CHAPTER THIRTEEN

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AN OBENCHAIN REPLAY IN ROCK SPRINGS

INTRODUCTION

Late March of 1965 found me assuming my duties in Rock Springs as a replacement for Frank Sanders, my old district manager, who was retiring. I now had a good deal on my mind, ranging from the sale of our house in Farmington and locating new quarters for the family to meeting various customers and becoming generally familiar with the operation in Rock Springs. Thus, I had little time to fiddle around or lose myself in general boredom.

The housing market in Farmington was poor to say the least. The oil and gas business had been in the doldrums for some 3 years now. Several oil companies had closed their field offices in Farmington. Also, staff had been reduced in other cases, which resulted in the transfer or termination of many other geologists and engineers. All of this placed a housing glut on the Farmington market. Schlumberger, as well as most oil companies at that time, offered little or no housing assistance in moving and the load was strictly mine. The Rock Springs market wasn't much better and the building of new homes had stagnated. The older homes were either not for sale or not worth considering, which made reasonable choices few and far between. In the new house market I found I had a choice of two houses in my price range. Both were split levels sitting side by side in a sub-division on the hill south of town. I opted for the one in the cul-de-sac, the address of which was 1461 Sublette Circle. I figured it would be quieter as well as safer for Tom when he began roaming around outside. I was able to place a contingency contract on it and then hope for the best with the sale of our home in Farmington. In figure 13-1 you will find a map, taken from Streets and Tips 2001, which I'll use to point out landmarks of interest. Notice that north is to the left in the diagram and our home is to the extreme south of town. Much that I talked about in chapter ten had still remained the same but the town had grown larger in size and population to about 13 or 14 thousand people. However, the major growth of that sleepy little town had occurred after I left in 1969, when it spurted to a whopping 26,000 people due to a new power plant, new trona mines and a surge in oil well drilling. Consequently the map, as a whole, doesn't apply but it does contain items not present when I was transferred from there the first time in the summer of 1959. Today, 2008, I understand it is now busy once again due to the energy boom, which has resulted from a profitable means of extracting gas from the Fort Union formation north of Rock Springs.

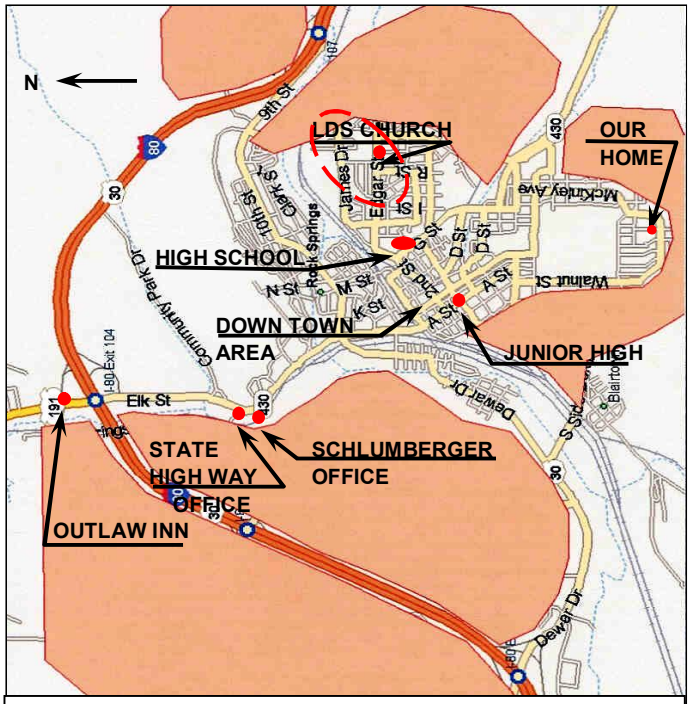

Figure 13-1 Rock Springs, Wyoming in 1965. Orange shaded areas were undeveloped then.

Rock Springs had two logging trucks and one perforating truck with four engineers, 8 operators and a secretary. The business was pretty well distributed between majors and independents. Belco Petroleum was still a big operator in the Big Piney area and we had secured most of their logging and perforating business. Mountain fuel Supply Company drilled several wells a year and many of the engineers and geologists I had known in my previous stint there were still around. The Union Pacific Railroad still maintained an office in town but drilled few wells of their own. They were participants in most wells drilled within 20 miles of the mainline because of their ownership of land and mineral rights bequeathed to them by Congress in construction of the cross-country railroad. They owned alternating sections on either side of the track through southern Wyoming and had a strong voice in logging and completion activities. Beyond that, the activity was randomly distributed among various companies including Texaco, Phillips Petroleum, Tenneco, Mobil Oil and El Paso Natural Gas Company.

I managed to secure an efficiency apartment on Elk Street just a few blocks from the office. Other than sleeping, I spent little time there because of a busy schedule and my own boredom with being by myself. As it turned out I spent about 3 months living there before the family was able to move to Rock Springs. Although I tried to batch in the interest of keeping costs down, I frequently found myself in various restaurants seeking company while I ate. Besides, TV dinners were far from exciting and it was next to impossible to cook decent meals from scratch with the exception of breakfast. Even then, I often went out simply for conversation. For some reason the same food tastes worse when eaten in silence and that rather incredulous statement comes from an introverted engineer, so it must be true.

I mentioned in chapter 12 that business was slow throughout the Rockies in the early sixties. As a result, the Rock Springs district was shifted from the Northern Rocky Mountain Division to the Southern Rocky Mountain division. Thus, I still reported to the SRMD manager, George Ellis, after my transfer. The four engineers were Dave Rust (an ex fighter pilot during the Korean War), Larry Wells (a rather new engineer), Don Pearson (a perforating engineer) and Bob Jacobs (also a new engineer). Larry was assigned to one open-hole truck, Bob to another while Dave provided relief during their days off. By this time engineers were working a 9 days on, 3 days off schedule. Don could regulate his perforating business so that he could take days off when needed. If something unusual came up, I could fill in. We had some experienced operators but others with little experience. A few of their names, as I remember them, were Perry Hodges, Bob Brough, Mac McCullough, Larry James (all experienced Senior operators) along with 3 junior operators and a trainee who's names I don't recall. All of the engineers were quite competent and the operation generally ran smoothly during my break in period.

A DISTRICT MANAGER'S JOB

The District Manager's job in a Schlumberger location is variable and quite stressful. He is responsible for providing well logging and perforating services over a defined area, which varies with activity concentration. Schlumberger locations ran best when kept reasonable small, in the order of 3 to 5 or 6 trucks. As they get bigger the necessary organization tends to swell and efficiency seems to drop. In the average district, the manager is responsible for training, sales and customer service, technical performance of the staff, expenses and profit margins. The district is staffed to meet average business needs or rig activity in terms of trucks, equipment and personnel. Sufficient activity to keep all trucks running at a nice average pace is ideal but seldom materializes, it seems. The trucks and other equipment either sit in the garage while fixed expenses continue to mount or else six customers will all want trucks on a given day when only three are available. Consequently, the manager tries to keep his finger on the oil field's pulse through telephone contacts, office visits and rig contacts. Engineers are asked to visit rigs when in their vicinity to get an estimate of the logging date. The manager makes regular sales contacts with customers to secure the work on wells in his vicinity as well as ascertain an estimated date of logging time. When crunch time comes, i.e. several wells appear to reach total depth in the same time frame; the manager will be on the phone trying to find the best way to cover the work. Frequently he calls on other Schlumberger districts to cover overflow wells rather than make the customer wait or lose the well to a competitor. This necessitates sufficient lead-time to get a unit from a considerable distance away, typically 6 hours or so. Fortunately, the customer places an expected logging time on "will call", which helps one plan

ahead to a degree. Even so, feast or famine is often the order of the day, in terms of business versus available equipment. However, one learns to live with it and life goes on.

As summer drew nigh, I was beginning to sweat about the sale of our house in Farmington.

Figure 13-2 Front view of our Rock Springs, Wyoming bi-level home from 1965 to 1969.

What if I didn't sell it by June? What if I had to take a big loss to move it? I couldn't really afford two house payments but I wasn't about to leave Esther and the family in New Mexico either. I was definitely a family man. I had no interest in the limited nightlife of Rock Springs and was getting burned out being totally immersed in my job. How I longed to bring the family to my new location and settle down to my old mode of life as husband and father. Up to that time, I don't suppose I had appreciated just how much my family meant to me. Each time I talked to Esther, the outlook was pessimistic but even so I tried to be positive and told her summer was the best time to sell.

Well, I claim no prophetic powers but lady luck came our way in early June. A man and his family were being transferred into Farmington with the Bureau of Reclamation and he bought the house without argument for our asking price of $16,500. What a relief! We set closing dates on both homes (old and new) and by early July were in transition to Rock Springs. I had paid a whopping $18,000 for the new house and it really wasn't as good as our former home. However, we felt lucky in getting our money out of the house because of the Farmington market and didn't complain. Anyhow, we were finally a family once again.

LIFE IN ROCK SPRINGS

Our Rock Springs house was a bi-level, which made the lower level less of a basement and more of a first floor. We traded one flight of stairs for two and had to walk half way up them as we entered the house to arrive on the main floor. See figure 13-2. At our ages, a ripe old 36 and 37 for Esther and I respectively, the going was easy and the extra livable space a definite benefit. The upper level contained a nice kitchen with an eating area, a nice sized living room, a bath with shower and two bedrooms. The lower level also had a bath, two bedrooms and a den. Consequently Tom, at age 7 months, was placed upstairs with us while Valerie and Celeste each had their own bedrooms on the lower level. See figure 13-3 for a floor plan. We furnished the den as a family room, which made a comfortable home.

Only the outside was a problem and that was true anywhere in Rock Springs. The only substance that sprang out of the earth in that locale was rock, which seemed to spring eternally in every direction one looked. I feel sure that one particular characteristic of the area resulted in the town's name. In our first tour in that lovely town we had rented and felt no responsibility for improvements. Now, however, I was the owner of a home and began to look

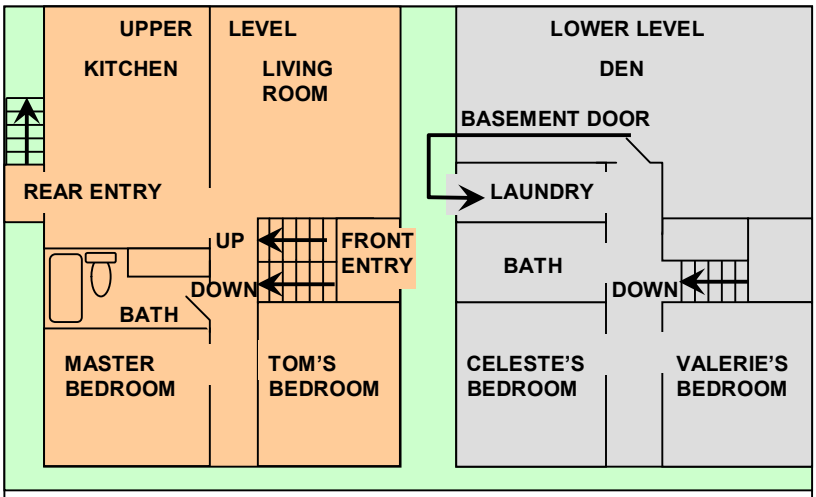

Figure 13- 3 A simplified floor plan of our Rock Springs home located at 1461 Sublette Circle.

forward to shaping up the outside to try to disguise the desert environment. Before launching into that episode, however, let me provide a snapshot of the kids as they appeared in that particular era. Figure 13-4 is a photo of Celeste and Tom (Tommy at that time) in the living room soon after our arrival. The photo of 13-5 provides a front porch view with Valerie and her cousin Karla Capener. Valerie turned 13 soon after our arrival. I'm not sure of the date of this picture but Fluffy, our Pomeranian puppy, was now part of the family and the Capeners had come to visit. I would guess the time frame to be the summer of 1967. The sling is a mystery to me.

DESERT LANDSCAPING

Southwestern Wyoming is desert in the truest sense of the word. Its annual precipitation is a measly 5 or so inches, which includes winter snow and the few summertime sprinkles that occur from time to time.

