Ghost Towns and Gilsonite

Of the Uinta Basin

By

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Abandoned Gilsonite hoist on mined section of the Little Bonanza vein, Bonzana, Utah. In background, the American Gilsonite Company's Bonzana plant, active today, supplies the vast majority of the world's Gilsonite.

http://utahghosttowns.blogspot.com

In the far South East corner of the Uinta Basin lies a curious and remote outpost of civilization just North of the White River, among the foothills of the Basin's long, steady rise toward the Tavaputs Plateau. Bonanza, Utah, comes into view suddenly out of the desert, its dramatic storage towers and scattered company housing appear pointedly out of place in the seemingly uninhabited landscape. Which for the most part, is exactly where we are. In 1938 Bonanza was the newest of several company towns constructed in the vicinity for the purposes of mining and transporting one of earth's rarest hydrocarbons, Gilsonite. Mining still goes on at this location, but over the decades most workers have found it easier to live in Vernal and commute the 40 miles each way to work rather than to subjecting their families to such an isolated existence.

"It's not the middle of nowhere, but you can see it from here", is how Vice President Bill Britton of the American Gilsonite Company describes the location of Bonanza today. But even without the benefit of these words, it would be hard to image a more remote and inaccessible location for a mining camp. Perhaps the exact middle of nowhere we are searching for lies over the hills and across the White River, where 21 miles on a dirt road to the South and just a mile shy of the Colorado border, a historical marker informs us we have come to the site of Dragon. Looking around, we find several intact dugouts, a corral and an old log cabin. An impenetrable sagebrush jungle stands guard over two large foundations. A dilapidated trailer, origins unknown, has been abandoned here just beside them. One mile up Dragon Canyon to the West can be found the old mine, today nothing but a trench excavated to a depth of a few hundred feet for miles as its stretches off across the mountains. A concrete foundation beside a pile of collapsed timbers marks the loading trestle where for 35 years trains would stop and wait. Impossible to imagine, if one did not already know. There's not a track in sight and the narrow canyon seems a most unlikely place to ever have built one. Retracing our steps to the North, and then South and West, we set out to explore two more Gilsonite ghosts, the ex-towns of Rainbow and Watson.

Today the locations of these former towns are still marked on many roadside Atlases, and the current oil and gas boom has kept the old roads better maintained than they have been in decades. Visiting them today, it is difficult to imagine how large and developed they once were, with houses, stores, hotels, rail depots, and even baseball diamonds. As former mining camps, the histories of these towns dominated by the development of a single unique earth mineral. They arose, developed, expanded, and declined in step with the nation's early use, and later departure, from rail transportation.

From 1904 to 1939, the veins of Gilsonite South of the White River along the Colorado- Utah Border were extensively mined, and from Dragon Gilsonite was shipped 54 miles across the Book Cliff mountains via a narrow gauge railway. It was one of the last such railroads ever to be built and was the closest any railroad ever came to actually serving the cities of the Uinta Basin.[1] From Dragon (and later, the terminus at Watson) one of the latest running stage coach services in the West operated over 112 miles of road delivering passengers and freight into and out of Vernal, Fort Duchesne, and Roosevelt. By the late 1930s it was cheaper to truck the mineral to the railhead in Craig, Colorado, and the Uintah Railway was shut down. The focus of mining then shifted to the longer, thicker veins near Bonanza, and most structures in the smaller camps were torn down, moved, or simply abandoned.

Gilsonite

Though most people have never heard of Gilsonite, they invariably benefit from it several times a day. The unique hydrocarbon has a variety of uses, and finds its way into our lives through such diverse forms as the streets we drive on, the paints we cover our buildings with, the natural gas wells from whence we obtain energy, the foundry sands from whence we obtain our steel, and the ink we print and read. *Gilsulate* is a powerful insulator used to protect pipes in extreme environments. Most newspapers in North America and Europe use Gilsonite in their printing inks to prevent them from smearing. And if you bought a tank of gas in Grand Junction in the 1960s, the very gasoline you burned in your engine may have spent the previous several million years of its life as a Gilsonite *rock*, prior to being mined, crushed, slurried, piped for 73 miles, and finally refined near Loma, Colorado.

Yet despite such widespread applications almost no one who benefits from Gilsonite today knows they are even using it, what it is, or where it comes from. And in stark contrast to its variety of uses, the occurrence of Gilsonite in the natural world is a tremendously rare phenomenon. The Gilsonite of the Uinta Basin represents the overwhelming majority of global proven and probable reserves. For this we may thank the unique geologic history of the Unita Basin.

At the base of the Dragon vein, natural Gilsonite appears rather like a coal seam. Yet, unlike a coal seam, it cuts vertically up and down across layers of horizontally deposited sandstone, intruding them perpendicular to the surrounding rock's own bedding patterns.

Light and crumbly, Gilsonite is easily chipped off. It has a smooth luster reminescent of obsidian and fractures conchoidally. Mining has traditionally been undertaken by hand, which can be an unnerving process, as gilsonite dust is explosive, and picks striking the sandstone edge of the seam tend to produce sparks.

Geologists having studied the mineral usually begin their explanations approximately 50-55 million years ago during the Eocene epoch. At this time a large freshwater lake, Lake Uinta (also called Lake Green River), existed at the site of today's Uinta Basin. At this time, river drainages were flowing South to North over

flat, meandering flood plains. Ancient streams and river mouths at the Southern border of this lake put down a great thickness- a few thousand feet- of sandstone, known to us today as the Wasatch Formation. Interfingering with this formation, and gaining in thickness and dominance to the North were the finer grained sediments of the lake's bottom, which time and pressure would compact into a shale. Only the finest silt could be transported this far into the lake, and the accumulation of these muds, along with a locally abundant supply of organic matter, would over a period of fifteen million years eventually result in the deposition of 3-4,000 feet of *Kerogen*, more commonly known today as oil shale.

The second half of the story is thought to have taken place over the course of the Miocene- a later age that spanned approximately 23 to 5 million years ago. It was during this time that the South side of the Uinta Basin began the period of uplift that produced the Tavaputs Plateau, whose highest points today are over 10,000 feet above sea level. While this plateau was uprising, lengthy fissures and cracks occurred vertically across the relatively flat layers of sandstones and shales. Viscous hydrocarbons were pushed into these cracks and in so doing formed a series of Gilsonite veins, varying in thickness from just a few inches to over twenty feet wide, often several hundred feet deep, and extending up to 30 miles long.[2] It is suspected that these veins were early on exposed at the surface, allowing more volatile parts of the oil to evaporate, leaving behind a thicker base to harden and form the Gilsonite. Most are located in the fluviate layers of the late Eocene Uintah Formation, and are believed to have been intruded from below by a viscous, carbaceous matter from the older Green River shales. Only the vein at Dragon is located in the Wasatch Formation, much of which is older than the overlying Green River shales. This vein lends credence to the theory that the oily matter which formed the Gilsonite was capable of flowing both upward as well as downward as fissures in the uplifting crust spread apart.

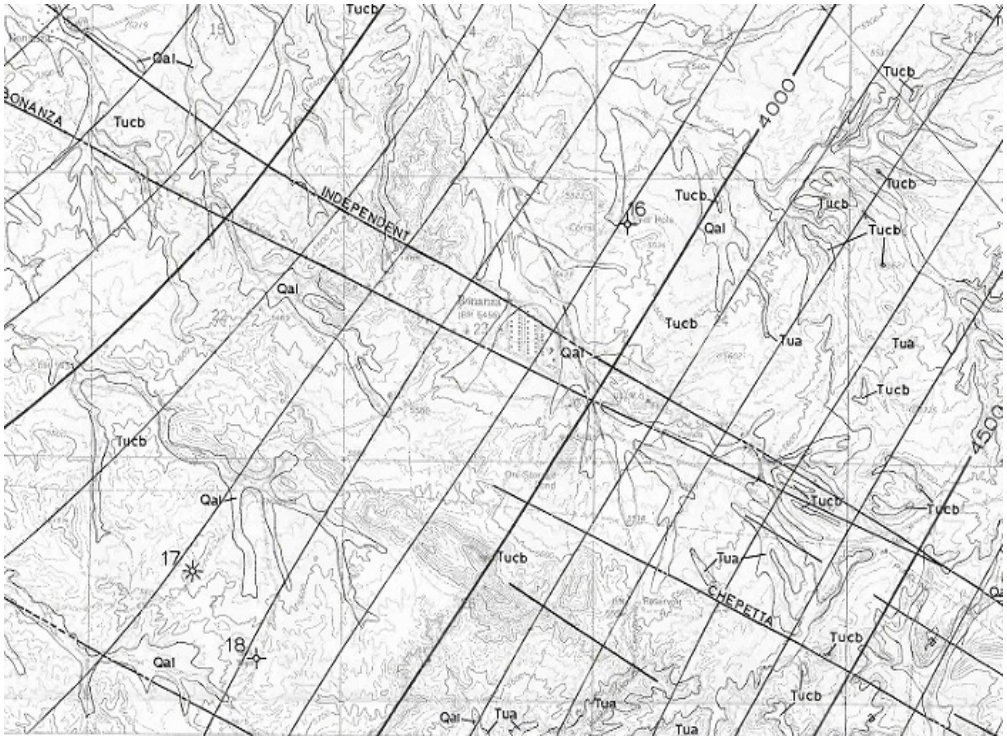


Image taken with permission from USGS Geologic Map of Bonanza area, showing SE to NW orientation of Gilsonite veins. All veins in the Uintah Basin have this same orientation. Compare length of Bonanza Vein, extending beyond the image, with the size of the town of Bonanza, center. Note: NE to SW lines are this map are elevation contours.

Courtesy, USGS, "Geologic Map of the Bonanza Quadrangle, Uintah County, Utah" 1986

Indians and Prospectors

In 1869 John Wesley Powell, while famously exploring the Green and Colorado Rivers, heard a story of the mysterious mineral. Apparently a blacksmith at the White Rocks Indian Agency had asked some Ute Indians if they knew where he could find any coal. When the Indians returned with some likely looking black rocks, the smith was surprised to find they only bubbled and melted when burned, releasing an unpleasant odor and thick, black smoke. Though whites eventually located the source vein, it would be a great many years before prospecting and mining of the mineral would occur in earnest. Much of it was located on the Ute Indian reservation, and was a far distance over rough country from any railroad. With few apparent uses, Gilsonite was largely left alone, and miners generally focused their attentions on more likely prospects elsewhere.

By 1885 a more scientific study of the rock had been undertaken. Mining geologist, minerologist, editor, and sometimes professor William Phipps Blake in that year categorized the rock as an asphalt and gave it a name, "Uintaite". He published his findings, though they did not immediately ignite much popular interest, as few commercial uses had been developed by that time.

