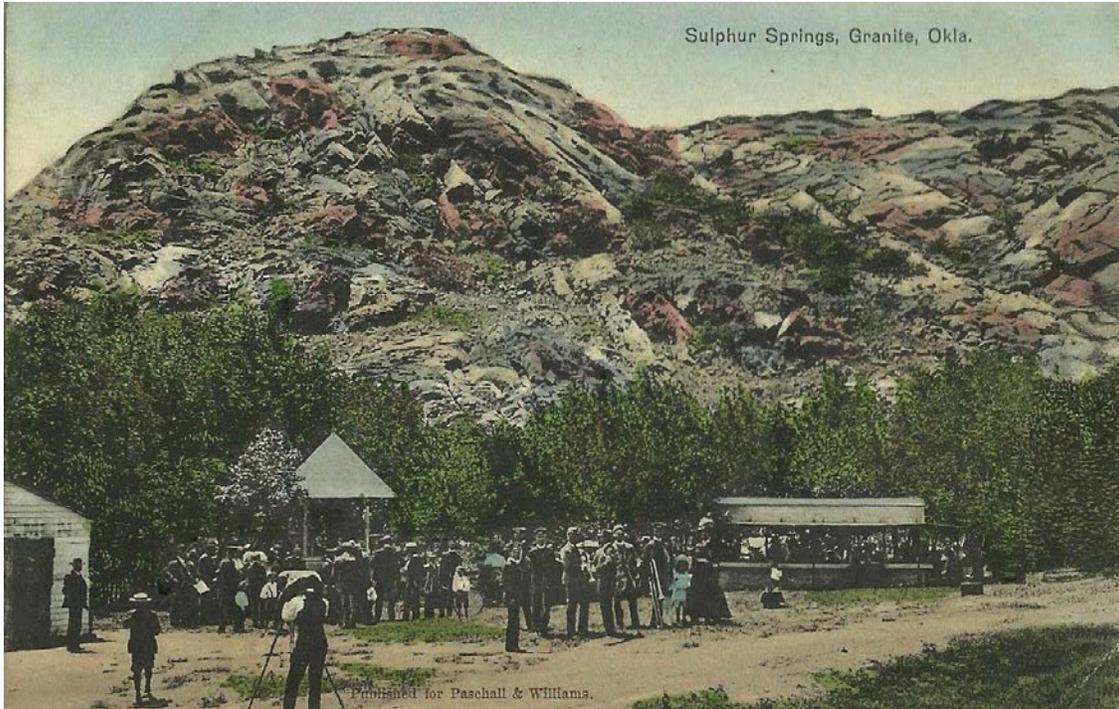
## **Chapter 9 Granite Sulphur Springs Then and Now**

This Chapter uses period and present day photographs to document the locations of buildings once present on the site as well as what remains today. The site was visited in December of 2014 with the intent of documenting features relating to Granite Sulphur Springs which may remain. Using period photographs and postcards the locations of most of the buildings were determined with close approximation. The photos were also helpful in establishing the locations of buildings no longer existent at Sulphur Springs.

**Figure 9.1. Layout of Granite Sulphur Springs based on period photographs and survey in December 2014. Blue rectangles represent the locations of nonexistent buildings, blue circles mark extant features.**



**Figure 9.2. Bath House Built 1906, removed 1917; Top; circa 1906 photograph of bath house at Granite Sulphur Springs (usgwararchives.net). Pump house with cistern and privy in foreground. Right; same view in December 2014**



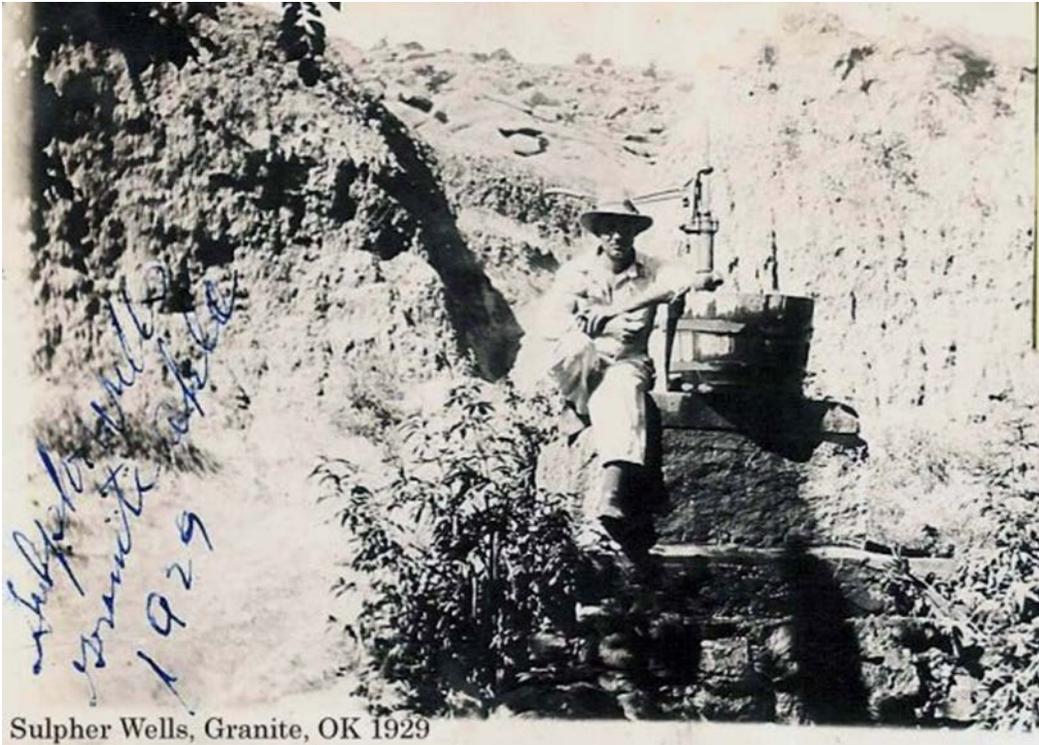
**Figure 9.3. Band Gazebo, Built 1907; Top; Circa 1908 photograph showing band gazebo at Granite Sulphur Springs. Note the corner of the roller skating rink to the left and an unidentified building to the right. This building may be the restaurant. Right: same view 2015**