My most difficult challenge, i.e. the soil or lack thereof, was added to that arid climate. The yard had a thin covering of rather sandy soil and within 3 inches of the surface ones shovel struck sandstone and I mean real sandstone. Fortunately the yard was rather level and no real digging was required. I immediately had sod brought in to cover the small front yard facing the cul-de-sac. We planted a few shrubs and that became the size of our landscaping that first

Figure 13-5 Valerie and her cousin Karla with Fluffy on the porch in Rock Springs.

year. I was extremely busy with my new job and any time spent had to come from vacation time. However, a plan began to form in my mind, which took the next two summers to come to fruition. I decided to build a fence around the back to repel the trash that seemed to roll endlessly with the wind in that part of the country. The windy season ran from July fifth

Figure 13-4 Tom and Celeste soon after our arrival in Rock Springs.

though out the winter, ending about July third. Needless to say we always ate out (barbecued) on the fourth to take advantage of that one quiet day. Well, we had to have a deck for our grill, of course, so my plan included building one of appropriate size. How could one enjoy eating outside on the fourth without an attractive back yard complete with grass, shrubs and maybe a few flowers? That became the third part of my landscaping plans, which together formed an attractive exterior quite like we had enjoyed in Farmington. The one big difference was; the Farmington home came with a finished exterior while the Rock Springs residence would ultimately finish my exterior, or so it seemed.

BUILDING A DECK

I decided to build the deck the second summer we lived in Rock Springs or 1966. Vacation was primarily filled with my effort to carry out the plan I had made during the previous winter but we did manage to get in an overnight camping trip and maybe even a short trip to Boise. I can't place exactly when such events took place but we usually visited family every two or three years.

The back door of the kitchen in the top level of the house opened up to a small landing of maybe 4' x 4' resting approximately 5' above the

ground. Steps then led down to the rocky surface of the back yard. I had decided to expand that area to a 12' x 15' deck, which would provide plenty of room for a table and the grill and began my efforts by ripping off the landing and steps. I had the assembly loose in a matter of minutes and began dragging it out of the way. I'm not sure just how it happened but the landing and steps assembly flipped and in my effort to control it, I felt a little twinge in my left hand. I examined it and found my middle finger making a right angle turn at the second joint just like I had experienced in high school football. The front part of the finger lay across the forefinger rather than in its assigned place. Well, experience does prove valuable. My coach, Bob Gibbs, you may remember, had simply pulled the end of the finger out, which stretched the tendons and allowed the knuckle to snap back correctly. I thought, "If it worked once it should twice", and snapped it back myself. It hurt a little but I was no worse for the wear and went about my day of preparation.

Because of the deck's size, I decided to support it with 9 individual 4" x 4" posts and set out to dig the holes. I thought I would set the posts in concrete about 18" deep. I had borrowed an auger from a friend up the street, figuring it would speed the job up considerably. Much to my surprise, I ran into sandstone about 4" to 6" down (I mentioned this earlier) and the drilling came to a halt. I decided that wasn't quite deep enough and got myself a 2" diameter spudding bar maybe 8' long. This thing weighs about 25 pounds, I suppose, and the one doing the spudding simply grasps it with his two hands, lifts and rams it down in the hole. Each blow breaks out a little rock or soil, which is then scooped out of the hole. Being young, a little dense and in relatively good physical shape, I really got after it and dug the nine holes that afternoon. Though I was tired, all went well and I finished the day quite satisfied with my efforts. The next morning, however, I found my forearms so sore I could hardly close my fist. I couldn't grasp a pencil or a fork and almost had to have Esther feed me. There was no way I could work that day. I had Esther rub liniment on my forearms and I took it easy waiting for the soreness to drop to an acceptable level. The next day it had. I was able to plant the posts and pour the hand mixed concrete around them. All seemed to be going according to plan and I let them stand overnight before continuing.

The next morning, however, I found my forearms so sore I could hardly close my fist. I couldn't grasp a pencil or a fork and almost had to have Esther feed me.

The next day I was going to run 3 floor joists along each row of three posts and then nail my flooring to them. As I proceeded, I received a rude awakening. Somehow, I had managed to cut one post too short or planted it deeper than the others. Obviously, none of my dad's carpenter genes had been transferred to me. What was I to do? The posts were all solidly planted and wouldn't even wiggle. I wasn't about to tear the short one out, so I cut the other two in that row off to the same length and then used a two by eight in place of the two by sixes for the other rows. Voile! The floor joists were all level and I could easily cover up my mistake with flooring. This I did and the remainder of the deck went according to plan. At the end of the week my deck was finished, complete with a nice railing and steps. Of course, I used the steps, which had been attached to the original landing and saved a little effort. The second week I painted it and in a few days the deck became a part of the family recreational space. I was complemented on my efforts by neighbors but, quite naturally, I didn't elaborate on that unusual floor joist. In fact, I closed in the space under the deck and the product of my struggling effort was completely disguised. The family who eventually bought the house from us was no wiser either, unless they happened to crawl under the deck and examine the structure later. As you can see, I was more proud of my cover up than I was of my carpentry.

LANDSCAPING THE BACK YARD

In those days, sod was quite expensive and water was cheap. The decision to plant rather than sod the back yard was relatively easy for one with Scottish ancestry. Our forefathers, Abendschöns, stopped there (Scotland) before going back to Holland and finally to America on the good ship Fane in 1749. I feel sure, based on my natural instincts, that the Scottish trait of "penny pinching" was a communicable disease in those days. However, the old saying, "There is no free lunch", certainly applied in 1966. My wages, as derived by dividing the sod cost less seed and top soil cost, by my hours of labor were miniscule at best. Then there is the subject of lawn quality, which I'll avoid completely. My only satisfaction lay in the fact

that the yard turned out reasonably well and it was my handiwork. At least, I could claim a reasonable return in satisfaction $ per hour.

Because of the preponderance of rock and sand throughout the area, I elected to have about fifteen yards of topsoil hauled in. The easy part was paying for it when compared to the job of spreading it evenly throughout the yard. You see there were no "Bobcats" or similar spreaders for rent in those days (at least in Rock Springs). Even though the individual loads had been placed strategically throughout the yard, one can only throw a shovel of dirt so far. That meant loading a wheelbarrow countless times and distributing the dirt around the yard in little piles for later raking. Man, I get tired just thinking about it. Anyway, I eventually spread the stuff out to a nice even depth of about four inches and worked out the clods and weeds. I then spread a little horse manure over it and worked that in. By then I decided the complete project was best described as "horse manure".

Finally, I spread the seed and laid down gunnysacks over the whole thing. The latter had to be staked with long nails to keep them from blowing away. They then keep the dirt and seed in place, an important step in Wyoming. I found it extremely difficult to nail the dirt or individual seeds; you see and opted for the gunny sacks.

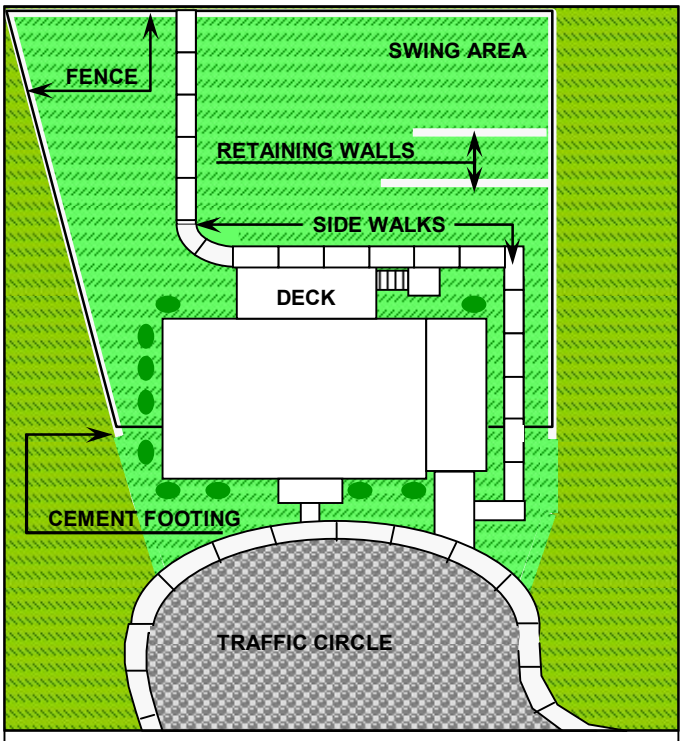

Figure 13-6 An illustration of our Rock Springs yard, complete with my many modifications.

Next came the watering, which occurred morning, noon and night until the grass grew sufficiently to maintain moisture on its own. Much of the last job fell on Esther because of my work, though I was usually in town. Then, with grass starting to grow through the gunnysacks, I had to carefully pick them up. If one picked up the sacks too quickly or the ground was too dry, the grass came with them, leaving a nice bare spot. Surely there was a better way and that way was SOD but I couldn't change horses now, not in the middle of the stream (my labor).

BUILDING FENCE AND RETAINING WALLS

One would think I would have learned my lesson in 1966 and had the remainder of my outside work done by professionals. Not so, in my case. My Scottish heritage took over once more and I decided to devote my vacation to completion of the yard. That may have been one of my more stupid mistakes in my life.

The back yard sloped upward away from the house. To the left the slope was rather gradual but directly behind the house it took a sharp rise after several yards of level ground. I decided to terrace the hill with two small but rather lengthy retaining walls. One would be about 3 feet high by 10 feet long and the other about 4 feet high by 15 feet long. Above the upper one would be a nice level place for a swing set, which we bought for Tom. In addition, I would put in a sidewalk around the house and back to the trashcan area, which would be outside the fence I planned to erect. All of this is illustrated in my handy dandy little drawing of figure13-6

I decided to begin with the retaining walls, build the fence next and finally put in the sidewalks as the last and probably easiest step of my project. The fence seemed to be the biggest problem. A chain link fence wouldn't do because the trash collected by the wind would pile up against the fence and be visible from the yard. Some would blow through. A solid fence would act as a windbreak and eliminate the sight of the trash, which would inevitably blow in. I found a source of 2" tubing, which I could get for nothing. Once again my Scottish genes took hold and I thought, "Why not use the tubing for fence posts". They would be strong and I could bolt the rails to the posts. Panels could then be

bolted to the rails to make a solid fence and close off the outside rock, sand and trash. We would have our own little Garden of Eden within the enclosure for our enjoyment. So, I set about collecting the materials in the spring of 1967. I had the tubing cut into 8-foot lengths, which would allow me to set them 2 feet in the ground and provide a 6-foot fence. I bought a bunch of corrugated plastic panels, which were 6 by 4 feet. They make an attractive fence, being both colorful and strong (figure 13-7). I was prepared by the time my 4-week vacation came up.

THE RETAINING WALLS

Vacation arrived. A neighbor lent me a small cement mixer. I bought some gravel and several sacks of cement as well as some lumber for forms and fencing. I also bought the necessary 4" x ¼" bolts with washers and lock nuts. The material was ready but was I?

I dug out the hillside as shown in figure 13-6 for the retaining wall forms and built the same with 2x4 stakes and 1x12 boards. I then braced the low side with 2x4s and filled in the topside with dirt or sand. I remembered dad's story about insufficient bracing and the resultant bowing of some concrete basement walls at a lodge on the Boise River. Mine were sturdy, to say the least. Fortunately, I didn't run into any sandstone and I was soon ready to pour the walls or so I thought.

The little cement mixer was situated in the area for Tom's swing along with a pile of gravel and a stack of cement bags. I still had the wheelbarrow, which was purchased for the earlier yard work. I was in business. I had the hose nearby with a handy on-off nozzle as a water source. I began by mixing up the first load of cement according to directions. I suppose I let it mix longer than necessary just to be sure of an even consistency. I dumped it in the wheelbarrow and guess what. The mixer load filled the wheelbarrow just right. Yep, a mixer to the load made for efficient labor. It didn't take long for me to work out a system. I would start a new mixer load before I moved and dumped the preceding one in the wheelbarrow. By the time I had distributed the poured cement properly in the form and worked it to eliminate air pockets, the new load at the mixer was ready. Man, I didn't waste any time and began to move along rather quickly. Before I tired, I had much of the first wall poured. However, I hadn't counted on the fact that the electrical energy for the mixer was endless and my energy was somewhat limited, even in those days. Before long, I began to wear down and found myself resting in between loads. Loading the mixer and wheeling the wheelbarrow in addition to working the cement in the form were all work, believe you me. Digging out for the second wall and building it wasn't easy either but I got it done. By evening my back was tired, my shoulders ached and I was sweaty and pooped. When Esther called me in for dinner, I didn't hesitate because I was ready physically and had just completed the second form. I must admit, however, I was satisfied with the day's accomplishment. I had worked out the kinks in the operation and expected things to move smoothly the next day.