The man who through his efforts set himself to discovering a way to make the strange mineral useful would eventually give to the mineral its modern name. Samuel H. Gilson was a remarkable and energetic figure who left his mark in many places across the early history of Utah. Born in Illinois in 1836, at age 15 he moved West to prospect with his brother. A more stable occupation than mining he discovered in ranching in the Great Basin, where by 1860 he was supplying mounts for the Pony Express. He was present at the laying of the cornerstone of the Mormon temple in Salt Lake City as well as at the celebration where a golden spike joined together the transcontinental railroad in 1869. Later he became a deputy marshal and was present at the execution of John D. Lee for his role in the Mountain Meadows massacre. By the 1880s he was living in Juab County and would often travel through the Uinta Basin to sell horses.[3]

Gilson was probably introduced to the mineral that would later bear his name in 1885 by cowboys or Utes who had already come across it near Fort Duchesne.[4] Were this the case, it would contradict a more romantic story that Sam first noticed the rock as it was being excavated by ants and deposited along their hills. But however it was brought to Sam's attention,[5] he did devote more time, and more of his patient wife's cooking pots, to the search for marketable uses for Gilsonite than anyone else hitherto. Moving to the Uinta Basin to conduct his research, he found the strange material could be used both as a lacquer and an insulation for electric wires. Deriding his passion, residents of the Basin started jokingly referring to the mineral as "Gilsonite". Soon enough Mr. Gilson would relish the name and wholeheartedly promote its use.

By the next year Gilson had befriended and was sharing his knowledge with another man whose

interest in the "asphaltum" had begun some years earlier. Bert Seaboldt was at that time a construction manager for the powerful Denver & Rio Grande Western Railroad. This railway had been the first, in 1883, to connect Colorado's Western Slope and Utah's coal fields to Salt Lake City, and for decades it would remain the single most important factor in the industrial and commercial development of Eastern Utah. Many years before, while visiting the Basin, Seaboldt had been shown an outcropping of Gilsonite by George Bason, who had located and posted a claim himself but had done no assessment work on it. Seabolt attempted to jump Bason's claim by posting his own notices, and began preforming his own experiments on the rock, finding it was impervious to both moisture as well as acids.[6] All might have gone well at that time for Seaboldt if it hadn't been for a passing Indian Agent who noticed his tents and informed him he was trespassing on the reservation.

Seaboldt and Gilson joined forces to develop the mineral, and were soon helped by the interest of an Asphalt dealer from St. Louis by the name of C.O. Baxter. Baxter had been importing Asphalts from as far away as the Mediterranean, and was very interested in the development of a closer, domestic source. Baxter read an article about a Uintah Basin asphalt and on a whim tried writing to Sam Gilson at General Delivery, Salt Lake City. Sam got the letter and began a correspondence that soon resulted in Baxter's first visit to the Basin. After meeting Gilson and Seabolt he agreed to go into business with them.

Soon after Bert Seabolt was heading to Washington, DC to lobby Congress to remove some of the mineral rich areas from the reservation.[7] After a period of initial frustration, by May 1888 a section just over 7,000 acres in size that included the veins near Fort Duchesne had been removed from the Eastern edge of the Ute reservation. "The Strip" was thus obtained after convincing the Indians to accept $20 per acre for it. And after some consideration, and little understanding of mineral rights or values, they consented to the agreement. The Strip would be known for its early Gilsonite mines as well as its saloons and lawlessness- as its unique position surrounded by but not part of a reservation kept it for years out of the jurisdiction of any law enforcement agencies. Today, the location of this settlement appears on maps as "Gusher", which it was renamed many years later by developers anticipating an oil boom. With its name reflecting the controlling interest of Missouri capital, the “St. Louis Mine” was soon up and running. In the first year of operation some 3,000 tons of Gilsonite were hauled to the railroad in Price, over a tortuous wagon road 100 miles long. Mining would initially proceed on a relatively small scale, until a series of favorable legal decisions in 1897 and 1903 opened much more of the reservation to prospecting and settlement.[8]

With several of their claims off the Reservation, Gilson, Baxter and Seaboldt organized the Gilsonite Manufacturing Company in Salt Lake City. Gilson would eventually decline a lasting position in corporate management, though in addition to his discoveries he did help put together the supply route through Nine Mile Canyon as well as organizing the Gilson Asphaltum Store in Price. Sam Gilson's name may have been secured forever by a joking offer at a board meeting to pay one silver dollar to have the company named after him, which it was. By 1889, several more investors became involved and the company switched its name to "Gilson Asphaltum Company", the first of several name changes and reorganizations over the ensuing decades. While there have always been a few other competing companies mining different veins in the basin, the one started by Gilson and Seabolt has always been the largest and is the ancestor of today's American Gilsonite Company,

which runs the plant at Bonanza, Utah and estimates its market share at over 95% of global proven and probable reserves.

The Uintah Railway

On March 3rd, 1903, Congress passed an act giving recognition to mining claims that had been illegally located on the reservation prior to 1891. The same act also provided for a sale of mineral bearing tracts of land on the reservation that had not been included among the pre-1891 claims.[9] The Gilson Ashpaltum Company had, in the previous years, purchased many of the early and inaccessible claims at low cost[10], and in 1903 they outbid many of their competitors in the auction. Subsequently they had by that year become the biggest player in the Gilsonite business, and now counted among their possessions the Dragon Vein, which only in that year had become legally available for exploitation.

This important deposit had been discovered in the fall of 1888 and was given its unique name for the appearance of some Gilsonite that outcropped there above the ground in the shape of a black dragon.[11] The vein ran far across the surface of the desert at an average width of 6 feet for over 2 miles, with a tapering width extending several miles more. In Dragon Canyon, the vein cut across a steep valley at right angles, the middle having long since been carved away by erosion, leaving the deposits on either side visible and easily accessible. A 1907 survey estimated it contained up to 2,086,479 tons of mostly high quality "select" Gilsonite.[12] Just barely inside the Utah state line, it was the thickest vein South of the White River, and was closest of any significant deposits to the D&RGW. Seaboldt's company had spent $275,000 acquiring mineral rights to claims throughout the newly opened territories.[13] Eager to start profiting on these investments, an effort quickly began to exploit the vein.

One of the greatest obstacles to speedy development was a transportation bottleneck created by poor roads and the remote and rugged nature of the territory over which they had to pass. One round trip haul from the mines to Price took 10 to 11 days, and each wagon could only carry 6,000 to 7,000 pounds of Gilsonite at a cost of $10 to $12 a ton. By contrast, rail and ship transport of Gilsonite from Price, Utah to the Krupp warehouse in Hamburg, Germany was only $13.50 per ton. While costs were partially offset by commercial freight that wagons carried on the way back, the nature of wagon transport was still grossly inefficient compared to the potential market for the mined product. The construction of a railway to Dragon was an obvious choice.

Though they were approached first with the idea, the Denver and Rio Grande declined the offer to build a route through the rugged cliffs. It would have been quite an investment for a railroad whose only purpose would be to haul out a product they did not control. Faced with this reality, the company decided to build a

railroad themselves as a wholly owned subsidiary. The Uintah Railway Company was thus incorporated on Nov 4th, 1903. A construction contract was quickly awarded to Utah Construction Company of Salt Lake City, and orders for two locomotives were placed. One crew started grading South from Dragon to the base of the pass, while another started just outside Grand Junction and built to the North.

Much of the line South of the Book Cliffs ran along the old D&RGW narrow gauge line that had been abandoned in 1890 when the Rio Grande converted to standard gauge and built a new route through Ruby Canyon along the Colorado River. This did not, however, insure the builders an easy time, as no less than 37 trestles were required to cross the various washes that meandered across the ever eroding badlands. At the same time railroad construction began, mining commenced on the vein, with Gilsonite being stockpiled just outside the entrance in anticipation of the first train.

The old connection to the D&RGW main line is still today an inhabited community, though few passing it by at 75 miles an hour take the time to stop and explore. Mack, Colorado is the last exit on I-70 Westbound with a population inside the Colorado state line. At Mack, old Highway 6, a busy route lined with gas stations, houses, industrial parks and businesses from there to Orchard Mesa suddenly veers off to the Northwest and looses its pavement as it meanders for 20 lonely miles until it rejoins the interstate inside Utah. The old railroad grade can still be driven on today. It splits off due north from town just before Hwy 6 turns to dirt, and runs between several farms for 10 miles until it hits the open desert. The road remains paved for some miles further as it approaches the cliffs. Good tires are recommended, but it is still possible to drive all the way over Baxter Pass to from Mack to Dragon today.

Mack, Colorado, as it appeared in the days of the Uintah Railway. The Uintah's narrow gauge track is visible in the center foreground of this photo as it curves to parellel the standard gauge of the Denver & Rio Grande Western. Narrow gauge cars of sacked Gilsonite from Dragon would line up parallel to waiting cars of standard gauge, and the Gilsonite would be thrown over and re-stacked by hand.
Western History/Genealogy Dept., Denver Public Library.

A company created town, Mack was named after John M. Mack, who was the first president of the Uintah Railway Company, and who would later become much more famous for his development of heavy duty trucks. Several early models of Mack's trucks would actually be used with special wheel fittings to allow them to drive over the Uintah's rails, carrying passengers and small loads between stations more cheaply and easier than using a locomotive. Other models of trucks would several times be tried as a replacement for the horses that ran passengers and freight from the rail terminus into Vernal and Roosevelt. However, their tendency to break down and become mired in the mud kept the horses in business for many years.

In its early days Mack consisted of little more than modest housing for railway workers, a hotel for travelers, a switching yard and a siding where sacks of Gilsonite would be unloaded from the Uintah's narrow gauge cars, and thrown by hand into the waiting box cars of the D&RGW's standard gauge trains. This was obviously less efficient than building a standard gauge route all the way up to Dragon, but to do that would have incurred far greater up front engineering costs. Here as elsewhere in the Rockies, narrower rails allowed the train to make steeper curves, some of which turned as much as 60 degrees with up to 7 and a half percent grades on either side of Baxter Pass.

While all original structures of the Uintah Railway station have long since burned or been torn town, there are still a few historical references to the earlier period left. "Moro Castle Ave" and "Hotel Circle" respectively refer to a unique geologic feature along the railway and the former location of the company hotel. "Baxter St", of course, is named after the investor and organizer C.O. Baxter. And while there are no more narrow gauge tracks or Shay locomotives to greet today's visitors, Uintah Liquors- featuring the image of a locomotive on its sign- is more than happy to do business with you.

Two other settlements sprung up along the Colorado side of the railway to service trains. 20 miles north of Mack an outcropping of coal was found in the Book Cliffs. A small community, Carbonera, was started there to mine the coal and supply all the railroad's fuel needs. This "town" never grew too large, and had a total population of about 24 by the 1930s.[14] Eight miles further along, still South of Baxter Pass, the more substantial town of Atchee was founded to house the railway's locomotive and car repair shops. Named after Ute chief Sam Atchee, several railway mechanics lived here with their families. A hotel, coaling and water facilities were also built, and within a few years a church and a school were erected too. Today the site of Atchee is on private land, though an adventurous driver could still visit by following the old railroad grade from Mack, which is legal to drive on. The crumbling stone foundations of the machine shop, however, are all that remains.