**Figure 9.4. Sulphur Springs Hotel. Established 1907; Top Circa 1908 view of the Sulphur Springs Hotel; Bottom; similar view in December 2014. Note the distinctive rock circled in white in each photograph.**



**Figure 9.5. Roller Skating Rink Built 1906; Top; view of roller rink 1906, note bathhouse to the left; similar view December 2014.**



**Figure 9.6. Sulphur Spring; Top; circa 1929 view of Sulphur Spring (okgenweb.net): bottom; view in December 2014**



**Figure 9.7. Overview; Top left; view of Sulphur Springs from the January 9, 1909 edition of The Granite Enterprise; top right, postcard from same photograph; bottom, similar view in December 2014. Top view likely taken from area near cedar tree just right of center in bottom**



**Figure 9.8. Sulphur Well; Top; circa 1920 photograph of group adjacent to drilled well covered by gazebo, note structure in background (Gunning 1972:142); Bottom; view of drilled well and gazebo remains December 2014.**



**Figure 9.9. Privies; Top: Men's privy; bottom: Women's privy; both photographs taken in December 2014, no period photos have been found of these structures.**

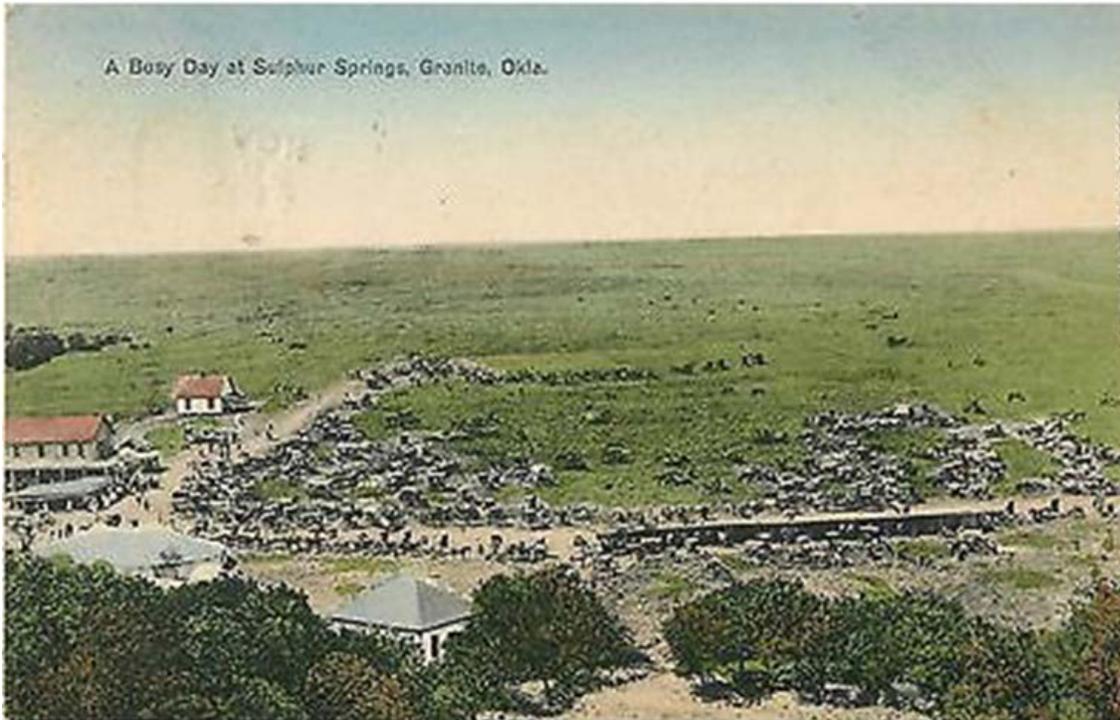


Figure 9.10. Other views; Top: Circa 1909 post card of an event at Granite Sulphur Springs; bottom: Circa 1909 post card showing a group by the Sulphur springs shown in Figure 9.6. Note the presence of firearms.