As expected, the morning of the second day found me sore, as an infected boil but no lancing would help. The first hour reminded me of my Bear Valley days wherein we drove several head of horses from Landmark to Upper Deadwood. I always suffered through saddle soreness the next day in our spring ride. I knew that I would have to work it out. At first I was a little slow with the shovel and wheelbarrow but soon the oil of activity had lubricated my aching joints and things began to roll smoothly again. By the end of that day I had the second or lower wall poured and even got a start on the fence. The second wall, being higher, longer as well and further away from the mixer, took longer. Even so, it was completed with no major trouble.

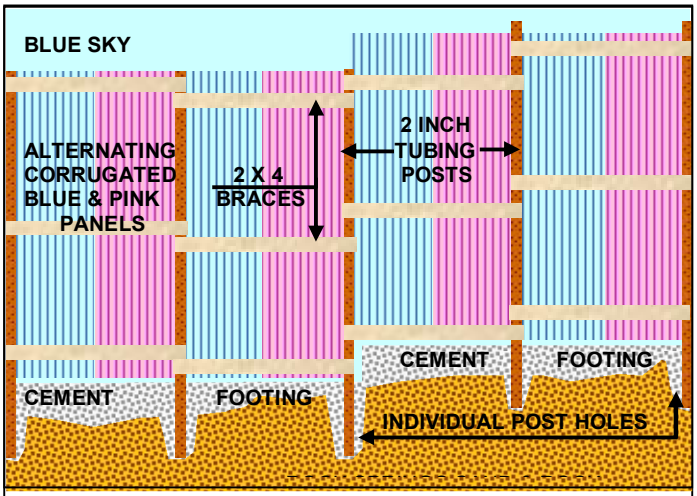

Figure 13-7 The wood, cement, iron and plastic fence resulting from my blood, sweat and tears.

MY FENCING EXPERIENCES

These experiences had as much to do with the art of fencing as they did with the construction of

a fence. Maybe I should clarify that a little. Actually, I'm speaking of the art of designing a fence, not saber rattling or the disposal of stolen goods. You see, I had several problems I intended to solve with my fence, only one of which was the detouring of blowing paper and other trash across our yard. Yes, a little extra work could improve the utility of the fence in several ways so let me explain. However, before I do, let me toss in a couple of my favorite pictures of Tom, he being the focus of attention that summer. The photo of figure 13-8 was taken at 18 months and the one of figure 13-9 at twenty months. You've got to admit that he was a cute little tyke even if he was spoiled a little.

In the early summer of 1966 we had a major gully washer in the mountains south of Rock Springs and in Rock Springs proper. I mean the rain really came down. I think that was also the year of the Big Thompson flood in the Front Range of Colorado. However, my concern was in Rock Springs. During that rain, water poured into the basement of our home to the tune of about 6 inches. There was no vegetation to hold back the dirt or the water. Fortunately, the basement was still largely unfinished. I don't remember its exact state but we finished the den later (including carpet). I'm not sure of the state of the girls' rooms. Anyway, we had a mess to clean up, which was somewhat simplified considering the concrete and tile floor.

Figure 13-9 Tommy @ 20 months or in late August of 1966 in Rock Springs.

Figure 13-8 Tommy @ 18 months or in late June of 1966 after arrival in Rock Springs.

Needless to say, I wanted to protect myself from another such flood. With that in mind, I decided to use the fence to detour any flowing water along with the trash. If I built a cement footing along the base of the fence a few inches high, water coming down the hill would be forced around my property into the traffic circle. Those down below would have to fend for their selves.

The idea of a diversionary wall along the bottom of the fence is what started me thinking about steel tubing for fence posts, as well. Such tubing set in concrete should be able to withstand the constant force of the wind on the solid panels of the fence. They were like sails on the old schooners and the fence might eventually buckle if the posts were weakened. That wouldn't happen with 2" steel tubing set in concrete and acting as posts.

Because of the slope of the back yard, the footing of the fence had to be constructed in steps to essentially follow the topography. Thus, the level of each 8-foot section would step up or down as the fence was built around the yard. Figure 13-7 illustrates the idea and demonstrates the approximate colors involved

as well. I might have chosen more suitable colors but the selection was limited. In any case, it was colorful and strong just as the Maginot line in northern France. I was confident that neither the water nor wind could effectively skirt my fence, as did the Germans to the Maginot. No sir, I was one proud papa when it was complete.

I began my fence building in the front next to the garage. See figure 13-6. About even with the deck, the lot sloped upward creating the need for the retaining walls and the need to terrace the footing of the fence as well. The slope was greatest near the walls and then moderated around the play area for Tom. Along the back there was a moderate slope, which peaked near the end of the walk and gate. From there the slope was rather gentle all around the rest of the yard to the left front of the house. As you can see, the total length was significant as was the labor involved. As I remember, I completed it and the walkway during my month vacation, which I suppose is an inappropriate term for such activity. It was a week of labor instead. If I ever had a laboring man's physique, it was at the end of the summer of 1967.

WALKWAY CONSTRUCTION

The walks were a snap after the fence and retaining walls. I used two by fours for forms, making the walks about 3 ½ inches thick. I poured it in sections, leaving expansion joints as shown. I guess they worked because we had no cracking or other problems with the walks during the rest of our stay in Rock Springs (two winters and a summer). I also enclosed the deck and used the space for storage of materials, which could stand the elements. Such things as the pick, shovel, wheelbarrow and camping gear filled up the limited and somewhat dusty space.

INSIDE IMPROVEMENTS

During our 4 years in Rock Springs, I painted the complete inside of the house. As I sit here and think about what I accomplished in terms of home improvements during that period, I amaze myself. I got a lot done. In fact, I worked my tail off. I was getting 6 weeks of vacation a year by then but my job was also very demanding. I frequently rode a truck because of an engineer shortage, managed the operation, made sales calls and handled field emergencies such as sending replacement equipment to a well with problems. I got by on very little sleep. Today, I wonder how I ever had time to work because I'm still busy. I think one of my friends put things in perspective, however, when he said, "You're busy alright but you only get half as much done in a day because you move a lot slower". I suspect he is right.

Figure 13-10 Esther enjoying Tom on a sunny afternoon in Rock Springs (1965).

FINISHING THE DEN

I believe we finished the den in the fall or winter of 1966. I did a lot of the work myself, including the furring strips on the concrete wall and the paneling but had a professional put in the ceiling and build some bookcases. All of this was part of my continuing effort to save a buck. I'm sure it took me twice as long considering the need to go back and correct mistakes from time to time.

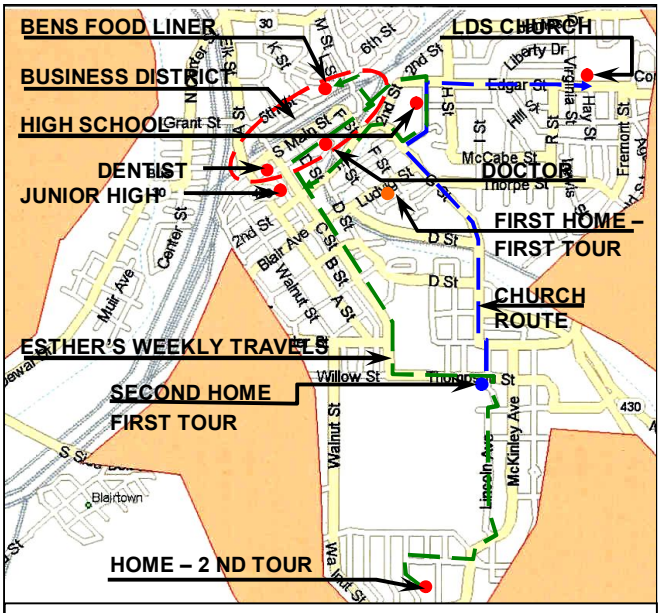

Figure 13-11 An expanded view of Rock Springs with Esther's habitat and her various travels.

Even so, I learned a lot and gained a little satisfaction. If nothing else, it taught me a new respect for my dad and his carpentry skills. When the paneling, ceiling and bookcases were complete, we added carpet everywhere but in the laundry room, I do believe. That's probably when we carpeted the girls' rooms because I don't remember ripping any carpet up after the flood. The family room turned out to be very comfortable in spite of my work. We had the TV down there and it was somewhat roomier than was the living room. When I was in, we spent a lot of time together watching TV, playing games, reading, etc. I suspect Esther and the kids were down there a lot during my absence as well. What entertaining we did usually took place in the den as well because of the available space and relative comfort. More often than not any such entertainment involved people we were most familiar with or Church members. With the busy nature of my profession, our social life was limited, to say the least, due in part to work but more so to our desire for a quiet family life.

PAINTING THE INSIDE

Nothing unusual went on during this effort. I think I painted the whole upstairs and maybe even the girls' rooms a little before we moved to Denver. I'm not sure whether it was related to

Figure 13-13 Two big ones, son. Don't waste your time. Blow, blow, blow!

the move or just because it needed it. The original paint in a new house never is any good according to my experience. I believe they water down the paint and they are also sloppy. I'm always amazed at the poor trimming I see when I repaint. It reminds me of a joke, which many of you have probably heard but I'll tell it

Figure 13-12 Tommy on his second birthday. Come on son. Blow!

anyway. It goes something like this. *"A guy, who was traveling through the south, was a little down on his luck. He was looking for any kind of handy work to earn a few bucks. In a little town in Alabama he came across a preacher who said the church he ministered in needed painting. He asked if the traveler might want to do it for a modest fee. Of course, he accepted. The preacher gave him some money for the paint and as he was buying it, it occurred to him that he could make a little more if he thinned the paint to cover the church. This he did and proceeded with the job. All went well until he was finishing up. About that time a big dark cloud came over and a gully washer followed. As the rain came down, he noticed the white paint was running off of the building into the gutters. Worried sick he fell to his knees and began to pray asking the Lord for help. About that time he heard a clap of thunder and then a loud voice that said,* ***'Repaint, repaint and thin no more".*** So it is with original paint jobs. That's one place I claim better work than the professionals, though I may not be as fast.

By the time I was transferred in the spring of 1969, the house was in excellent condition. Esther always kept the house up well and small mars and scratches were covered up on a regular basis. I didn't paint the outside,

however. It still looked reasonably good when we sold it and I didn't have the time. That was a job the new owners would have to do.

ESTHER'S DOMAIN

Esther's world was centered in the family and in the church. We had a relatively new Oldsmobile when we arrived, which gave her all the mobility she needed. Though she loved the girls, Tom was her pride and joy. In addition, there was 10 2/3 years difference between Tom and Celeste, resulting in three females in the household wanting to mother him. This was a good time of life for Esther and the girls as well as for me. Esther's happiness is apparent in figure 13-10, a photo taken in the summer of 1965. It also provides a view of our Oldsmobile and the backside of our neighbor's house. That house faced Sublette Street and was my other option upon my arrival in Rock Springs. It was identical to our house in the beginning (before my extensive work) and thus serves as a comparative view for the back of our house.

Figure 13-11 is an expanded view of that part of Rock Springs, which became her world from 1965 to 1969. There was little traffic and she had a nice car with everything but air conditioning. The latter was still considered a luxury by people in the inter-mountain west and especially Rock Springs. We hardly ever had a 90-degree day and even if we did, there would be a 20-mile an hour breeze. We didn't consider air movement to be wind until the velocity exceeded 40-miles per hour.

Esther was already familiar with most of Rock Springs, although there had been some new development north of the interstate. Of course, the interstate itself was new and according to some people the by-pass was the nicest part of the city. Of course, I liked the place because my work was interesting as was the geology of the area. That meant little to Esther and she only tolerated the town. Actually, she did like the people and life was good but the lack of good doctors was a major drawback for her. We continued with Dr. Harrison and his treatment was predictable. Shoot first and examine later. Well, that's a little bit of an exaggeration but one hardly left his office without a shot of penicillin. She did accept the dentist as being OK but we had little work done in those years.

ESTHER'S ROUTINE

On a typical weekday Esther would take the girls to school as well as pick them up. Valerie had entered high school one year after our arrival and Celeste moved into Junior High. Esther didn't mind because it got her out of the house, so I was told. I have learned since that she

Figure 13-14 Tom @ 2 years and Celeste on Christmas day 1966.

always stopped with the girls for treats at a small grocery store on D Street near the old LDS Church. Though I'm sure they were in agreement with her agenda, I suspect Esther was relishing the stop as much or more so.

Figure 13-15 "C" Tom busily engaged in pearl diving and just having fun.

Between our two stays in Rock Springs, a new LDS building was erected in the northeast part of town near Virginia Street. The old one was near the down town area and was being used as a library in 1965, I believe. I have shown

Esther's daily route in green, which passes both the junior high and the high school. She might couple such a trip with a visit to Ben's Food Liner or the dime store on the north side of the tracks. There were few or no other places to go but she was a homebody anyway. Her joy was the kids, our home and anything associated with them. Figures 13-14 and 13-15 are representative of her world.