From Atchee the railway began the hardest part of its journey, climbing 2,012 vertical feet in only 5.8 track miles over a 7.5% grade to reach Baxter Pass, the highest point on the railway at 8,437 feet above sea level. For about every mile in distance on this stretch the train would have to climb approximately 400 vertical feet. The heavy Mallett engines custom built for the Uintah to haul trains over the pass were the largest and most powerful narrow gauge engines ever built. Along with them, geared Shay Locomotives capable of handling

steep grades and sharp turns were used from the beginning. The Pass' namesake, Charles O. Baxter had been an early promoter and supporter of the industry as well as the railway, and his brother, Frank E. Baxter was a D&RGW engineer who was borrowed to help with the Uintah surveys. After stopping at the top to check brakes, trains proceeded on to Dragon, pausing at Lake McAndrews to take on water. This reservoir was created to serve the railway and supply the miners and was named after John McAndrews, once a herder for the Indian Service in the Basin who became a helpful agent on behalf of Gilsonite interests in the 80s and 90s. McAndrews left the Indian Service in 1892 to work for Gilson Asphaltum and eventually became superintendent of the Uintah Railway's stage lines.[15] When all was said and done, the railway had cost $175,000 to build. By September of 1904, shipments were finally coming out of Dragon by rail.

Dragon

The Dragon *mine* was located 1.25 miles up a side canyon West of the broad valley along Evacuation Creek where the *town* of Dragon would be built. This town was also referred to as Dragon Junction, as it was the transfer point between the Uintah Railway and a stage service operated by the railroad that took passengers and freight through to Vernal, Roosevelt, or Fort Duchesne. A few cabins, a saloon, a loading tresetle and a bunkhouse were also established at the mines, and these were alternately referred to as Dragon Mines or Dragon Camp. A short spur connected the two settlements and, after dropping off passengers and mail at Dragon Junction, allowed trains to be loaded directly from the mine entrance.

The mining area at Dragon as it appeared circa 1907. The vein of Gilsonite is clearly visible on the right. Below the vein is the loading trestle, and the railroad track is visible in the foreground. Not pictured and further up the canyon to the left were more buildings including houses many miners lived in. Of all these structures, all that remains today is the mined vein, some concrete and collapsed wood of the loading area, and a road grade that runs up the canyon where the railroad once was. Most of the town was located one mile to the East, in a broader valley along Evacuation Creek.

Mining was undertaken by hand with pickaxes and shovels. Gilsonite would be broken up and loaded into 200 lb burlap sacks. Miners trenching from the surface dug into the vein along its length, which was timbered for support. The rock was then hoisted up to ground level and loaded into wagons that traveled down a graded road to the loading area at the base of the vein. Horses provided the power for both the hoists as well as the wagons. To reach the deeper deposits, a shaft was also dug underground to extract the mineral from

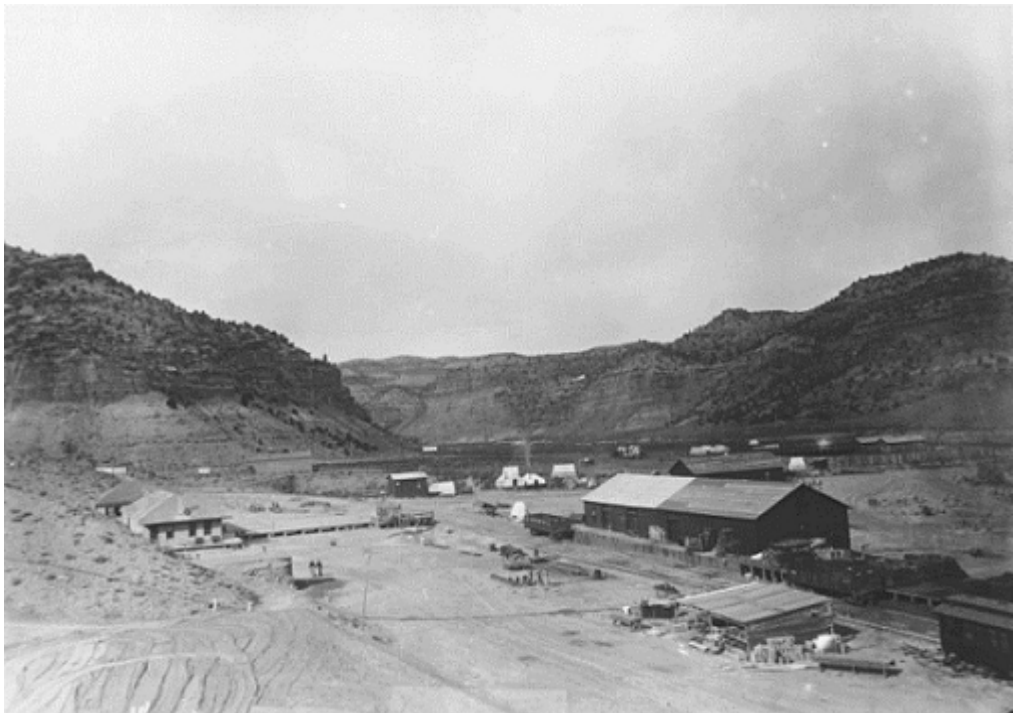
lower depths. There it was loaded into mine cars which were later pulled out to the loading trestle.

Digging out Gilsonite by hand was dirty and dangerous work. Gilsonite dust would soak into miners' pores and could only be removed with great difficulty and hard scrubbing with solvents. Often, miners would cover their exposed skin with a mutton tallow or cream that would absorb the dust and could be washed off at the end of a shift. In the early days of Dragon, water (carried in by rail) was scarce and before 1908 there were no employee showers. During the summer months baths might be forbidden, leaving miners to endure long periods unable to fully escape the black crust.[16] In 1907 miners were paid $3 per day, with 75 cents per day of it paying for board. Most miners in the early days either furnished their own tents, or lived at the boarding house. Labor and management did not always get along harmoniously, and in the spring of 1907 miners went on strike, reportedly threatening to blow up the mine if it was reopened without miners' demands being met. This strike eventually collapsed, however, with some workers going back to work and others moving away.[17]

When allowed to build up, Gilsonite dust, like coal dust, can dramatically explode, and the threat of such an explosion was among the greatest hazards faced by miners. One of the earliest such disasters took place in on the 24th of November 1896, at the St. Louis mine on the Carbon Vein just East of Fort Duchesne. This underground mine was managed by Gilson Asphaltum and was the original location of the raw material enthusiastically experimented with by Sam Gilson. That afternoon, sometime between three and four o'clock, residents of Vernal "were startled by the rattling of windows and doors and a rumbling noise like the cannonading of distant thunder." The explosion sent timbers 500 feet into the air and flames 200 feet above the surface. Rushing to the scene, reporters and curious onlookers soon learned two miners had been killed. No one knew what had triggered the explosion.[18]

Four years later, another major disaster took place when miners Isaac Cook Jr. and Charlie Anderson were working underground on the Parriette vein, several miles to the South West. To see in the darkness, the miners wore headlamps with a dangerously exposed open flame. When the dust ignited, the explosion collapsed the roof of the mine, launched a fireball 400 feet high, and killed both workers.[19] Six years later a second disaster at the Parriette occurred when four men were suffocated to death after the vein caught on fire.[20] Knowledge of these earlier accidents kept the miners at Dragon safety conscious, though the inherent dangers of mining hydrocarbons by hand would be ever present.

Beginning in 1904, most other companies in the Basin working on different veins started to abandon the old wagon road to Price and began hauling their own loads to the new railhead at Dragon. By 1906, 12,140 tons of Gilsonite were being hauled to Mack a year. By 1912, that figure had jumped to 34,511 tons.[21] Gilson Asphaltum Company would consistently have the largest output of any operator in the Basin, but through its ownership of the Uintah Railway[22] it was quite satisfied to haul Gilsonite out for its competitors. Not all competitors, however, were willing to put up with the high freight rates imposed. In fact, it eventually took a law suit filed in 1907 by a competitor to put a stop to discriminatory pricing.



Above: The town of Dragon, Utah, as it appeared in 1908. The warehouse is the large building in the right foreground, the Uintah Hotel is the large building on the left. Used by Permission, Uintah County Library Regional History Center, All Rights Reserved

Below: Dragon Today. The two markers at the right were placed here by the Uintah County historical society in 2009. Just to the left of them, one concrete foundation is visible. Numerous dugouts and one log cabin are relatively well preserved along the Western hills, but all other remnants of more substansial structures have been overgrown by sagebrush and greasewood.

As railway and passenger traffic increased, Dragon Junction quickly grew to become larger than the settled area near the mine. A post office was built to handle the mail. Other buildings included a large

warehouse, a store, and a 20 room hotel that served passengers bound for either direction. Those staying overnight at the hotel could look forward to a breakfast that included fresh eggs from the chicken coops kept just behind the General Mangers' residence, and even ice was available year round from a storage cellar built right next to the hotel. Enough families eventually moved to the area that a school was required, and by 1910 it had an average enrollment of about 20 pupils. Occasionally, visiting ministers, school superintendents, or other notables passing through town would be given use of the school building for lectures or religious services. All structures in Dragon were built along a relatively narrow North to South strip of land near the mouth of Dragon Canyon. Town was bordered on the West by the canyon's high walls, into which dugout houses were built which can still be seen today. On the East, expansion was prevented by the steep ravine of Evacuation Creek, which could vary in flow from a tiny trickle in the summer to a raging torrent during spring run off- or any other time a sudden rainstorm produced a flash flood.

The monotony of miners' life was broken up by periodic sports and diversions. The Gilsonite camp soon had its own baseball team, which played regularly on Sundays, and would at times travel far across the Basin or into Colorado for games. Saturday night dances were also periodically held, usually in the Dragon hotel or at Mr. Jensen's store at the mine. A library was started at the initiative of General Manager M.W. Cooley's wife. By April of 1910 it had 300 volumes, and Mr. T.M. McNeil was employed as its librarian. Books were carried up and down the railway to be loaned out to communities along the line, and were also made freely available to cattle and sheep ranchers in the area. Further contact with the outside world was made possible by both Telegraph as well as a Telephone lines into Vernal, which by 1907 were proving their usefulness, being "resorted to" at least once to stop a fleeing criminal from escaping the county.[23]

Less healthy diversions were available as well, in the form of two saloons. Though violence was rare in the orderly company town, consumption was sufficient at times to induce fights. On at least one occasion, extraordinary conduct prompted the *Vernal Express* to declare its desire for the county to either grant the town a justice of the peace, or revoke the Dragon saloon's liquor license. In 1911, an accused cattle rustler, Joe Gurr, was visiting Dragon. In a bout of bad spirits, and after a long night of drinking, he began to menace and assault the citizens of the town with a bread knife.[24] Ultimately, a sheriff from Vernal was dispatched via auto to extract Mr. Gurr. Among the fallout from this tragedy was a great abuse of the right of petition by citizens of the town, many of whose signatures appeared first a petition to the county commissioners demanding the banning of the sale of liquor in Dragon, and then again on a counter petition opposing that petition.[25]

Like many Western mining camps with limited water supplies, the threat of fire was an ever present danger. And in the spring of 1910, two occurred with potentially disastrous consequences. In February, a fire started by a gasoline stove burned down Mr. Odem's saloon on the North side of town. Odem was able to save the money, and as most of the liquor stock was kept downstairs in the basement, it survived the flames unharmed. Losses sustained were estimated at $500, but did not extend beyond the premises.