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# **Appendix I: Memorandum of Agreement**



**MEMORANDUM OF AGREEMENT**  
**SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION**  
**PURSUANT TO CFR 800.6(A)**

WHEREAS, the Federal Highway Administration (FHWA) has determined that Federal-Aid Project STPY-028B(114); State Job Piece 10100(04) for SH-6 reconstruction will have an adverse impact to archeological site 34GR177 Greer County, Oklahoma, a property determined eligible for inclusion in the National Register of Historic Places under Criteria D for recoverable data the site contains regarding early 20<sup>th</sup> century activities in Greer County, Oklahoma, and has consulted with the Oklahoma State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f);

WHEREAS, in accordance with 36 CFR Part 800.6(a)(1), the FHWA has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR Part 800.6(a)(1)(iii);

NOW, THEREFORE, FHWA, Oklahoma Department of Transportation (ODOT), and the Oklahoma SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

**STIPULATIONS**  
**ARCHEOLOGICAL SITE 34GR177**

I. FHWA will ensure that the following measures are carried out:

1. Prior to the initiation of construction, the portion of 34GR177 falling within the Area of Potential Effect (APE) will be subject to data recovery efforts. Previous investigation has determined the site contains late 19<sup>th</sup> and early 20<sup>th</sup> century items confined to the surface of the site, which likely relate to early 20<sup>th</sup> century Sulphur Springs Resort in Greer County, Oklahoma. This will include the following:
  - A. Controlled surface collection within the approximately 200' x 500' portion of the site falling within the APE. The collection will be provenienced based upon the three collection areas previously established during the initial site investigation.
  - B. The surface collection will be accomplished by intense surface examination of the entire APE. Raking or other wise tillage with hand implements of the upper 5 cm of soil will be employed as feasible to assure maximum recovery.
  - C. A metal detector survey will be conducted to assure maximum recovery of diagnostic metal items. The survey will be conducted at approximate 5 m spaced transects as allowed for by topography and vegetation.
  - D. Only items providing information in regards to date of manufacture, function or

D. Only items providing information in regard to date of manufacture and function or use will be collected.

E. The initial stripping of the soil for construction will be monitored by an archeologist to recover any diagnostic items that may be exposed. The ODOT will assure that notes regarding this monitoring activity are added to the construction plans.

F. All items will be curated in an Oklahoma based facility in accordance with 36 CFR 79.

II. Archival research will be conducted regarding the early 20<sup>th</sup> century Sulphur Springs Resort in Greer County Oklahoma. The research will include but is not limited to:

A. Review of period local newspapers at the Oklahoma Historical Society and the Greer County Historical Society.

B. Review of probate and tax records of individuals identified as associated with the Sulphur Springs Resort.

C. Interviews with local informants who may have information regarding the Sulphur Springs Resort and /or dumping activities on 34GR177.

III. A final report including a description and analyses of the items recovered from 34GR177 as well as a history of the Sulphur Springs Resort, Greer County Oklahoma will be produced and provided to SHPO and the Oklahoma Archeological Survey. A minimum of 50 additional copies will be produced for distribution to interested scientific and historical communities.

IV. Dispute Resolution. Should any signatory party to this MOA object at any time to the actions proposed or the manner in which the terms of this MOA are implemented, FHWA shall consult with such party to resolve the objection. If FHWA determines that such an objection cannot be resolved, FHWA:

A. will forward all documentation relevant to the dispute, including FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within forty-five (45) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories, and concurring parties, and provide them with a copy of this written response. FHWA will then proceed according to its final decision.

B. may make a final decision on the dispute and proceed accordingly, if the ACHP does not provide its advice regarding the dispute within the forty-five (45)

day time period. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response(s).

C. will have the responsibility of performing all other stated and unchanged actions of this MOA not related to the dispute.

V. Amendment. This MOA may be amended when such amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all the signatories is filed with the ACHP.

[Watermark1]VI. Termination. If any signatory to this MOA determines that its terms will or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per stipulation IV, above. If within thirty (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories. Once the MOA is terminated, and prior to work continuing on the undertaking, FHWA must either (a) execute an MOA pursuant to 36 CFR 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. FHWA shall notify the signatories as to the course of action it will pursue.

Execution of this Memorandum of Agreement and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the reconstruction of SH-6 and its effects on historic properties, and that FHWA has taken into account the effects of the undertaking on historic properties.

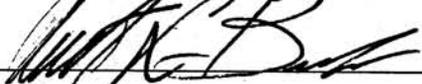
Federal Highway Administration

BY:  DATE: 3/8/2010

Oklahoma State Historic Preservation Officer

BY:  DATE: 1-14-2010

Oklahoma State Archeologist

BY:  DATE: 1/25/2010

Oklahoma Department of Transportation

BY:  DATE: 2/04/2010



## **Appendix II: Artifact Analysis (on CD)**