TOM ADAPTS TO HIS ENVIRONMENT

Like all young children, Tom was active and one couldn't be sure what his next move would be. Before he could walk, he learned to negotiate the stairs to the basement so effectively that he didn't change for a couple of years. At first he would slowly back down the stairs. He had tried going both forward and backward and found the latter to be preferable. It was a little slow, however. Everyone else got to the den first, which he didn't seem to like. With time, he found if he stiffened out like a board on his stomach and slid, he could negotiate the short flight much faster. This he did with his feet first to take the impact of the landing or basement floor. He would then crawl to the next flight and repeat the process. Through this technique, he managed to get down about as fast as the adults. Only his crawling to and from the steps, top and bottom, took longer than the others.

Tom liked his dad's boots. He would put them on and tramp around the house for hours playing like he was daddy or at least acting like he was doing the things he imagined I did. Esther caught him in a pose, which kind of demonstrates such activity in figure 13-16.

TOM'S DRIVING LESSONS

Tom wanted to drive before he could walk. I would often place him in my lap when we went to church or some other family activity. He would make putt-putt sounds and try to turn the wheel, which I only allowed when stopped. We noticed the truck sound came naturally to him when he got his first Tonka at age 2. No one showed him that I know of but within minutes he was making truck sounds while pushing the Tonka around the basement. I was sure he would grow up to be a trucker, heaven forbid. One day he noticed a road grader near the house, which was shut down for the weekend. He wanted to be up in that grader and I obliged him. Companies and governments weren't quite as particular then about such things. Soon he was whipping that steering wheel back and forth accompanied by truck like sounds. Figure 13-17 shows him in action.

At about three years of age, Tom obviously had the impression that he was ready to drive by himself. Who cares about a driver's license or

Figure 13-16 "C" Tom, ready for work with yardstick, dad's boot and sister's galosh.

hands on training. Hadn't he already driven a road grader? Well, I didn't understand how strongly he felt until one day when we were getting ready for church. I headed for the car

Figure 13-17 Tom may have been the youngest road grader operator in history.

with him and told Esther and the girls to hurry, I'd be in the car with him. We had gotten in the front seat when I noticed the back yard sprinkler

was on. The car was stopped with the transmission in park but the emergency brake was off. I said, "You stay here and daddy will shut the water off". It took about one minute. As I came back through the gate, the car was backing down hill out of the driveway and across the circle. I noticed my neighbor across the circle running alongside it and finally getting in. He had observed the car coming backward from his front window as I went into the backyard and ran out immediately. He was able to get it stopped as it circled across the lawn of the house next to his on the corner. I could never have reached it. Tom must have jerked the transmission into neutral the minute I left the car because there was no time wasted. As I calmed down and thanked him for his quick action, It occurred to me that had he not stopped it, the car would have probably crashed into the house just down the hill or maybe turned over, depending upon how Tom steered. Tom was quite happy with his self and told us how he drove the car. Esther didn't see it, thank goodness but I was scared out of my wits.

THE DEATH OF OAKS HOOVER

In 1967 Oaks Hoover, my sister Delight's husband was drowned in Lake Lowell. He was sailing with a friend. The water got rather rough, as it was capable of doing, and the craft cap-sized. As I understand the situation, they waited for some time hoping someone would come to their rescue. It began to grow dark and Oaks, being the strongest swimmer, decided to try to swim to shore for help. He knew they couldn't hang on much longer. He gave out before reaching shore and drowned. His friend was rescued and his heroic decision turned out to be the wrong one. I drove to Boise and Caldwell to offer my consolation and what little help I could give. We all helped drag the lake but to no avail. A memorial was held, as I remember. His body was found several days later.

CHURCH ACTIVITIES

Esther taught in primary most of the time, as I remember, but the girls were in the young women's program. I guess Celeste would have graduated from primary in 1966. Anyhow, primary was scheduled during the week, so Esther made a weekly trip to the Church besides Sunday services. She could cut off a little distance by following the blue route shown in figure 13-11, after reaching Thompson Street. She had Tom for company now, as he advanced from less than a year to 4 ½, while we lived there and it made her life a lot less lonely. Esther's main interest in life was being a mother and housekeeper. She cared little for social functions and neither did I. We made a good pair though such a personality worked against me in my professional life.

I was called to be the Elder's Quorum president soon after my arrival in Rock Springs. I had a lot to learn because of my short-term membership.

Figure 13-18 Tom enjoying the deer in Hogle Zoo during the spring of 1968,

I had served as an assistant clerk and as a counselor in the young men's presidency in Farmington. Looking back, I doubt that I was very effective in this position. I don't remember receiving any training except by verbal recommendations from the bishop. I held on and did my best until I was released about 3 years later. At that time I was called as young men's president, a calling in which I had a little better idea of my responsibilities because of working with Dick Matthews in Farmington. Things seemed to go better in that calling, which I held until I was transferred to Denver in 1969.

One amusing story I should tell regarded the book "A Marvelous Work and a Wonder". During our first stay in Rock Springs a very nice lady in the ward had loaned me a copy of the book. I guess I was supposed to return it but failed to do so when we were transferred to Billings in 1959. When we returned, she asked me if I still had the book to which I replied in the affirmative. It happened to be a special gift to her daughter from some relative and I guess she was somewhat sad when I ran off with it. Of

course, I sheepishly replied I was sorry and got it back to her the next week. It was buried deep with all my other books, which were still unpacked.

Our family was always very active. Sometimes I would be out of town or on a well but usually I had Sundays off. Esther, of course, was dedicated to her calling and attended both primary and Sunday services whether I was around or not. I was struggling a bit with the word of wisdom, i.e. drinking coffee. It was difficult to give up after about 25 years of slurping the stuff up day in and day out. In the forest service it had been a mainstay for me, particularly for breakfast. In the oil field, I had

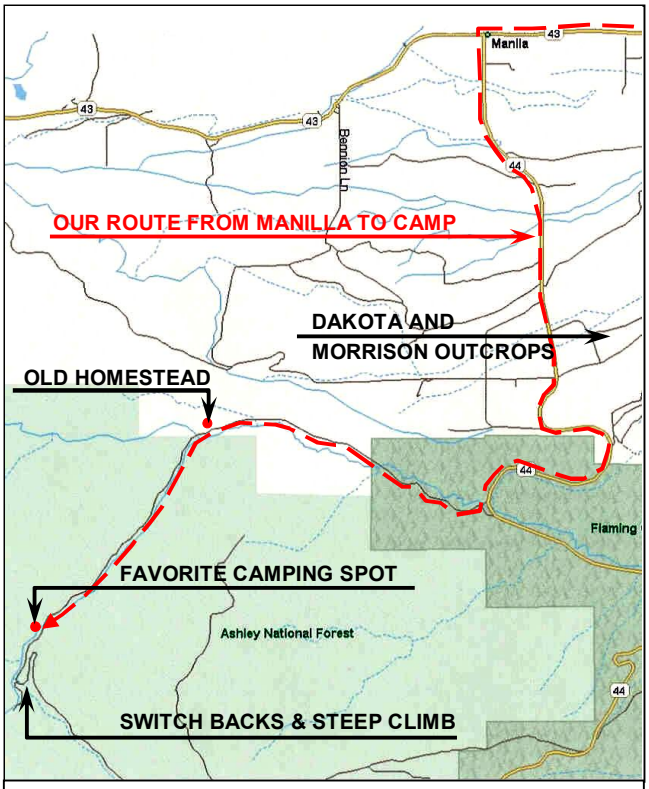

Figure 13-19 A map of the Manilla, Utah area. A camping area popular with the Obenchains.

drunk gallons of the stuff as I gazed into the recorder throughout a long night. It was also a social thing I was used to with friends and with customers. Saying no to an offer of a steaming cup was difficult at best and I succumbed far too often. Usually such lack of will power reared its ugly head when I was in the field. Everyone would be sitting around drinking coffee and smoking. I never craved the latter but I did crave coffee. I probably quit drinking coffee more times in those years than I could count on my fingers and my toes combined but I would always start again in some weak moment.

In 1968 the bishop convinced Esther and I that we needed to take the family to the temple and be sealed for time and all eternity. We were following the commandments pretty well including the payment of tithes but coffee was still my nemesis. I stopped drinking it again (maybe my 10th time) and we took a series of lessons, 12 in all I believe, before we went in June. I was ill prepared it seemed and came away not certain of what I had participated in. It was several years later before I really began to understand the temple and the covenants one receives therein. I must admit, however, that I was touched by the sealing ordinance wherein Esther and I were sealed as husband and wife for all eternity and then all of our children were sealed to us. It was special then and remains the most beautiful ordinance I have ever had the privilege to be a part of since. However, temptation in the form of coffee didn't stop and I'm ashamed to say, I continued the struggle for three or four years before conquering it. In fact, this period of my life was one of struggle in various areas of the gospel as I tried to understand it more perfectly and live the principles therein. Today I have completely lost the craving and thus the temptation for coffee but I still like the smell of a brewing pot in the early morning by the campfire. Though far from Sainthood, I measure my progress by looking back at those early days and remind myself that I have progressed. Daily progression is difficult to measure but a 10 or 20 year period provides the time needed to observe personal change.

FAMILY OUTINGS AND VACATIONS

When it came to picnics and simple overnight camping, we returned to many of the areas mentioned in chapter 10. These included a nice spot on the north flank of the Uinta Mountains near Manilla, Utah, two or three places in the Wind River Mountains and the Hoback River country, all of which are illustrated in figure 10-2 of chapter 10. I'll add a few enlarged maps of our favorite camping areas to facilitate these later experiences. We also took an occasional trip to Salt Lake, the only big city within reasonable driving distance.

TYPICAL TRIPS TO SALT LAKE

We probably averaged going to Salt Lake a couple of times a year during our last stay in Rock Springs. We would go in the spring just to

enjoy the warmer weather and see the first signs of flowers, etc. We went to find Fluffy, Tom's first puppy in about 1968. We made trips for furniture and other household items. We went to the temple and we went to look for a car. Sometimes we went just to get out of Rock Springs. It was relatively easy to manufacture a reason to go. We would usually stay overnight and see a show or something. I remember going to our first surround sound movie there called "The 2001 Space Odyssey". A couple of times we went to the Hogle Zoo. Tom enjoyed the animals. Figure 13-18 is a photo from such a trip. We would usually have a picnic and kind of relax as we took Tom around the zoo. I remember slipping on a steep paved corner of the walking path and really bruising my elbow. It wasn't right for 3 or 4 years after that. No, I'm not speaking of my head! It still isn't right. We loved to eat at Kentucky Fried Chicken. It was good then and they served sit down dinners with good choices and good food. Today, the Colonel isn't like the Colonel was. You might say he is now only a kernel of his former self.

THE MANILLA, UTAH AREA

In the summer of 1965 we returned to a campground just south of Manilla, Utah some 75 miles from Rock Springs. The map of figure 13-19 portrays the area with our camping spot and an old homestead nearby. We usually spent a night or two at a time here. I could fish the adjacent stream and there were some nice hiking trails as well. In addition, we could drive south along the road and up the switchbacks to take advantage of some marvelous scenery. During our first stay in Rock Springs, the road along this creek was highway 44 but as you can see, the road was rerouted after the completion of the Flaming Gorge Dam. The road we camped along side of was paved but had little traffic even when it was the state highway. After it was replaced, we only saw an occasional car or truck. Thus, we had little or no interference from others.