A larger and much more serious conflagration occurred a few months later on May 9th. Just before 5pm, sparks from the smoke stack of a passenger train fell on some sacked Gilsonite which quickly began to burn. Several cars fully loaded with Gilsonite and ready for shipment were saved by the hurried actions of railwaymen. The Uintah Railway's warehouse, however, was not so lucky. It burned to the ground, along with an estimated $15,000 worth of stored Gilsonite and merchandise bound for Vernal. Bucket brigades were able to stop the fire from spreading to other buildings, but the warehouse and all of its contents were a total loss.

Though Dragon would continue to exist as a town until 1939, its importance as a center of Gilsonite mining was dramatically reduced by a mining accident in 1908. In the wee hours of the morning of February 12th, sleeping residents were suddenly awoken by the sound of an explosion coming from the Dragon mine. As Bender describes,

> explosions rocked the area, hurling mine timbers for as much as two thousand feet and killing instantly the two Greeks who were the only men at work in the mine during that shift. The intense heat from the burning Gilsonite made it impossible to even approach the entrance to the open vein for days, and the red glow from the fire was visible in the night sky at Vernal, 68 miles away. The bodies of the two miners were not found and recovered for another 14 months, having been entombed by the molten Gilsonite which flowed into and filled the drift where they were working. The fire continued to burn for months afterward, growing fierce at times and then seeming to die out again. Over two and a half years later, the *Vernal Express* reported that the same fire had broken out anew after smoldering for some time in the Cumberland tunnel of the Dragon mine.[26]

The exact cause would never be known, and was perplexing to many, as the company had recently taken the steps of installing electric lights to allow work to proceed more safely. Perhaps an accidental spark, or the lighting of a cigarette set off the explosion deep inside the shaft. Whatever the cause, the fire in the mine was still burning two months later, and would smolder, periodically breaking out, for another two years. Over the course of that time the vein continued to be mined, though breakouts would periodically disrupt operations.

Dragon survived the loss of a warehouse and even a massive fire at its only mine, but beginning in 1911 it started to decline in importance. That year, the railway was extended 12 miles further North to a new terminus. There a town quickly grew up to take over many of the functions of transport in and out of the Basin that Dragon had previously fulfilled. It would be known as Watson, and was named after W.G. Watson, the engineer who oversaw the extension. From Watson a spur ran Southwest for four miles to a new mining camp growing up along the Rainbow Vein[27] of Gilsonite, which had not yet been seriously exploited. Here Barber (Gilson) Asphalt relocated its men and equipment who had previously worked at Dragon.

Dragon's businesses began to stall at the loss of railway traffic and miners' patronage. By August of 1911, Myron Mott, Dragon's barber, had moved back to Vernal in search of customers.[28] However, all was not

quite over for Dragon yet. By late October 1917, the Dragon mines were being leased from Barber to another company.[29] In celebration of their town's continuing relevance, residents of Dragon reportedly held "the best dance ever given here", for which the Uintah Railway sent up a special caboose to accommodate the public. By 1917, need was even such that a new school was erected.

Watson

Watson was officially opened on November 19, 1911. The extension of the Railway fueled the wildest hype and speculation by Basin residents that the line would soon be continued all the way to Vernal, and moreover, be upgraded to standard gauge. Passengers riding the train could see several areas where the Uintah had begun using longer standard gauge ties to replace older ones as they wore out, giving the tracks an uneven, if optimistic, appearance. Plans to tunnel underneath Baxter Pass and widen the curves were discussed and surveys were made, and now and then a company representative would even drop a word or two in the local newspaper to fuel these hopes.[30] Perhaps projecting some of its own psychology onto Railway operators, the *Vernal Express* duly noted the importance of the mines near Watson, but spent more words enthusing the "ever present desire" to "gradually push the line on".[31] Ten years later, little had changed in Vernalites' optimism, and the paper once again was moved to report "Uintah Railway Will Extend Road" in large bold letters on its front page.[32] But eventually all this talk would come to naught. Watson would be the closest a freight and passenger railway would ever get.

Where Dragon's short distance from the mine allowed for an easier integration of mining, railway, and commercial life into a single location, the Rainbow mine that Watson's trains primarily arrived to serve were four miles Southwest of town. Watson's main purpose was to function as a transfer point for passengers and freight between Basin cities and the D&RGW main line at Mack. This limited mission gave the town a reason to exist, but its prosperity would only last as long as the Railway was the primary means of transport into and out of the Basin.

Structures erected in Watson included a rail depot, a warehouse, a post office, a school, a telephone office, and a general store. A mechanic's shop employed eight men and worked hard to keep company and private automobiles running. The Watson Hotel provided a layover stop for travelers headed either direction. As in Dragon, dugouts were relatively easy to dig into the hillsides, where they were used for storage as well as dwellings. Unlike wooden buildings, their design has allowed several to remain intact to this day, where they comprise the bulk of Watson's ruins.

With the addition of Watson, the Uintah Railway Baseball League got one of its best teams. Defeating Dragon in the first four games of 1912, and Mack in the spring of 1913, the progress of the Watson team was

eagerly followed as whole articles in the *Vernal Express* devoted to specific games found their way to print.[33] Life in the generally orderly town was not always as carefree or benevolent, however. In April 1916 a fight broke out among workers at the company office as they were standing in line to draw their pay. Apparently tensions among four employees had been brewing for a while, and the melee may have lasted an hour and a half. One individual, Richard McDermott, was even shot in the fight, but the wound was minor enough that he was able to go along with sheriff Hatch Murray when he came to town and made arrests the next day. All four were taken to Vernal and each placed under $500 bond.[34]

Dugouts such as these two built into the hillside at Watson make up the bulk of Dragon and Watson's remaining structures.

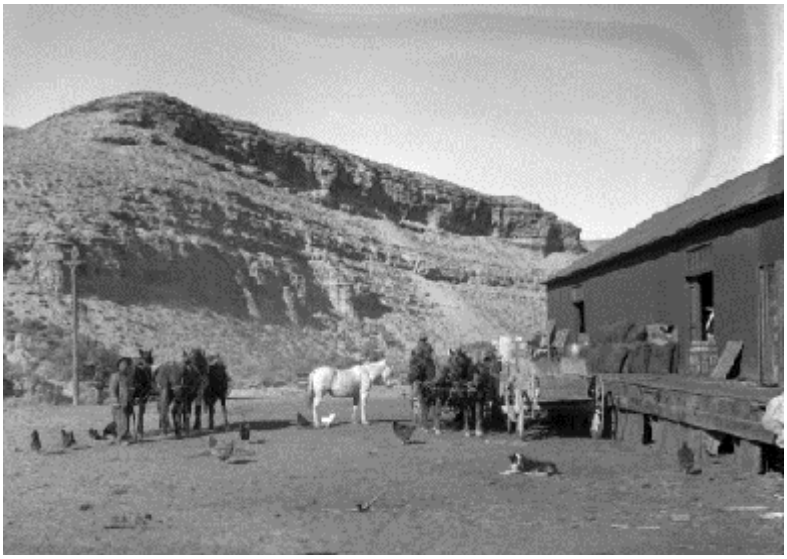
The same railroad and stage service that hauled homesteaders and mine superintendents was equally capable of transporting more nefarious characters. On a hot summer night in 1917, one such individual, Bruce Blair, crept into the pump house office of the Uintah Railway and stole a watch out of a vest. Taking the stage to town, he wisely got off the wagon at Vernal's outskirts. However, city police had been notified and were looking for him. He was caught, escaped, chased and shot at through Vernal's streets, and finally caught again the next day at a relative's ranch.[35] The drama did not end there, for within a week Blair had sawed himself out of his cell with two hacksaw blades he had had on himself when captured, which he smuggled into prison under his belt. [36] The next day, he was found enjoying a meal and shaving at a sheep camp. Captured again and finally put on trial, Blair received a 6 months sentence at the penitentiary in Salt Lake.[37]

The World War left its mark on the town, as it did to so much of American industry. Not only was the Gilsonite business going strong, but the energy needs of warring nations compelled them to take a closer look at the oil shale reserves of the Uinta Basin. Samples were sent to England for analysis by chemists there, and in 1917 executives of the Crane Shale Oil Corporation proposed building a plant at Watson. For a few exciting years extending into the early 1920s, oil shale development seemed likely might take place on a wide scale. The

oil separation plant was eventually built, just 4 miles outside of town.[38] But the high cost of separating the oil from the shale soon forced its closure. The same expectations, and the same logistical and economic problems, would defeat shale developers time and again over subsequent energy crises.[39]

Somewhat more helpful for the war effort was the participation of many residents in the American Red Cross. At the initiative of Mrs. Cooley, the Railway superintendent's wife, chapters were formed across the Basin, including at Dragon, Watson, and Rainbow. In April of 1918 the Watson chapter held a "box supper and dance". Individual boxes were auctioned off, most going for between $8 to $10. The largest box, with the cake, went for $124.40. Proceeds were donated to the Red Cross.[40] Less benevolent collections were taken as well. Just three days before the Armistice, the United War Organization Committee's representatives at Dragon, Watson, and Vernal were leading drives to collect more funds for the war effort.[41]

Above Left: Approaching the Terminus of the Uintah Railway at Watson. Western History/Genealogy Dept., Denver Public Library.



Above Right: Uintah Railway Engine. First three cars behind the coal car are water tanks. A watering station, Wendella, was built where the train passed Lake McAndrews, high in the Book Cliffs. Water would be hauled by train to the towns of Dragon, Watson, and Rainbow for the duration of the towns' lives. Western History/Genealogy Dept., Denver Public Library.

Left: Freight being transferred onto wagons at the Uintah Railway station in Watson, circa 1912. Western History/Genealogy Dept., Denver Public Library.