I mentioned the gully washer that occurred in the early summer of 1966 in this general area. Storms such as this provided the name by which they are described. Heavy rain in the mountains, over a significant area, is collected by the various draws or ravines, which then channel them down into the main drainage area. In this case the creek along side, which we camped, became the spout of a funnel and all the rain up above came roaring down into it. A twenty-foot wall of water rushed through the canyon on that fateful morning and washed trees rocks and anything else in its path down the canyon. Twelve campers using our favorite

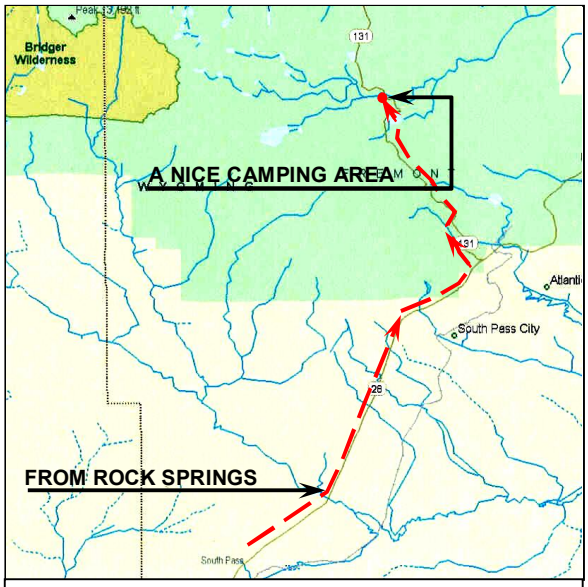

Figure 13-20 A map illustrating our Wind River Camp and the surrounding area.

haunt were drowned and their vehicles trashed as the Tsunami like wave of water hit them. We might well have been among them had it been a weekend. We didn't get back to the area until the summer of 1967 and were flabbergasted at the destruction such an incident can inflict. The height of the water at that time was still apparent

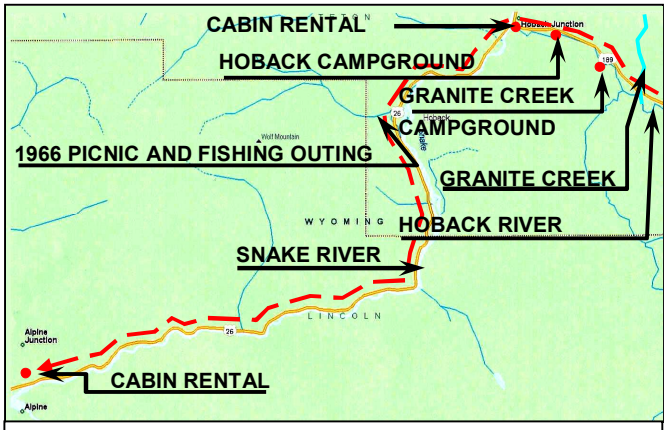

Figure 13-21 Enlargement of the Hoback, Snake River area with our campsites & cabins.

from the uprooted trees and void of underbrush. Camping in the area had been placed off limits. I doubt that we could have slept in that place any more with the memory of that dreadful day still in our minds. We went on up the road to a campground near the summit where we slept

with only pleasant dreams and no nearby creek to worry about.

THE WIND RIVER AREA

Figure 13-20 portrays one of the nicer camping areas in the Wind River Mountains. We didn't frequent it quite as much because there was more traffic and I didn't do as well in providing fish for dinner. However, it was a beautiful area and we enjoyed going there from time to time. The girls would play with Tom along the shallow creek. We really didn't worry about them but Esther always kept a watchful eye on their activities. At first, I tried my luck fishing but in later visits I simply enjoyed the solitude because of the earlier lack of fishing success.

THE HOBACK AREA

The Hoback/Snake River area was probably our favorite haunt, which we frequented two or three times a summer. There were several different camping spots available if one counted the cabins along the Snake. Figure 13-21 portrays that area and our camping spots, which lay

Figure 13-22 Esther, Valerie, Tommy with "Yours Truly at the Snake River cabin.

about 150 miles north of Rock Springs. I talked a lot about that same area in chapter 10 but left out a few incidents in our second stop in southwestern Wyoming. Consequently, I'll take time to fill in the missing activities.

By the summer of 1966, Tom was about 18 months old. Esther really didn't like to rough it, so to speak, with him in tow. I believe that was the year we stayed a couple of nights at Hoback Junction or the spot labeled "cabin rental". It was at the confluence of the Snake and Hoback Rivers just down river from the Hoback river campground. We had spotted the rental cabins on an earlier trip and decided that they were within our price range. Actually, the facility had cabins or permanent house trailers for rent. We chose a trailer with a couple of bedrooms and a sofa bed along with a living room and kitchen area. It had a nice view of both the Hoback and the Snake and was located in a pleasant wooded point between the two. We spent a couple of nights there. The first morning we took a lunch and went up a little stream, which drained into the Snake (identified in figure 13-21). I fished a little but had no success. Of course, three kids yelling, running and wanting to help, quite simply, didn't help. A constant barrage of questions from the kids and Esther's various comments kept me more in the picnic mode than in one of fishing. We had an enjoyable time but were rather tired by early afternoon. Back to the cabin we headed for a nap and a little relaxation. I think the girls found the cabin area more interesting than the creek we had been fishing in. The next day we went into Jackson, 20 miles up the Snake. Although it was a tourist town, the traffic and crowds were nothing to what Lethia and I experienced on a trip through there in 1997. We ate lunch there and made the rounds in the various shops before heading back to the cabin. Once again we spent a fun evening as a family with dinner and games in a mountain atmosphere.

In the summer of 1967 we managed a trip down the Snake to Alpine Junction and spent the night there in a cabin by the Snake. There was no camping involved. We ate in restaurants along the way, staying only one night. It was all done to relax in a change of scenery. The family loved the mountains almost as much as I did, so it didn't take any coaxing to convince them of an overnight stay somewhere out in them thar hills.

HOLIDAY VACATION TRIPS

THE CAPENERS

Theresa, Esther's sister, and her family lived in Malad, Idaho while we were in Rock Springs. We usually got together with them once or twice a year. You may remember that they visited us in Farmington, New Mexico and we spent several days together on Grand Mesa, the mosquito capital of the world. While in Rock Springs we made a couple of trips to Malad on Thanksgiving and spent the weekend. In like manner they visited us, as figure 13-5 attests.

We four had great times together. Gene loved baseball and I would watch a little but primarily, we had enjoyable conversation. We played pinochle on a regular basis, after the kids went to bed. Usually Gene and I would be partners, as would Esther and Theresa. That worked better than husband and wife against husband and wife. When Theresa was Gene's partner, he would often get frustrated with her and make remarks, which kind of ruined the sociality of the evening. When we played men against women, everyone was more congenial. As I remember, they got more fun out of beating us than we did them, which wasn't real frequent. Regardless, we had a good time laughing and chatting because the girls really didn't care who won.

CARL AND GINNIE'S

One Thanksgiving we went to Idaho Falls to spend the holiday with Carl and Ginnie. It was cold and snowy all the way. I remember going across western Wyoming around Cokeville on rather slippery roads. We could see a car coming in the distance, maybe a half-mile ahead of us. As I watched, I saw the headlights begin to rotate and then I realized the problem. I said to Esther, "That car has left the road and is rolling. We were there in seconds and stopped. Luckily, no one was hurt. There was a young man and a woman in the vehicle and the back of the V-W wagon was full of personal belongings. They were in the service and were heading east. We gave them a ride into Montpelier where they got help. We made it on into Idaho Falls that night, a Wednesday, and stayed the weekend. Carl and Ginnie hadn't been in their house a long time, maybe 2 or 3 years but it proved to be his one and only residence, which I envy in a way. One thing that stands out about that trip was their sofa sleeper. Boy, they didn't make them comfortable in those days. There was a steel rod that struck me right in the middle of the back and there was no way we could sleep. We finally turned sideways parallel to the bars and got through the night. We didn't say anything and continued to sleep across the bed the remaining nights. How grateful we were to get home to our beds on that Sunday night.

REGULAR FAMILY REUNIONS BEGIN

Mom and Dad's generation began having regular family reunions in 1967, if my memory serves me right. I know they began while we lived in Rock Springs because we made the journey from there to a campground just above Ketchum. It was in late June and all but a few families were in tents. I'll never forget waking up to a snowstorm on Saturday, our first morning there. Some of the hardy ones went to the hot springs just south of the campground for a swim but most of us spent the day visiting around campfires, just a shivering and a shaking. I believe we all posed for a group picture but I don't seem to have a copy. Uncle Edgar had made some bread in his camp stove, which he passed around. We stayed a second night and broke up on Sunday. Overall, it was kind of a miserable 2 days but in spite of that, the "Family Reunion" became a bi-annual event to this day. Later ones, however, were scheduled in July, which made the odds of having good or at least warmer weather, a little more favorable.

A CANADIAN VACATION

You may remember that Esther and I had gone into Canada while we lived in Cutbank, Montana and visited the Waterton Park. It was beautiful country and we always wanted to go back to spend more time. In early 1968 we decided to go again that coming summer and began to plan our route. We decided to stick to Alberta and visit the many national parks there. We would spend two weeks and then drop down into Idaho and visit family for a while. However, a problem reared its ugly head. How in the world would we tote all the camping stuff along with three kids? After all our camping needs, as Esther saw them, had multiplied with the arrival of Tom. Well, maybe we should get a new station wagon and while we are at it, one that is air-conditioned. The Oldsmobile had served us well but our needs and desires, had out grown it.

THE DODGE WAGON

That spring we started shopping for a new station wagon. There were Chevrolet, Ford and Dodge/Chrysler dealers in town. We visited each dealer and finally found a beautiful Dodge wagon, which was fully equipped with leather upholstery and a vehicle we really liked. However, in my estimation, we couldn't afford it. The salesman realized we liked it and started dealing but wouldn't come down to a price I felt I could afford, so we walked out. Next we went to Salt Lake and spent a couple of days looking there. Finally we settled on an Oldsmobile wagon, which was somewhat smaller but satisfactory in both price and size. I had to pay $50 to secure the car but we didn't finalize the deal. Why, I don't remember now. We planned to return and pick it up in a couple of weeks. Upon our return to Rock Springs, the salesman

was back in contact pushing even harder for the sale of the Dodge. I stood my ground and told him I had already committed to an Oldsmobile with a $50 fee to secure it. His price was still too high for me. I wasn't particularly trying to Jew him down but I knew what I could afford. Before we finished talking, he had met my price, tossed in new floor mats and the $50 I would lose in Salt Lake. That's how we ended up with the Dodge, truly a beautiful wagon in those days. If it has one, the moral of that story is, "When buying a car, or any big ticket item I suppose, have a maximum amount you can afford in mind and stick to it". We were now ready for vacation with a few weeks to spare.

HEADING OUT

Esther was a little perplexed with the Dodge because she felt like she was driving a truck but soon she was reasonably comfortable with it. July arrived and guess what. The day before we loaded the Dodge, Celeste cut her foot open on a bottle. Dr. Harrison stitched her up and bandaged it well. He said to go ahead with our trip and have the stitches taken out in Canada.

The two front seats were roomy enough for the family but the back wouldn't hold all our gear. Consequently, I wrapped the tent and sleeping bags in a big tarp and tied it to the luggage carrier on top. We were loaded down but the engine didn't blink. There was power to spare. The car got about 12 miles to the gallon, a real gas hog but the price was right, 25 cents a gallon. So, off we went up through Riverton, Wyoming to Billings and then to Great Falls where we spent the night in a motel. Interstate 15 was still in the planning stages in those days.

ARRIVAL IN CANADA

Rather than take 87, its predecessor, I angled to the west on 89 through Choteau to Browning and Babb, Montana. Just north of Babb, I took Montana 17, which turned into Canada 6 as we crossed the border. The map of figure 13-23 illustrates our route in blue after crossing the border. It was a long day after leaving Great Falls but we made it all the way to a campground just east of the Canada 93 & 95 junction on the south side of the highway. See camp #1 on the map. We arrived about 6 PM and I began setting up camp. They had tent platforms at each camping site, which caused a little problem. Luckily, I could just stake the floor of the tent in the ground along the outside. I'm not sure what folks with smaller tents did. Ours was a two-room affair, which I bought in case of bad weather. We could sleep in one room, even though it was tight, and set up the table in the other. We even had folding stools for each of us. It was daylight for about 20 of 24 hours while we were in Canada, it seemed and we didn't go to bed until midnight.