One other industry besides Gilsonite mining did periodically give a jolt of real energy to Watson. By

1919, among the economic resources of Uintah County was an estimated 153,000 head of sheep. A new shearing plant built at Watson that year employed 16 shearers who sheared 55,000 head.[42] All together this netted 1,479,963 pounds of wool. At 52 to 55 cents a pound, the sheep sheared at Watson alone contributed about $800,000 to the fortunes of Uintah County[43]. The railway made shipping the wool much easier, and in ensuing years a similar volume of this traffic would be reported each spring. However, shearing was not a year round industry. Gilsonite alone would remain the primary commodity railed out of the basin.[44]

Freight coming *in*, however, began to mysteriously drop off during the first World War. Yet the incoming trains were still running heavy, the road from Watson stayed busy, and the shelves in Vernal remained full. The cause was a manipulation of parcel post mail, which allowed very affordable rates for bulky, heavy items. The railway saw numbers of parcel post packages handled by its trains under contract for the postal service rise several fold over the freight the railroad itself was setting prices for. In one series of shipments, 10,000 lbs of salt arrived at once. Then there was the 12,500 lbs of flour and the 8,800 lbs of sugar. Everything from garden tools to auto parts to strawberries was being snuck in by being packed in boxes just under the 50 lb limit. In fact, the large, two story brick building that would hold the Bank of Vernal was entirely built with bricks purchased in Salt Lake City and mailed via parcel post. The extent of this manipulation was revealed after a brake failure on a Railway mail truck caused a crash, scattering bricks in all directions. By the summer of 1916, it was estimated that the Postal Service was losing $25,000 to $30,000 per year in the Uinta Basin area alone as a result of these activities. Finally, in November of that year the Post Office sent instructions to its postmasters not to allow more than 200 lbs of parcel post mail per addressee per day.[45]

Until 1921, the stage service from Watson used automobiles as well as horses, which were still very much appreciated by passengers at times of mechanical failure.[46] In May that year, the company disbanded its "wagon and automobile truck" service, citing the unprofitability of running it. It was one of the last stage services in the country still in operation, which at its height had involved 172 horses and mules.[47] Passenger traffic over the Uintah Railway subsequently declined, as anyone traveling over the line would have to make private arrangements to get to Watson.[48] Soon after abolishing its passenger stage service, the Railway reduced its passenger train service to a tri-weekly schedule. These reductions in traffic would have a dramatic impact on Watson. In 1928, a journalist doing a story on Gilsonite had this to say about conditions along the old toll roads and the Watson town:

> Across the rivers' bridge we are halted in the deserted village of White River... A gate across the roadway reminds us that the old stage route is now a tollway and that we are expected to help pay for its upkeep. Mr. Henry H. Wolf the accommodating man in charge of the toll station explains that the place some eight or nine years ago was a busy place for freighters and travelers but at the present he his dog and a collection of cats are the only ones left to tell the tale.... We... hasten on our journey... Finally we come to Watson. The place is almost deserted. Since the days of the stage nearly all the buildings have become vacated. The population on "ordinary days" totals only eight souls but on "train days" it often doubles that number. By "train days" we learn is meant the days on which the train comes to that place. This is every other day. The train is composed usually of one passenger car a freight car for hauling supplies, and a string of empty flat cars for Gilsonite.[49]

The traveler found only one store open in Watson. Only a shell of it would still be clinging to life by 1939.

Rainbow

The vein at Rainbow was ten feet wide at the surface, and soon the miners were trenching down into a long open cut. The Gilsonite was not quite as high grade as it was at Dragon, but the cost of mining it was less. Sacks of Gilsonite were easier to push out here in mine cars than they were to haul out by hand along the uneven, narrow passageways of the Dragon vein. At the entrance electrical hoists loaded the heavy sacks onto railway cars. By late 1912, Gilson Asphaltum was employing 65 men at Rainbow, each capable of digging out 5 to 7 carloads of Gilsonite per day.[50] This made the Rainbow vein the most productive in the Basin at that time. By 1937, the vein had been mined for a length of 3 miles and, in places, to a depth of over 400 feet. As the miners worked their way deeper and deeper, widths of netting was suspended between the horizontal support timbers to keep rock from falling on those working below.

Miners did not commute from Watson, but lived at Rainbow. In early 1913, Mr. McAndrews, superintendent of the Uintah Railway stage lines, invited two county commissioners and a newspaper reporter to ride with him on a visit to Rainbow. The writer was impressed with the "neat little town." He described, “Some twenty houses, frame and log, all painted... spaced along on both sides of a wide, clean street, at the other end of which stands the [one room] school house upon which there is a belfry with a bell, and within ten students and a pretty school teacher... A water system supplies all of the houses with pure mountain water from a large tank that is built at the end of the track on an elevation above the camp. The water is hauled by the company from the springs near Baxter Pass.”[51]

Miner posing atop a carload of sacked Gilsonite outside the entrance to the Rainbow mine. Note the miners' darkened face, an inevitable result of exposure to gilsonite dust.

Western History/Genealogy Dept., Denver Public Library.

The houses were built and owned by the company, and ran in a straight line North to South. Other structures in town included a store, a boarding house, a church, and later, a recreation hall where weekend dances would be held and films were shown on a "moving picture machine". The store and boarding house were owned by private individuals independent of the Railway or the mines, though they were completely dependent on miners' patronage to stay in business. A Sunday School started in 1921 reported an attendance of fifty[52], and by 1925 there were 24 pupils in the Rainbow school.[53]

The town of Rainbow, Utah, as it appeared in 1925.

In 1931, Utah Educational Magazine editor D. W. Parratt paid a visit to Rainbow, and was given a tour of the mines. Deep inside the mine Parratt met several workers, and got a lesson in mine safety:

> Occasionally the workmen strike fire with their picks as they hit against the sandstone adjoining the Gilsonite. This startles us for we are aware of the fact that we are in the midst of an extremely combustible dust but [mine superintendent] Mr Ford allays our fears by telling us that in some unaccountable manner the dust has never been known to ignite from fire flashes of this sort he also remarks that utmost precautions are taken to prevent dust explosions. Nobody is allowed to carry matches in the place and any employee found smoking in the mine would be discharged at once. Hoisting machinery is all kept away from the workings as a safety measure and only electric safety lamps of the very best make are used by the miners.[54]

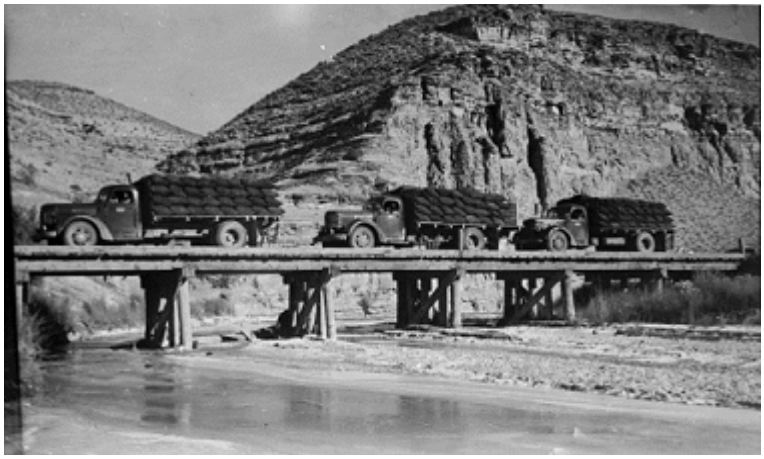
For many years miners at Rainbow managed to avoid the sorts of major accidents that had at times shut down Gilsonite operations elsewhere. Periodically pickaxes were accidentally run through a miners' foot or leg,[55] and traffic accidents getting to or from town resulted in injuries.[56] Economic recessions, as in 1920 and

1929, hurt far more miners than on the job accidents,[57] and the town's greatest loss of life in a single day was limited to the massacre of 27 sheep by coyotes in 1916.[58] In 1938, a fire started in the vein, though no one was working it at the time. Believed to be a result of lightning or spontaneous combustion, it was only noticed and put out after rising smoke was seen from a distance. 50 mine workers were called in to fight the blaze, which they mostly extinguished with dirt.[59] Dust explosions were prevented throughout the duration of Rainbow's active life as a mining town, though one eventually did occur in 1945 and killed one miner.[60]

In the spring of 1929 a rockslide on Baxter Pass put the Uintah Railway out of commission for several weeks. Gilsonite soon filled up the warehouses and the mines had to suspend operations till trains could run again. Approximately 150 miners were idled and 180,000 pounds of wool built up at Watson awaiting shipment. While crews were battling the uncooperative mountain, temporary plans had to be made to truck the wool and Gilsonite to the Denver and Salt Lake Railway terminus at Craig.[61] The Uintah's tracks were eventually cleared, but the interval had demonstrated how efficient and increasingly affordable trucking was becoming.

The End of an Era

Watson had continued to decline in importance throughout the 1930s, and by 1936 the absence of children in town resulted in few protests over a homesteader's decision to tear down the Watson school and move it to his property on Missouri Creek.[62] The settlement at Rainbow mine stayed lively a while longer, as the mine provided steady work to more people than the businesses at Watson could. However, by 1937, the decision had been made to close operations at Rainbow, close the Uintah Railway, and shift the focus of mining to Bonanza, where Gilsonite would henceforth be hauled out of the basin by trucks to Craig. By December of that year, 16 cottages were being erected in the new town.[63] Several of Rainbow's buildings were torn down and used in the construction of Bonanza. By the summer of 1938 workers still mining at Rainbow were living in the boarding house at Watson, as the one at Rainbow had already been “abolished.” [64] That fall, people started moving away from Rainbow, Dragon, Watson, and Atchee in earnest.



Trucks loaded with Gilsonite crossing the former railroad bridge over Evacuation Creek near Watson, Utah in 1940. The year before, the Uintah Railway had shut down. Operating the narrow gauge line over 66 miles of winding, mountainous terrain between Watson and Mack had become more expensive than trucking to Craig, Colorado.

The last train on the Uintah Railway pulled out of the Mack Depot at 8:10 am on May 16th, 1939. Along with one box car and two flats, Mallet Engine No. 50 was bringing the last ever shipment of water for the lingering residents of Dragon and Watson. As the train began its return trip, a “funeral like” atmosphere prevailed. By then the railway had operated at a loss for over a year. Hauling Gilsonite out by rail to Mack was costing the company $9.95 per ton, while trucks could drive it the 122 miles to Craig for only $5 per ton.[65] For 35 years the railway had transported to the world a useful commodity by the most efficient method then possible, but times had changed. In September a contractor with a crew of 25 men was at work disassembling the railway, the steel from which was sold as scrap to the Colorado Fuel and Iron Mills near Pueblo, Colorado. Engines, cars, and equipment was auctioned off, some of it finding its way to useful service in Oregon and eventually, Guatemala. The old grade was taken over by the county and maintained as a mine access road. It is still drivable today, though completely forgotten as a once hopeful “short and direct route” for visitors touring Utah's national parks.

For many years the Uinta Basin's newspaper of record ran an "Along the Uintah Railway" column, as well as regular articles about specific occurrences in individual Gilsonite towns. Reading through these today one can learn a great deal about life in this remote corner of the Basin. News reporting is frequently pleasant, if mundane, and mostly describes the coming and goings of various persons, often visiting their families or moving to a new home. The travel plans of railway executives are often covered, whether it's one of General Manager M.W. Cooley's business trips to Denver or Salt Lake, or Superintendent McAndrew's escorting of his daughter Helen to college at the University of California. Subsequent superintendents proved similarly newsworthy.

The great bulk of words written leaves one with an impression of a generally pleasant and orderly existence. School district elections are held at the Watson school.[66] Mrs. Jack Winkler of the Watson hotel was thrown a surprise birthday party, where "Dancing was the main feature of the evening... a delicious lunch was served including a lovely birthday cake decorated in pink and white."[67] A Christmas dance, following a night of "music and recitations", is "enjoyed to the limit."[68] Halloween is celebrated at Rainbow by a masked ball where "merriment reigns supreme", and "everyone went home declaring the evening the 'best time ever.'”[69] "Most all the young boys" attended the show and dance at Dragon, and Mr. and Mrs. William Lang of Watson are proud to announce the arrival of a fine baby boy.[70]

At other occasions, this predictable, if benevolent monotony is violently shattered by a grimmer reporting. Instances of tragedy are less prominent in weekly articles, but taken together over a multi year period, the veneer of simplicity and harmony in "the gold old days" wanes fast. A boy drowns, carried away by a flash flood on July 4th when the family car stalls out in a wash. The ensuing manhunt fails to recover the body, which is assumed to be entombed under layers of drying mud.[71] Another child is burnt to death when a lamp his father was fixing explodes inside their Watson house.[72] A Greek is shot at and beaten up just outside of town.[73] General Manager of the Uintah Railway James Hood is himself killed by injuries sustained in a train wreck on his own railroad line.[74] A traumatized and blinded passenger sues the company for damages after another derailment.[75] A mine worker has his skull crushed from a falling timber at the Little Emma mine and

dies instantly.[76] The Spanish Flu kills Watson's nurse.[77] Dolly G. Bobzien of Watson is granted a divorce from her husband Charles "on a charge of cruelty".[78] A former Watson resident, "in the vigor of manhood", is killed when a train engine strikes his car near Delta, Colorado.[79] Orlie Murray of Rainbow was shipped off to Vernal for medical attention after suffering "with a serve case of blood poisoning caused by an infection from a scratch."[80] Mable Robbins of Rainbow received word that her little brother at Mack had one of his hands "badly torn to pieces when a giant [blasting] cap he was holding exploded."[81] Mrs. Thomas Kendall of Dragon learns her son has died at the Country Boy mine.[82] Mrs. Gerald Steward arrives in Jensen from Fruita with the remains of her dead husband.[83] A five year old child from a ranch on Willow Creek rides 40 miles through the night in a lumber wagon to get to Watson, after being "completely scalped in [an] unavoidable accident".[84] Steven Perry of Rainbow, "misfourtunately", has run a pick through his leg, and "has been unable to get around since."[85]

The industrial history of an ostensibly humdrum commodity such as Gilsonite does not, as a general role, excite the same passions, nor inspire the same literary output, as the gold and silver camps that boomed and fell elsewhere in Utah and throughout the West at the same time. Gilsonite shipments were not so rich that they were guarded by armed escorts. No miners smuggled chunks of "high quality" Gilsonite out of the mines in their clothes to sell to enterprising bartenders. There were no express cars full of valuables to be robbed along the Uintah Railway, and there were rarely even enough passengers to make a going through of their pockets worthwhile. The mine payrolls were not as large as the coal camps and Butch Cassidy never tried to rob, [86] much less work at one, as he had in the exciting early days of Telluride.

That being said, the voluminous accounting of miners' and residents' lives in the Gilsonite camps are rich in their own struggle and adversity. Gunfights were rare, but sickness and accidents were not. Towns had less trouble from Indian attacks but their residents experienced fear and grief enough of pneumonia, appendicitis, and the whooping cough. The quiet, abandoned townsites with their crumbling ruins and winding roads, surely, are comparable in human drama and tragedy as anything that took place at other mining camps in the state.

Epilogue: Bonanza

Unlike the older camps which were built along creeks that had carved deep canyons, Bonanza was situated further North where wide, flat landscapes dominate topography. The company was looking to keep things based in Bonanza for the foreseeable, and as a result, workers here had built for them a model company town that far exceeded in amenities what most had been used to. By 1957 more than 200 people were living at Bonanza in individual houses with their children attending a much larger and brand new school.

By that time corporate mergers involving Standard Oil of California (later Chevron) had transformed

Barber Asphaltum into the American Gilsonite Company. Increased research and development found a way to transform solid Gilsonite into a high octane gasoline, as well as a high quality coking fuel. In 1957 a 72 mile pipeline was built over the old Uintah Railway grade from Bonanza to present day Loma, Colorado. At Bonanza, Gilsonite started to be mined hydraulically with pressure hoses and mechanical cutters fitted with a low pressure stream of water that carried the crushed rock to a central sump at the bottom of inclined drifts. There, Gilsonite was kept in suspension before being electrically pumped uphill to a slurry preparation plant. Leaving the plant, a slurry of water and particles of Gilsonite less than one-eight inch in size was pumped through a pipeline laid over Baxter Pass. At Loma a plant dried the Gilsonite, and processed it into a gasoline fuel. By the 1970s, competition from newer refineries in the area encouraged this plant to close, and the company shifted back to only selling dry Gilsonite. Behind the signs warning of asbestos contamination, the rusting and crumbling remains of the gasoline factory can be seen today just North of I-70 at the East side of the Loma Exit. As of this writing it is in the process of being torn down by Fruita Development, LLC which plans to replace it with a business park.

Left: In 1945, an explosion at Bonanza set the vein on fire, launching flames high into the sky. Luckily, no one in that accident was killed. Later, the introduction of hydraulic mining techniques greatly increased the safety of Gilsonite miners by keeping mines wet and dust levels down. This was very much appreciated upon the technique's introduction in 1957. Four years earlier, a second massive explosion at Bonanza had killed eight miners and was the worst disaster in Gilsonite mining history. Today, mining is undertaken by hand and hydraulic methods are no longer used. This does allow the old danger of more dust build up to remain, but safety precautions have prevented any massive explosions from occuring for nearly 60 years.

Special Collections Department,
J Willard Marriott Library, University of Utah

Today the plant at Bonanza is still running, though the town is a few decades removed from its glory days. Mining continues with pneumatic jack hammers and is largely done by hand. The company houses are still there, but many have become dilapidated, as most of the 120 employees prefer to live in Vernal and commute to work. The Bonanza plant busily works away supplying most of the world's Gilsonite, and decades of industriousness are obvious from the roads leading out of town. Mined out veins of Gilsonite stretch far into the distance, and frames of abandoned mechanical hoists stand precariously over the empty trenches.

The longest and thickest veins of Gilsonite in the Uinta Basin are located at Bonanza. The three men standing side by side holding hands in this photo at the Cowboy Vein provide a useful scale. In the same area, the Bonanza, Little Bonanza, Wagon Hound and Uinta Veins all closely parallel each other and maintain impressive widths.

Being 10 miles further North and on the other side of the White River, the Bonanza mines had closed in 1914, but reopened in 1928 when improved roads made them once again economical to mine. In 1938, the Barber Asphaltum Company permanently moved its operations here from Rainbow. Today, its corporate descendant, the American Gilsonite Company, continues to mine and distribute from Bonanza. Were the same three men in the photograph at the left to attempt to repeat their pose today, they would find themselves tumbing several hundred feet into a chasm. Western History/Genealogy Dept., Denver Public Library.

The ruins of the early Gilsonite camps make for intriguing, if incredibly remote, visitation today. Numerous dugouts have outlasted the log cabins and board structures and are relatively well preserved at Dragon and Watson. At Dragon, a few collapsing corrals are easily visible while the stone and brick foundations of larger structures struggle to remain visible above today's impressive stands of sagebrush and greasewood. Nothing is left of Rainbow, except for the old mined out vein, which stretches like a gash for miles across the countryside.

More often than not, the significance of these ruins are overlooked by the workers of a newer boom- natural gas- as they drive through the town sites hauling machinery to distant drilling pads. The boom has not impacted the Dragon town site, which is largely undisturbed (save the ravages of time). A historical marker there erected in 2009 by the Uintah County Historical Society provides some welcome context, photographs, and a map of the 1911 town layout. Drilling companies have done quite a bit of work to maintain the roads in far better condition than they ever were for stage drivers 100 years ago. At Watson in the summer of 2011, construction was begun on a new bridge spanning evacuation Creek. A large air conditioned camper, serving as an office, has been parked just above the ruins of an old dugout, dramatically illustrating the past century's advances in local housing conditions. How astonished, and appreciative, the old inhabitants would be to see such a thing today!

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Articles

For many years the Vernal Express ran a regular "Dragon" collum that reported on comings and goings of persons, and various facets of daily life. Re-reading them today, one finds them to be as dramatic as the mine exploding in 1908 or as benevolent as Mrs. Coltharp's organization of a knitting class for children in 1917. Searching the archives has been made infinitely easier thanks to the ongoing digitization of the nation's newspapers. To search back issues of the Vernal Express, try http://digitalnewspapers.org/newspaper/?paper=Vernal+Express . - CW

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Nichols, Jeffrey D. “Sam Gilson Did Much More Than Promote Gilsonite.” *Utah History To Go*. May 1995. <http://historytogo.utah.gov/utah_chapters/mining_and_railroads/samgilsondidmuchmorethanpromotegilsonite.html>.

1 In the years since the Uintah Railway was dismantled, one other railroad has got a little closer to penetrating the basin, though it does not connect to Vernal or any other city. A pair of tracks passes just North of Bonanza heading into the state from Craig, CO, but it is used exclusively for delivering coal to the Uintah County coal fired Power Plant. The transport and supply needs of Basin Cities continue to be met by trucking alone.

2 Redfield, A.H. "Native Bitumens." Industrial Minerals and Rocks. Ed Samuel Dolbear. New York: American Institute of Mining and Metallurgical Engineers, 1947. 637-642. American Institute of Mining and Metallurgical Engineers July 20 2011. <http://www.aimehq.org/library/books/Industrial%20Minerals%20and%20Rocks,%201949/637.pdf>. p. 637.

3 Sam Gilson withdrew the active participation in the Gilsonite Buisness in the late 1890s, a point at which his name often disappears from subsequent histories of Gilsonite mining or the Gilson Asphaltum Company. A man of many interests, Sam Gilson spent his subsequent years involved in a variety of activities, from running a livery business in Price, UT to drawing up designs for coke ovens, train platforms, and even an airplane. Some of his activities, such as spying on polygamists in the early 1880s and publicly supporting striking coal miners in Carbon County in 1904, have in their controversy been omitted from almost every published account of Gilsonite mining history. For an account of Gilson's “forgotten” labor advocacy, see Powell, Allan Kent. “The 'Foreign Element' and the 1903-1904 Carbon County Coal Strike.” Utah Historical Quarterly 40.2 (Spring 1975): 151-152. Sam Gilson died in Salt Lake City on December 2, 1913.