A FIRE CHANGES OUR PLANS

As we were eating dinner some clouds passed over but I don't remember any rain. A bolt of lightning struck the ridge across the way and soon a nice little fire was going. I wasn't too

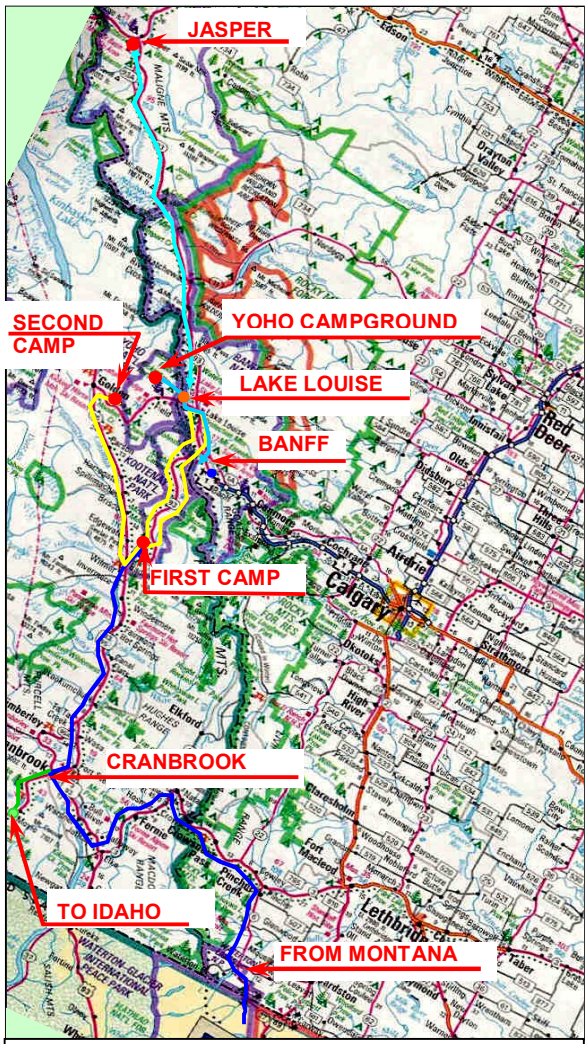

Figure 13-23 A map showing our route in Canada as well as some side trips.

worried because it was half way up the ridge and would probably move uphill. We spent the night there and I slept like a log. I'm not sure how well Esther and the kids slept because they weren't too comfortable being that near the fire. The fire spread quite a little that evening and I managed to film quite a bit of it. Esther

complained that I should be photographing the kids, not the fire but, of course, I could see the kids anytime and this was a one-time shot. I knew my priorities and held to them.

The next morning the fire had cooled off, which is rather normal, in my experience, because of the cooler temperatures. I figured they would have it out by nightfall. We ate and decided to leave our camp and go on up to Lake Louise for the day. We would stay another night at this camp and then head north on 95 to Golden. We did as we planned and all went well but upon our return, we just barely got back to camp before they closed the highway. The fire near camp had blossomed and was two or three miles long. We got back to camp, which was still at the low end of the fire. Everything was OK and I still didn't see any danger. I had decided to spend the night there as planned because it was late afternoon.

My plans got changed rather soon. A forestry official came by and made us clear out. He told us the highway was closed and we would have to go west to find camping facilities. We packed up and headed back down to the junction where we turned north for Golden. From there, it was only 70 miles to Golden and we should be there by 6:30 or so. We would then turn east on Canada route 1 and drive about 15 miles to a campground. With any luck we would be there in a couple of hours. The second day's route is shown in yellow.

A SLOW TRIP

When we arrived at the junction, we ran into traffic and all was headed north. With the cutoff to Lake Louise closed through Kootenay Park, everyone was headed up to Golden and across on #1 just as we were. We moved at a reasonable speed up to Golden but there we merged with traffic coming east on Canada 1. Everything slowed to a crawl as we made our way to our objective campground. Little did we know that everyone else had the same idea. We finally arrived at around 10 PM. The campground was packed to overflowing with no tent site available. People were camping anywhere they could find an open spot. We did the same after finding a little free area of sand and grass. We didn't bother with the tent but slept on the open ground. We snacked on junk food and hit the sack.

Before long we heard people moving out. It was only 5 AM but there was too much noise for me to sleep. We roused the kids up after fixing a little breakfast, ate and packed what little we had taken out back in the car. Soon we were on our way, probably about 7 AM. We all felt better even with the short night we had experienced. We also knew it was only about 15 to 20 miles to our next camp. We would stop early and even stay there a few days. Of course, we had a little surprise waiting for us, which I'll describe later.

YOHO NATIONAL PARK

We arrived at Yoho National Park Campground well before noon and selected a campsite. There was a fee attached to this park but it had hot showers available and flush commodes. This was Esther's type of camping. Our campsite was about 100 yards from the showers and bathroom facilities. Once again there was a wooden platform for the tent. That's nice in a way but it is awkward if your tent doesn't fit the slab. We were in luck. The tent and platform were essentially the same size. As I put up the tent, I noticed some black clouds rolling in. This time I placed all the beds in one side of the tent and the table in the other. Just in case it rained during meal preparation, I tied the tent flap to two trees and made a shelter for the gas stove. We could weather any rainstorm now unless the wind was too strong. By afternoon, it was raining and all my preparations were put to the test. They worked like magic with the kids reading or playing in the bed area. Esther and I prepared supper and a good one, I might add. This was to make up for the previous night. We had some canned meat along with fried potatoes, a salad and a vegetable or two. Esther had planned ahead and we even had a little desert, some kind of junk food. That evening we played games and listened to the rain come down. The rain continued through the night while we slept like logs.

Morning came and the rain continued. We slept in late but finally Mother Nature called and I could ignore her no longer. I went down to the central facility to shower and shave as well as answer the earlier referenced call. Soon I was back and ready to get breakfast. Esther and the girls decided to shower afterwards. Naturally, appetites were greater than normal and I had trouble keeping up with the desires of the family. I always fed the kids first, then Esther and finally, myself last. That way, I could eat in peace while Esther and I made plans for the day. The rain continued in a variable mode, sometimes hard and then lighter for a period of

time. We knew we would have to get the kids out of the tent. They were hyper enough under normal circumstances and they had been cooped up for the better part of three days.

REMOVING THE STITCHES

It was time to get Celeste's stitches out of her foot, so we decided to go to Banff, which was about 45 miles down the road. First, of course, came the kid's and Esther's showers. I suppose it was about 11 AM before we left. We didn't have to wait too long after arriving. Her foot was pronounced as healing on schedule and the doctor removed the stitches with no problem from Celeste. We drove around Banff a little to get an idea of the town size and layout. That didn't last long and we headed back to camp. It was late afternoon when we arrived so we decided to relax. Besides it was still raining intermittently and the underbrush was wet as could be. We had another good dinner, which attested to our supplies. I think we added some goodies in Banff, however. Games were the order of the evening as we tried to keep the kids busy. Finally, we retired for the second night.

DADDY, THERE'S A BEAR OUTSIDE

The second morning Valerie beat me up and headed for the bathroom. She hadn't much more than exited the tent when back she came yelling, **"Daddy, there's a bear outside".** I crawled out of my sleeping bag and into my pants before taking a peak. She was right. Just outside our door was a good-sized mama black bear. I think she was sniffing the odor or maybe some tiny scraps left over from our evening meal. I mentioned cooking under the tent flap earlier and that's basically where she was. However, I could see no cubs and, after a short time, decided she posed no threat to us or anyone else. She was simply looking for breakfast. Well, that didn't alleviate Valerie's concern. She didn't want to be on mama bear's breakfast menu for that day and wouldn't step outside without me. I grabbed my shaving gear and walked her down to the community bath and, after finishing, waited until she appeared. She had carefully instructed me about that. I think she hoped if mama bear were really hungry she'd pick on me first or maybe I'd volunteer being the opening entrée. Oh, the faith of a child. Little did she know of the yellow streak down my back and my dazzling speed when motivated by fear. Anyway, we sauntered back to the tent and found mama bear still in the vicinity. Consequently, I found myself walking Esther, Celeste and Tom down to shower as well. That took a good share of the morning and it was nearly lunchtime as we finished breakfast but that mattered little considering the rain.

A WALK AROUND THE LAKE

I had spotted a lake on the map, which wasn't too far away. The rain had subsided, for the moment, to a light drizzle. The map showed a trail around the lake and I talked the family into a little hike to use up some of their energy. Luckily, the rain only maintained its drizzling intensity as we departed the car and began our hike around the lake. We probably spent an hour or so circumventing that picturesque little body of water with the kids doing their thing of running and yelling. It didn't begin raining hard until shortly after we climbed back into the car. What should we do the rest of the day? Esther suggested going to Lake Louise again to kill time and maybe visit some of the little shops. It was only a few miles down the road. This we did and arrived back at the tent about six that evening. We had been listening to the weather and it didn't appear there would be any improvement in the near future. It was far too wet for any serious hiking even at family levels. The kids couldn't even spend much time outside the tent unless it was in the car. The rain and mama bear limited our choices. Esther and I discussed the situation and decided to head north to Jasper National park, roughly 100 miles away. Hopefully, we would find better weather there.

HEADING FOR JASPER

The next morning, I packed up a wet camp after breakfast and we headed north. Clouds were hanging around the mountain tops most of the way, so we could see little but the trees and rocks alongside the road. About half way to Jasper, the clouds seemed to lighten up and we could finally see the mountaintops. I made it a practice to point out interesting geologic phenomena to the kids and Esther on family outings. One could see the cirques and glacial valleys and I explained their manner of formation. We passed by the Athabaska Glacier, which was interesting. Rides up the glacier on buses were available but we decided not to take the time. Besides it was rather miserable out there. In one area prior to the ice fields, we could see a down warping on tops of the mountains very clearly. That is, the sedimentary strata located on top of the peaks clearly formed the bottom of a syncline as illustrated in figure 13-24. Such a phenomenon

is described in geology books but I had never seen an example in nature. I thought it was very interesting. Unfortunately, no one else in the family was particularly impressed by my observation, made possible by my geologic background. I decided it was like great art. That is, only those with an eye for the beauty of geologic phenomena can appreciate their existence in the world around them. Since I've committed myself to this geologic explanation with figure 13-24, I will continue with it.

The warping of the earth's crust produced by compressional forces creates a series of up warps (anticlines) and down warps (synclines). The up warps fracture more readily than do the down warps and erosion by wind and water flow in those fissures take their toll. These erosional forces gradually carry away the material in the up warp and the up warp becomes a valley. Because there is less erosion in the down warp, the rock material is left in the form of a mountain. That might sound like a bunch of geologic phooey and, I must admit, I had my doubts as well but that's what they taught. That's why I was tickled to see the actual remnants of such action in nature. Well, I'll drop the subject before I lose you through boredom.

ARRIVAL IN JASPER

With a few stops and my continuing geologic lectures, it took the better part of the day to make it to Jasper. Fortunately, the campground we stayed in (Wapiti) was near town. It too had showers and flush toilets. These accommodations in Canada really impressed Esther. We found a nice campsite and set up the tent as before. The weather hadn't improved as yet but our hopes were high. We had experienced 4 straight days of rain. Surely things would dry out. We picked a few sights to see on the following day while seeking cover in the tent once again. We were in Canada and we wanted to do a little hiking while enjoying the scenery. We were determined.

Morning came and the rain continued. We had planned to spend two weeks enjoying the beauty we had heard so much about. We continued our sightseeing from the cover of the car. Needless to say, our activity menu was limited. We went back into Jasper and drove around the outskirts. With the low hanging clouds it was difficult to appreciate the obvious beauty of the area. After spending a little time there, we headed back to camp. We continued in that camp for a couple more days with no better luck. The kids were fit to be tied by the confinement to car and tent. Esther and I were thoroughly disappointed by the weather. We had talked of this trip since we bought the new Dodge wagon and before.

DEPARTURE FOR IDAHO

Finally, nine days after leaving Rock Springs, we said, "We give up"! The following morning we packed the car and headed south towards Idaho. We had planned the last week there but would now extend it by virtue of our early departure from Canada. We headed down Canada 93 to Fort Steele and Cranbrook. In so doing we passed back through Kootenay National Park and by the fire that had changed our plans. It was out, completely subdued by the weather. At Cranbrook, I hung a right and got on 95, which became US 95 after entering Idaho. It was about 300 miles to the US – Canadian line and another 65 miles into Sandpoint where we stayed. After suffering through roughly 7 nights of rainy weather in a tent, Esther had little trouble convincing me we needed to get a motel. Of course, the rain had finally quit and the weather remained dry the rest of our trip. We enjoyed a restaurant meal for a change and relaxed in our room

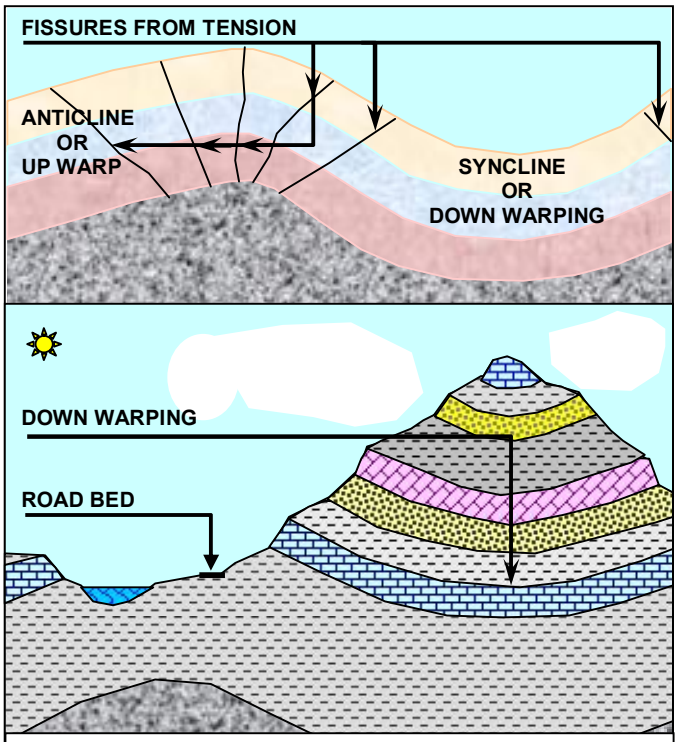

Figure 13-24 An illustration of the formation of mountains by folding and subsequent erosion.

afterwards. The kids were happy to be out of the rain, as were Esther and I. The beds were sure a welcome change.

The next day we had a leisurely breakfast and headed for Boise. The rest of the trip is rather blurred in my memory except for White Bird Hill out of Lewiston. I had heard about it and

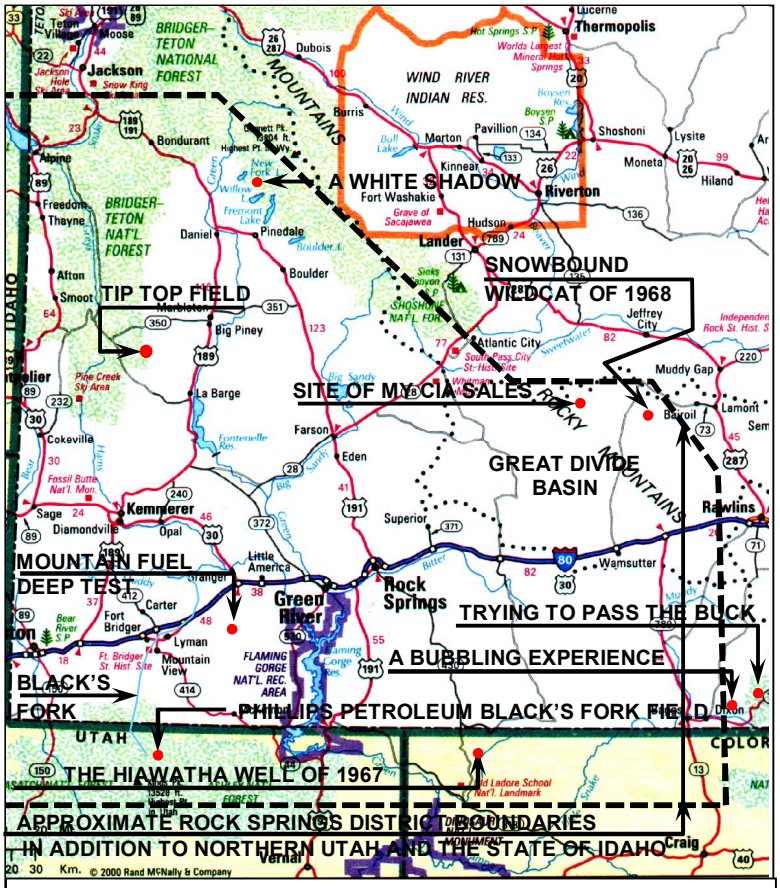

Figure 13-25 A map illustrating that portion of Wyoming serviced by the Rock Springs district in 1965.

expected a steep drop down on to the Salmon River but it was even more spectacular than I had imagined. It was nice not to have a trailer behind me. Even so, I found I needed to gear down to save my brakes because of the length and steepness of the drop in elevation. We arrived in Boise that night and spent the better part of a week before going back to Rock Springs. As usual, the family welcomed us and we enjoyed the reunion with everyone. I don't remember any details but we typically got together as a group and had potluck in one of the homes or the park. After leaving Boise, we arrived in Rock Springs on schedule just three weeks from the time we had left. Esther and the kids were happy to be home and I was ready to go back to work and get a rest myself. I do believe that vacations are often harder work than work itself. With that comment, I'll move on to some of my oil field experiences and see if any of you will pay attention to them.

VARIOUS OIL FIELD EXPERIENCES

I mentioned earlier that the oil business was in the doldrums when I was transferred to Rock Springs. Schlumberger had cut units (trucks and people) in many places. Rock Springs still maintained three units but we typically ran short one engineer and one operator to save money. A fully manned fleet of three trucks would require 9 operators and 4 engineers to work a 9 days on and 3 days off schedule for engineers, which was now the norm. Operators, on the other hand, always worked 6 days on and 3 days off. At any one time the normal 3-truck location would have 6 operators and 3 engineers on duty along with office staff and an instrument technician. In our case, we had five to six operators and 2 to 3 engineers on duty at any-given time, which I may have mentioned earlier.

We ran the perforating unit with 2 operators. They would work a six – three days off schedule but the unit had 2 operators only 3 days out of 9. The other six days the unit made jobs with a single operator. The engineer would take his days off when business permitted. The system worked for us because we could usually forecast perforating business in advance and jobs weren't as long or as frequent as were those for the open-hole units.

The manager, yours truly, rode truck for the open-hole engineers as required to provide their days off. This meant that I was on call six days out of nine. The engineer on duty made all of the jobs he could but it wasn't unusual to have both open-hole units in the field at once and I spent much of my time in that mode. Occasionally, I would also make a perforating job for the cased-hole engineer. Usually, during the summer, we would have a 4th engineer for vacation relief, which gave me some respite. None-the-less, much of the time I was riding truck and managing the location, which gave me little time at home. I provide this information so

the reader can better understand why I, as manager, was often making field operations. It was simply a matter of location economics in trying to remain profitable.

MEMORABLE FIELD OPERATIONS

I have reproduced figure 10-2 here as figure 13-24 to provide a handy map for discussion of the following field experiences. Of course, the points referenced on the map have been changed to those to be discussed here.

WINDY WYOMING

Much has been said about the wind in Wyoming during the years I worked in the area and little if any of it is an exaggeration. Though I may not be an authority, I spent between 9 and 10 years chasing around the state and feel I have some grasp of the subject. I have and will continue to tell stories about my experiences with this wind but I decided to take a moment and focus on it more directly before my field adventures as a manager. It may help you grasp the impact such wind had on our field operations.

LISTEN TO THE WIND BLOW

It has been said that, "The snow fall in Wyoming is actually several times that which is measured because most of it lands in Nebraska". I know from personal experience that one can get double the gas mileage traveling west to east that he can in the reverse direction. Similarly, in a truck with a large cab such as Schlumberger trucks, one can average twice the speed traveling east that he can west. This fact of life in Wyoming has to be taken into consideration when estimating trip time to a well or other destination. To help establish the credibility of such statements of mine, I have included a photo of myself in figure 13-26, which was given to me by a rancher near Rawlins. I had gotten out of my car and approached him for directions when a sudden gust of wind caught me by surprise. As you can see, I grabbed a signpost, which was the only thing between me and the state of Nebraska. Lucky for me the rancher was an expert calf roper. After snapping my picture, he tossed a loop around my torso, jumped off his horse while the latter kept the rope taut and gently lowered me to the ground. Before providing the needed directions he said, *"Sonny, ya need to learn to keep your feet on the ground, keep a low profile and park upwind from your destination on days like this".* I have since followed that advice and saved myself several anxious moments in later episodes with the Wyoming wind.

Figure 13-26 Always check the wind velocity before getting out of your vehicle in Wyoming.

THE BIG PINEY ICE BOX

The little town of Big Piney, Wyoming has always been noted for its record setting cold temperatures. The one motel located there provided outside AC outlets for engine block heaters. During the late sixties such provision was unusual, at least in the west. However, guests stopping over at the motel in mid-winter used these outlets religiously as temperatures dropped well below zero.

In the winter of 1966 –1967, Mobil Oil Co. drilled a well in the Tip Top field a little southwest of Big Piney. The location is shown in figure 13-25 as are the sites of the rest of my stories. As luck would have it, I happened to make the job. We ran a series of services from a standard Induction-Electric Log through a Microlog, a Sonic Log and a Density log. It was cold and I do mean cold. Temperatures had been running 20 to 30 below zero in Rock Springs. We arrived at the well in plenty of time to check the tools out and properly prepare for the job. Things went rather slow, however, because of the temperature. All outside work had to be done with gloves on. If a person touched a metal surface with bare hands at those temperatures, his skin would immediately freeze to the metal, requiring drastic and painful measures to free them. Thus, each action taken was deliberate and measured to prevent the possibility of a mistake. I even left my car running during the operation because it would be virtually impossible to start a few hours later. Hopefully, it had enough gas to last the night.

We were given access to the well about 6 that evening and began rigging up. All went well at first. When we got to the second service, the

Microlog, we couldn't open the arms of the device. It was hydraulically operated and the oil was too thick to flow through the system. We dropped the tool a few hundred feet in the hole and let it warm up in the mud, which was probably 150 degrees or so. After about ten minutes the hydraulic system operated normally and we could pull it out of the well to complete the calibration. You see, the caliper or distance between the outside of the two arms was calibrated with standard 8 inch and 12 inch rings. With this accomplished the service was run without incident. The next service was the Sonic with a Gamma Ray and Caliper. It too was run without incident. In this case, the caliper was spring actuated and there was no hydraulic system to freeze up.

When we got to the Density, we knew it would require a warm up in the well, like the Microlog, because of its hydraulic system. However, in picking up the device, the bridle jumped the sheave. That is, it slipped between the wheel and the frame of the sheave. Such a problem wasn't uncommon but could be prevented by the operator on the floor if he was being attentive. To free the bridle, the upper sheave was lowered to the rig floor, the frame loosened and the bridle pulled back onto the wheel. The sheave frame was then tightened and the wheel was raised back into position for the job. Unfortunately, in this case, the bridle was damaged and we had to change it. Under normal circumstances, such an operation was a thirty-minute job. However, with the temperature as low as it was, we had to pull the bridle into the heated doghouse and perform the work there with gloves off. Some of the work was too intricate to be handled with gloves. All in all, we probably lost 1 to 1 ½ hours. Finally, we were able to pick the Density up and hang it in the well for 15 minutes to warm it up for caliper calibration. From there on, all went well and we finished the job around 5 AM. When I returned to my car, it was toasty warm, having sat idling on location for the entire time. Of course, it was getting a little low on gas. Fortunately, Big Piney wasn't that far away.

In warmer weather, we might have done the whole thing in 8 hours instead of the 12 or so we used. Normal activities just take longer under such conditions. Anyway, we headed into Big Piney for some breakfast before going back to Rock Springs. There was a thermometer in front of the restaurant, which I assume was reasonably accurate. Though I knew it was mighty cold, I must admit I was somewhat surprised to see the temperature registering at 55 degrees below zero. That was the coldest temperature I ever had the pleasure, you bet, of performing a job in. Many are the times I have worked at 20 to 30 below zero but this was my personal record. By the way, perfect weather for well site work, in my humble opinion, ranges from forty or fifty degrees in the daytime down to 10 to 15 at night. It's invigorating but not so cold it inhibits finger movement and tool operation. Likewise, you aren't likely to break a sweat, unless tool trouble rears its ugly head.

HIAWATHA NEVER SAW SUCH DRIFTS

Fall and spring were the times we were most apt to get a heavy snowfall in the Rock Springs area. In the winter, we seldom saw over 4 or 5 inches at a time. In the fall of 1967 I had another memorable experience trying to get to a well south of Rock Springs as shown on the map of figure 13-25. It was an average well, being drilled by Mountain Fuel Supply Co. and called for an I/ES, a Sonic, a Density and a dipmeter. The weather, however, was not average. A snowstorm was in progress and had dropped about 18 inches of the white stuff by the time we reached the Colorado line some 50 miles south of Rock Springs. All had gone well up to this point. The map of figure 13-25 doesn't show the road detail of the area, so I'll provide my own of the immediate area in figure 13-27 even though it is of somewhat limited accuracy.

We had little trouble on the blacktop of Wyoming highway 430, which ended at the state line of Wyoming and Colorado as shown. Dirt roads continued south to Colorado 318 and east to a north-south highway, US 789, some 70 miles away. The latter passed by two Mountain Fuel Supply Co. oil field camps called Hiawatha and Powder Wash, respectively. The well as you can see was south and west of Hiawatha. Our road directions instructed us to head east from Wyoming 430 about five miles to a dirt road headed south to the rig. We simply had to find the road and then stay on it to get there. There was little chance of losing one's way.