4 While navigating the sometimes confusing lexicon of names and places in the Uinta Basin it is important to remember that the location of old Fort Duchesne, which is between Roosevelt and Vernal, was an entirely different settlement from today's town of Duchesne, at the far West end of the Basin at the junction of Highways 40 and 191. Nothing today is left of old Fort Duchesne, though the old graveyard is still visible from the highway. Duchesne is properly pronounced "Doo-Shane."

5 In 1937, a 90 year old Mrs. Gilson living in Salt Lake City shared her version of the story with a reporter from the Vernal express. Dismissing many romantic notions, she claims her husband was first introduced to the mineral while returning to their home, in Salina Canyon, from selling horses in neighboring states to the East. When he passed through Fort Duchesne, he stopped to visit. There an Indian chief told him about some strange rocks he had found, and took Mr. Gilson to a ledge containing the mineral. "Uintah Gilsonite Production Nears Million Dollar Mark." Vernal Express October 21, 1937: 1. Utah Digital Newspapers July 15, 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=405721&CISOPTR=405711>.

6 One oft cited early use for Gilsonite was as a liner for beer barrels. This myth has a basis in reality, but is not actually true. C.E. Soest, a long time friend of Bert Seaboldt, was a Vice President at Anheuser-Busch. He had received some Gilsonite from Seaboldt and was able to interest Adolphus Busch in its potential as a barrel liner, a concept Busch enthusiastically supported as the asphaltic product they had hitherto been using was at high cost being imported from Sicily. While an ultimately fruitful financial partnership would result, and it was a Busch employee, C.O. Baxter, who lent his name to the high pass the Gilsonite Railway would eventually cross, the experiment with beer barrels was never more than "a costly and disappointing failure", as the Gilsonite infused and destroyed the beer. Bender, Henry E. Uinta Railway: the Gilsonite Route. Colorado: Heimburger House, 1955. p. 22.

7 Bender, p. 15-16.

8 Eventually the Utes would loose over 90% of their historic lands in Utah and Colorado. Large areas of reservations would be created and then destroyed. For example, the two million acre Uncomphagre Reservation on the Uinta Basin and Tavaputs Plateau was created in 1882. By 1897 Congress discovered it had never intended to allow the Utes to stay there permanently, and took back land it had once given. It was then the thick Gilsonite veins near Bonanza, Dragon, and Rainbow became available for exploitation. In 1948 The Hill Creek Extension returned 726,000 acres of this land, though all of it was far to the West of the major Gilsonite veins, where Anglo-owned companies have been allowed to operate to this day. The Mineral rights lost in 1897 have never been fully restored.

9 Pruitt, Robert G Jr. The Mineral resources of Uintah County. Salt Lake City: University of Utah, June 1961. The Institute for Clean and Secure Energy July 21, 2011. <http://repository.icse.utah.edu/dspace/bitstream/123456789/5361/1/Utah-Tar-365.pdf>. p. 28. Conveniently, the same 1903 act that recognized pre-1891 claims allowed a 90 day period whence miners to re-record any claims in local records. As a result, numerous claims not actually found prior to 1891 were retroactively inserted into county records and thus achieved patented legality.

10 In just three weeks in May 1902, C.O. Baxter invested $50,000 in buying up Gilsonite claims for Gilson Asphaltum. "Local and Personal." Vernal Express May 17, 1902: 3. Utah Digtial Newspapers July 16 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=31159&CISOPTR=31110>.

11 Bender, p. 51. Note: Dragon Canyon in the Uinta Basin, whence outcropped the Dragon (or Black Dragon as it was sometimes called) vein of Gilsonite is not to be confused with the entirely different Black Dragon Canyon of the San Rafael Swell. The similarly named Canyon in the Swell is over a hundred miles away, has carved its way through an entirely different, Gilsonite-free rock formation, and is named after the appearance of a unique petroglyth, which is actually red.

12 Bender, p. 23.

13 Kretchman, Herbert F. The Story of Gilsonite. Salt Lake City: American Gilsonite Company, 1957. p. 30.

14 Bender, p. 32.

15 For an account of John McAndrews' life in the Basin see his 1927 obituary in the Vernal Express. “John McAndrews, Pioneer, Answers Call to Great Beyond.” Vernal Express October 14 1927: 3. Utah Digital Newspapers August 22 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=52045&CISOPTR=52003>.

16 Covington, Robert E. "A Brief History of Early Mineral Exploitation in the Uinta Basin." Intermountain Association of Petroleum Geologists. 13th Annual Conference (1964). The Institute for Clean and Secure Energy. July 15 2011 <http://ds.heavyoil.utah.edu/dspace/bitstream/123456789/8063/2/Abrief%2520history%2520of%2520early%2520mineral%2520expl...Covington%2520-%25201964.pdf>. p. 7.

17 Covington, p. 7. For a reference to the 1907 strike, see “Was Dynamite Used?” Vernal Express February 28 1908: 1. Utah Digital Newspapers August 22 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=33807&CISOPTR=33794>. Decades later Gilsonite miners in the Basin affiliated with the militant Mine, Mill, and Smelter Workers' Union, though the Red Scare in the 1940s eventually convinced them to leave it for the United Steelworkers of America. “Local Miners Withdraw from CIO Union.” Vernal Express December 18 1947: 4. Utah Digital Newspapers August 22 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal5&CISOPTR=8867&CISOSHOW=8917>.

18 "Another Explosion". Vernal Express November 26 1896: 1. Utah Digital Newspapers July 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=23415&CISOPTR=23409>. Seven other men working at the time escaped the exploding vein with minor burns and blackened faces. Smoke was reportedly seen by one miner just before the explosion, though the exact cause was unknown. Bert Seabolt expressed his doubts that it may have been caused by a headlamp, as "safety lamps made expressly for the work" were being used. Possibly, the men working had started a fire intentionally, though that was never proven. Whatever the immediate cause, the coroners' inquest faulted the company for gross negligence in "failing to properly clean and timber" the mine. See "Another Version." Vernal Express Dec 24, 1896: 1 Utah Digital Newspapers Aug 5 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=23598&CISOPTR=23584>, and “Coroners' Inquest" Vernal Express. April 8 1897: 4. Utah Digital Newspapers Aug 5, 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=24579&CISOPTR=24509>.

19 Weston, William. The hydrocarbon field of western Colorado and eastern Utah on the projected line of the Denver, northwestern and Pacific Railway. Denver: Northwestern and Pacific Railway, 1907. Google Books. July 16, 2011. <http://books.google.com/books?id=vVoRAAAAIAAJ>. p. 19.

20 Thomas, Gomer. Biennial Report of the State Coal Mine Inspector For the State of Utah for the Years 1905 and 1906. Salt Lake City: The Deseret News, 1907. Google Books. July 15, 2011. <http://books.google.com/books?id=jk60AAAAMAAJ>. p. 76. This dangerous side of mining, not to mention the numerous fatal accidents that occurred over the years on the Unitah Railway, are often times forgotten in popular histories of Gilsonite. In its projection of an exciting vision for the future of Gilsonite, a 1947 Popular Science article, for example, included numerous photographs of the modern buildings and mining machinery at Bonanza, yet failed to make any mention of the tremendous fire that occurred there two years before that shut down the mine, sent flames 1,000 feet high, and threw skyward rocks and timbers that then crashed down through miners' roofs. "Bonanza Blast Shoots Flames 1,000 Feet." Vernal Express October 11 1945:1. Utah Digital Newspapers August 16 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=316405&CISOPTR=316378>. Also unmentioned from 1945, a miner at Rainbow had perished in a dust explosion. "Mine Blast Kills Workman at Rainbow Mine." Vernal Express April 19 1945: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=313527&CISOPTR=313503>.

The worst disaster in Gilsonite mining history would occur on November 5, 1953 when another explosion at Bonanza set the

vein on fire and killed 8 miners. Since that time, safety measures have improved, though inherant dangers still remain. As recently as 2007, a Gilsonite miner was pinned underground for 30 minutes and sustained head and back injuries after a slab of rock fell off the mine wall and hit him. "Gilsonite Miner Hurt When Rock Pins Him." Desert News August 15 2007 <http://www.deseretnews.com/article/695200971/Gilsonite-miner-hurt-when-rock-pins-him.html>. Perhaps one of the biggest (and newest) threats to Gilsonite miners today is the long commute most of them take from Vernal to Bonanza. Early one morning in January 2011 two miners making this drive were killed on State Route 45 when an oncoming truck swerved into their lane. Liesik, Geoff "Two Men Killed Saturday in Head On Crash Near Vernal." Desert News January 22 2011 <http://www.deseretnews.com/article/705364966/Two-men-killed-Saturday-in-head-on-crash-near-Vernal.html>.

21 Bender, p. 60.

22 The lineages of early Gilsonite corporations in the Uinta Basin can quickly get confusing. To clarify, in the first decade of the 20th Century, a parent company known as the General Asphalt Company is the principle shareholder and owner of both the Gilson Asphalt Company and Barber Asphalt Paving Company. The Barber Asphalt Paving company founded as a subsidiary, and owns all the stock of, the Uintah Railway Company. I.e., the Gilson Asphalt Company and the Uintah Railway are owned and controlled by the company. Other Gilsonite mining companies in the area at the time included the Utah Gilsonite Company, the Raven Mining Company of Utah, Diamond Gilsonite Company, and the American Asphalt Association. In 1948, the Gilson Asphalt Company reorganized to become the American Gilsonite Company, and was jointly owned by the Barber Oil Company and California and the Standard Oil Company of California (later, Chevron).

23 "Look here for it". Vernal Express March 2 1907: 3. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=30781&CISOPTR=30747>. There was no police station or sherrif in Dragon to intercept the fleeing man, but via telephone the sherrif in Vernal was able to deputize the stage driver, who returned the passenger to Kennedy Station, where the sherrif was waiting. Things apparently ended relatively amicably, as the debtor was able to settle his debts out of court and left the county a free man.

24 "Lawlessness at Dragon." Vernal Express March 3 1911:1. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOPTR=63935&CISOSHOW=63953>.

25 "Right of Petition" Vernal Express August 11 1911:3. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=48051&CISOPTR=47992>.

26 Bender, p. 81.

27 The "Rainbow Vein" is speculated by some to be merely an extension of the Black Dragon Vein, and lines up nearly exactly with it if one were to draw a line continuing the Dragon Vein to the Northwest. Modern geologic maps of the area make the two different names seem redundant, though in this article the name "Rainbow Vein" will be used to distinguish the two mining areas.

28 "Dragon Waning." Vernal Express Aug 18 1911:1. Utah Digital Newspapers July 20 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=48143&CISOPTR=48110>.

29 In 1917 Barber Asphaltum leased the Dragon mine to the American Asphalt Association. Ironically, this was the same company that had sued Barber / the Uintah Railway in 1907 for discriminatory freight rates.See "Dragon." Vernal Express November 11, 1917:4 Utah Digital Newspapers July 16 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=84240&CISOPTR=84205>.

30 For example, see "Vernal and Uintah Basin Prosperous." Vernal Express, April 10 1914:1. Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=72826&CISOPTR=72810>. "When asked whether the Uintah Railway company will connect with the Moffat railway if it builds into the basin, Capt Cooley [General Manager of the Uintah Railway] stated that a connection would probably be made at Randlett. The Uintah has surveys completed to this point already and estimates have been made of the cost of construction which includes the making of the road standard gauge from Mack to Randlett; also including, the cost of necessary tunnels under Baxter pass. Two and one half million dollars is the estimated amount that will be needed."

31 "Iron Horse Comes 10 Miles Nearer." Vernal Express November 17 1911: 1. Utah Digital Newspapers July 19, 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=49903&CISOPTR=49879>.

32"Uintah Railway Will Extend Road: Large Gilsonite and Coal Fields to be Tapped." Vernal Express February 11th 1921: 1. <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=24330&CISOPTR=24313>. The post war economic depression seems to be the primary culprit for the stopping of this proposal. In 1920, 56,670 tons of Gilsonite were hauled out of the Basin by the Uintah Railway. In 1921, this figure dropped to 8,359 tons. The reduction in demand made the extension of the railway to Bonanza an unwise investment in the immediate term. In 1922 the company expressed these reservations, though it did appeal to the state utilities commission for a year extension on its plans to begin construction, a hopeful move for to wait for a more favorable climate. By the time the market had picked up to the point where the Bonanza mines were given another look, trucks and roads were already proving themselves superior to both the narrow gauge railway and the costs of converting it to standard gauge. The window of opportunity had closed. "Rail Builders Ask More Time." Vernal Express July 21 1922:1. Utah Digital Newspapers July 22 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=18090&CISOPTR=18079>.

33 See "National Game." Vernal Express June 14 1912: 1. Utah Digital Newspapers July 16 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=51867&CISOPTR=51853>, and "Watson Wins Opening Game." Vernal Express May 9 1913:2. Utah Digital Newspapers July 16 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=65667&CISOPTR=65645>.

34 "Free for all Fight at Watson Results in Arrests." Vernal Express April 28 1916:1 Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=68335&CISOPTR=68316>.

35 "Sheriff Pope captures Bruce Blair." Vernal Express August 3 1917:1. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=83270&CISOPTR=83257>.

36"Bruce Blair Breaks Out of County Jail." Vernal Express August 10 1917:1. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=83336&CISOPTR=83322>.

37 "Bruce Blair is Returned to Jail." Vernal Express August 17 1917: 5. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=83452&CISOPTR=83400> , "Bruce Blair Gets a Light Sentence." Vernal Express September 14 1917: 1. Utah Digital Newspapers July 17 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=83729&CISOPTR=83713>.

38 “Western Shale Plant Unit in Successful Operation.” Vernal Express October 22 1920: 3. Utah Digital Newspapers August 22 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=22955&CISOPTR=22919>.

39 "$100,000 Shale Plant Promised at Watson." Vernal Express November 30 1917: 1. Utah Digital Newspapers July 23 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=84470&CISOPTR=84458>. During the energy crisis of the 1970s, oil shale was again looked at as a viable resource. Many test facilities were set up in Western Colorado, and companies looking at deposits just South of the Watson area improved the White River bridge to what we see today. For an account of the oil shale development at this time, see "BoomTown Blues" by Andrew Gulliford.

40 "Watson Workers Take the Cake." Vernal Express May 3 1918:10. Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=86018&CISOPTR=85923>.

41 "Campaign on to Raise $3,320 in Uintah Co. for Uinted War Work." Vernal Express November 8 1918: 1. Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=87802&CISOPTR=87790>.

42 "Local News." Vernal Express March 14 1919: 8. Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=76773&CISOPTR=76701>.

43 "Local News." Vernal Express July 18 1919: 8 Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=78491&CISOPTR=78430>.

44 "Shearing in Uintah Co." Vernal Express December 19, 1919: 1. Utah Digital Newspapers August 3 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=81043&CISOPTR=81031>. Bonanza also had a shearing plant at this time. From 1914 to 1928, Gilsonite mining at Bonanza was not significant as most mining operations took place further South and closer to the railway. Prior to the existence of Watson, Dragon also had a shearing operation.

45 Bender, p. 115, and "Government looses $30,000 yearly on Basin Parcel Post." Vernal Express June 2, 1916: 1. August 3 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=68647&CISOPTR=68626>.

46 "Innocence Abroad, or Watson Am a Hard Road." Vernal Express April 5 1912: 1. Utah Digital Newspapers July 20 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=51250&CISOPTR=51242>. The article describes a trip from Watson to Vernal that was plagued by auto break downs. In it is a descriptionhorse drawn stages being ready for passengers to transfer to after a passenger car breaks down. By 1916, horses again were almost replaced by a tractor capable of hauling "5 of the present [horse drawn] wagons." "Uintah Railway Will Dispense With Horses." Vernal Express May 19 1916: 1. Utah Digital Newspapers July 20, 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=68522&CISOPTR=68513>. Unfortunately, after completing only one trip, the tractor broke down and a spare part needed could not be found. By June five more were ordered, however. "Lots of Caterpillars for Uintah Railway." Vernal Express July 14 1916:1 Utah Digital Newspapers July 20 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=69027&CISOPTR=69013>.

47 "Uintah Railway Has Been a Big County Asset." Vernal Express December 8 1938: 1. Utah Digital Newspapers July 21 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=213773&CISOPTR=213724>.

48 "Utilities Commission Grants Uintah Railway to Discontinue Service." Vernal Express May 13 1921:1. Utah Digital Newspapers July 21 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=25552&CISOPTR=25533>.

49 "Millions of Undeveloped Wealth at our Door." Vernal Express October 11 1928: 1. Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=45314&CISOPTR=45299>.

50 "Rainbow Gilsonite Mine Heads List." Vernal Express December 20 1912: 2. Utah Digital Newspapers July 24 2011: 2. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=53936&CISOPTR=53912>. The stated number of 65 employed miners would drop, by 1914, to only 15, due to a slump in the economy. However, it would rise again due to increased demand resulting from the first World War. "Vernal and Uintah Basin Prosperous." Vernal Express April 10 1914: 1. Utah Digital Newspapers July 24 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=72826&CISOPTR=72810>.

51 "Development of Rainbow Gilsonite Property of Gilson- Asphaltum Company." Vernal Express Feb 7 1913: 1 Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=54566&CISOPTR=54551>.

52 "Rainbow." Vernal Express December 23 1921: 4. Utah Digital Newspapers August 12 2011<http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=28339&CISOPTR=28299>.

53 "Rainbow Section." Vernal Express October 30 1925: 8. Utah Digital Newspapers August 12 2011<http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=31875&CISOPTR=31785>.

54 Parrett, D. W. "Visiting a Gilsonite Mine." Vernal Express January 15 1931: 2. Utah Digital Newspapers August 4 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=54444&CISOPTR=54416>.

55 At least two such accidents made it into print in the twenties. In 1928 Stephen Perry ran a pick into his leg, just missing his shin bone by an inch. "Rainbow Section." Vernal Express Dec 13 1928: 10. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=62502&CISOPTR=62453>. Just three months later, Marion Moon made a similar mistake, but this time struck his foot. "Rainbow." Vernal Express Feb 21 1929: 3. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=58196&CISOPTR=58160>.

56 "Car Goes Over Embankment Near Rainbow Carrying Driver and 6 Children." Vernal Express June 22, 1928: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=44134&CISOPTR=44122>.

57 "Rainbow Mine Increasing Workforce Rapidly." Vernal Express January 13 1922: 5. Utah Digital Newspapers August 4 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=15963&CISOPTR=15900>. For an impact of the Great Depression, see "Twenty Men Laid Off At the Rainbow Mine." Vernal Express July 3 1930: 1. Utah Digital Newspapers August 4 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=66377&CISOPTR=66362>.

58 "27 Sheep Killed in One Night at Rainbow." Vernal Express March 10 1916: 1. Utah Digital Newspapers August 4 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal1&CISOSHOW=68016&CISOPTR=68000>.

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60 "Mine Blast Kills Workman at Rainbow Mine." Vernal Express April 19 194: 1. Utah Digital Newspapers August 4 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=313527&CISOPTR=313503>.

61 "Landslide at Baxter Pass Blocks Railroad and Causes Slump at Gilsonite Camps." Vernal Express May 30 1929: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=61624&CISOPTR=61613>, "Uintah Railway Co Rebuild Quarter Mile of Roadbed Trains Now Going Through." Vernal Express June 20 1929: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=61888&CISOPTR=61875>.

62 "Dragon." Vernal Express March 19 1936: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=118780&CISOPTR=118726>.

63 "Rainbow Camp Being Moved to Bonanza." Vernal Express December 9 1937: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=406861&CISOPTR=406834>. In 1941, two years after Dragon was abandoned concerrant with the demise of the Uintah Railway, Charles Neal, a long time Gilsonite developer and superintendant of the Raven Mining Company aquired the title to the Dragon and Rainbow mines. These he leased to Ray Davis, who was already operating a smaller Gilsonite mine in Duchesne County. Davis trucked gilsonite out to his own processing plant in Provo. Davis would continue to work these mines on a small scale over the next few years, but there was no town left to support the few commuting miners. “Vernal Man Spends Career Exploiting Gilsonite.” Vernal Express January 4 1945: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal3&CISOSHOW=311765&CISOPTR=311739>.

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65 Bender, p. 179.

66 "Notice of Election." Vernal Express April 16 1920: 7. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=27612&CISOPTR=27556>.

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74 "James E Hood Manager Uintah Railway Dies." Vernal Express December 21 1923: 1. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=35597&CISOPTR=35584>.

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80 "Rainbow." Vernal Express April 4 1929: 3. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=61062&CISOPTR=61039>.

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84 "Five Year Old Child Completely Scalped in Unavoidable Accident." Vernal Express June 6 1929: 4. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=61714&CISOPTR=61677>.

85 "Rainbow Section." Vernal Express December 13 1928: 10. Utah Digital Newspapers August 11 2011 <http://udn.lib.utah.edu/cdm4/document.php?CISOROOT=/vernal2&CISOSHOW=62502&CISOPTR=62453>.

86 However, Butch Cassidy along with others affiliated with the “wild bunch” gang may have frequented the saloons of "the strip" in its early days.