As we turned south on the dirt road, we could see the rig off in the distance. It was dark and the rig's lights stood out against the moonless sky. I was just ahead of the truck. The terrain was relatively level at this point. About 3 miles away from the main east-west road, we came to the lip of a canyon. The road turned to the west as it dropped into the canyon. Almost

immediately, I came to a snowdrift and could see several more ahead as the road wound down the side of the ravine. I backed up and stopped the truck at the top of the canyon to simplify turning it around, should that be necessary. The two operators and I then walked down the road a quarter of a mile or so to evaluate our chances of getting through. We could run the truck first to break the drifts, if that seemed advisable, and I would follow. We were nearing the bottom of the ravine when it occurred to me that it would be fairly easy to break the drifts going downhill but what about the other side? From our vantage point, I couldn't really see how bad the road was over there, as it climbed out of the gulch. If we took the truck to the bottom, it might be a bear getting up either side and we could find ourselves parked there until spring.

The rig was about ¾ to a mile away and I decided to leave the truck where it was and walk to the rig. They might have a Caterpillar on site and, at least, they would know we were close at hand. The operators went back to the truck while I took off for the rig. That was a tough ¾ mile. I negotiated drifts too numerous to count in an uphill mode. I soon found out it was tougher to struggle through a drift going uphill than it was going down. I suppose it took me the better part of an hour to get to the top of the ravine. From there the going was relatively easy in that I could wind my way around any drifts. Soon I was in the geologist's trailer relating my story and the present location of the truck. The geologist, Vic Grass, said there was a better way in. He called a field roustabout working the Hiawatha camp and described the situation. The roustabout told him to send us back to Wyoming 430 and then south until we arrived at a road leading into the western part of the Hiawatha field. There, he would meet us and guide us through the maze of roads to the rig. Otherwise, we probably couldn't find our way. The map gives some idea of the maze involved.

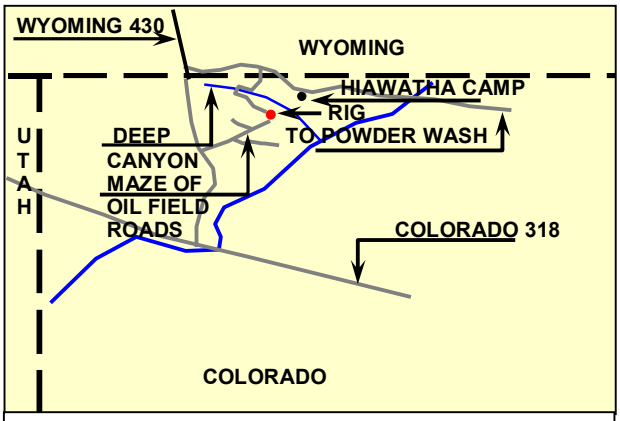

Figure 13-27 The Hiawatha area in detail.

With that information I headed back to the truck, which was a mile and a half or so away. I made good time because most of the way was down hill through drifts I had already plowed. The other side of the ravine, where the truck was, was a fairly easy climb as well. The operators had broken a good trail up that part of the road. I was back at the truck in about 45 minutes.

We headed back to 430 with me leading in the car. No one else was out that night. The only tracks were those we had made. As I turned to the south, it became apparent that following the road would be difficult. There was 18 to 20 inches of snow and only a few pieces of brush showed through the otherwise solid white landscape. If the truck happened to slide into the ditch, we might never get it out, at least until spring. There was nothing to hook the mud winch to; making it useless as far as freeing the truck was concerned. However, should I leave the road in the car, they could winch me out. With that understanding we began our trek south to the western entrance to the oil field as I gingerly felt my way through the snow.

Fortunately, whenever we came to an incline of any magnitude, the road location was easy to see and I traveled it without a problem. In the level areas I frequently got out and walked a hundred yards or so ahead to define the road location. If I got up to a speed of 20 miles an hour or so, big gobs of snow would come over the hood of the car and make it impossible to see. Consequently, our progress was slow. Maybe two or three times I found the car and myself in a predicament I couldn't get out of. The truck would stop and hook the mud winch on to the back frame. In a few minutes I would be back on the road. Much of the time I could back the car out of a problem area under its own power. It took about an hour to make the seven miles to the road leading east into the oil field. We found the roustabout as promised. From there, it was smooth sailing and we arrived at the rig in a half hour or so. From the time I had left the rig, walked back to the truck and come back on the alternate route, I suppose we had burned up three hours.

The job was a four-bagger, as I mentioned, and took about 20 hours to run. The well was in the

vicinity of 10,000 feet deep. Mountain Fuel ran all the logs from total depth to the casing shoe and required numerous prints. Consequently, it was getting light on the second day when we finally left location. We found our way out without any help. Once on the main road, I left the truck behind and headed for home, which was a couple of hours drive away. Once there, I had to dry the 60" dipmeter film (paper actually) and air freight it to Denver for dip calculations. The 60" film was necessary for optical dip calculations. As you can see, I had 5 feet of dipmeter paper for every 100 feet of hole or roughly 450 feet total. I also had to work up the films from the other three services and leave them for the secretary to provide the finishing touches before printing. My total time back at the office was probably 3 hours after which I shipped off the dipmeter, went home, showered and returned to the office to take care of some managerial duties. After a few phone calls, some discussion with office personnel and my crew, I headed for home where I crashed for some welcome shuteye. Such was the life of a combination manager and field engineer.

ANOTHER SNOW JOB IN THE ROCKIES

In the spring of 1968 we were greeted with a nice snowstorm that turned into a blizzard of sorts. As Murphy's Law might predict, I was riding truck that day and we got a call for a wildcat well just south of Jeffrey City, Wyoming. It was just barely in Sweetwater Co. and thus in the Rock Springs district. See figure 13-25. I have also shown a blow up map of the Great Divide Basin in figure 13-28 for reference to my story line. Total depth of the well was around 8000 feet and they called for an I/ES, a Density, a Sonic and the Formation Tester. The latter service required a special field unit, which not only carries the testing tools but also served as a place to service them for repeated runs in a well. This was a limited use wire line service and only one such vehicle was stationed in the Rockies, it being in Casper, Wyoming. I made arrangements for the assigned specialist operator to meet us at the well that evening.

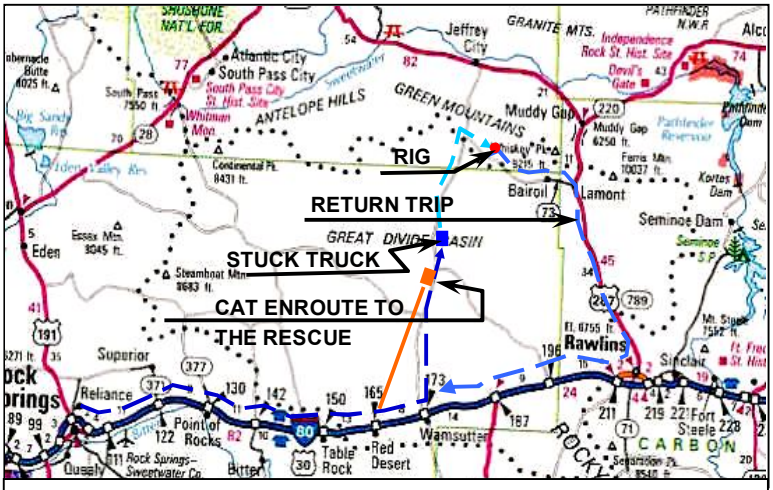

Figure 13-28 Map of greater detail related to a fateful spring job of 1968 wherein we fought mud and snow.

THE GREAT DIVIDE BASIN

You might notice there is a large area just north of I-80 in that area called the Great Divide Basin. The name comes from the fact that the basin lies along the crest of the Rockies at that point. In figure 13-28 you also might notice that the Continental Divide, represented by a black dotted line, splits just south of Rawlins. One segment goes north and a little east before taking a hard left along the northern edge of Sweetwater County. The other segment takes a westerly route and eventually crosses I-80 between Red Desert and Table Rock. It continues on a northwesterly route to a point just north of Superior where it takes a hard right or due north to finally join up with the first segment at a point just south of South Pass, Wyoming. Within the two segments lies the Great Divide Basin wherein there is no drainage in any direction. Any precipitation in the area simply lays there until it evaporates. Consequently, the lower areas are usually covered with a salt or alkali carried in by runoff and left over from the evaporation process. The basin is relatively level with the lower areas providing the water collection spots.

A DIFFICULT TRIP

We left Rock Springs about suppertime in a rather light rain and arrived at Wamsutter, Wyoming, located on I-80, around 8:00 PM with the precipitation now becoming snow. The well was located 50 miles due north of there on the south flank of the Green Mountains. The mountains, though having relatively shallow relief, form the Great Divide Basin's north limit.

After a quick bite to eat at the Wamsutter Café, we headed north with me and my car in the lead. Where road conditions were questionable, such a caravan was normal practice. First, we stayed together in case either unit had trouble. Second,

if my car slipped off the road or got stuck in a nasty mud hole, the crew could pull me out with the mud winch located on the front bumper. It was simply more convenient for me to be in front. By this time (maybe 8:00 PM) the snow was coming down heavily, adding moisture to the already muddy landscape. About two miles north of Wamsutter, we came to a rather long though not very steep down grade. About midway on the grade, a truck was stuck with his load of oil field equipment. There was no way to get by him without getting our logging truck stuck and, as a result, we decided to play the part of the "Good Samaritan". I moved the car out of the way while the operators stopped the truck upgrade a ways from it and began reeling out the cable from the mud winch. Once hooked up, both units applied power and the two-truck tandem slowly moved to the top of the hill. There, they were uncoupled and he waved goodbye. Actually, he was very appreciative and the time required for the whole operation was something like two hours. Of course, the snow came down the whole time forming a nice muddy slush. I doubt the Great Divide Basin had experienced such moisture in a decade. It appeared as though the year's moisture would come in one storm.

The trucker had come down the road we were heading up. He indicated it was a mess all the way, so we decided to chain the truck up, which killed another hour. Such an ounce of prevention might very well be worth a pound of cure. Around 11:00 PM we were on our way again with yours truly leading the way. The road was difficult to say the least. Much of it was a sea of mud. Even so, I was able to move along quite well and had to wait on the truck from time to time. After coming through a particularly muddy section about 25 miles north of Wamsutter, I crested a hill and waited for the truck. I watched with trepidation as it entered the area I had just struggled through. Before long, my worst fears were realized; they were bogged down. I turned around, headed back and stopped in a safe area 50 yards from the truck. Soon, it became apparent that they weren't going anywhere. I walked over to the truck to discuss the situation. We decided there was no option, other than getting some help. Of course, my car was the means of transportation.

LOCATING THE RESCUE EQUIPMENT

The two operators stayed with the truck and I headed south for Wamsutter to scare up a Cat, you know, one of those things with a blade on the front and steel tracks underneath. In several places along the way, I wondered if I would get through and make my destination. Wouldn't that be sweet with me stuck midway between the truck and Wamsutter? Even when my car was moving, I felt like it was a snow mobile or maybe I should say mud mobile, sliding along the surface of that gooey mess. The tires were in good shape and the wheels seemed to propel the car through the muddiest of zones like a prop on a motorboat. I arrived in Wamsutter around 2:00 AM and pulled into the only overnight service station in town. By this time, my vehicle looked like a mud ball with wheels. I wasn't much better off, bearing just a small resemblance to the human species. You see, I had also managed to pick up a considerable amount of the slime on my person from walking around in the stuff. It stuck to anything it touched like super glue.

I explained our situation to the night attendant, asking if he knew of anyone with a Cat who might be interested in helping us for a fee. He didn't, so I grabbed the phone book, which covered all of Sweetwater County. It looked as though I would have to have one trucked in and then walked to the problem area. That is, the Cat would have to proceed north from Wamsutter under its own power. Any transport vehicle would get hung up like we did. I found the number of one contractor offering such services in Red Desert, which was only about 8 miles west of Wamsutter on I-80. I was able to rouse him at home in bed at the ungodly hour of 3:00 AM. It took a few tries to get him focused but he was very cooperative once he understood the problem. He explained it would be easier to walk the Cat northeast to the truck, as shown in orange on the map of figure 13-28, from Red Desert. He could be on his way in about an hour and he anticipated taking 5 or 6 hours to get to the site. He would meet me there around 10:00 AM. I then called the Schlumberger dispatcher and explained the problem, as well as the action being taken. If the customer called in, wondering where the truck was, she would have an answer. I also explained that she probably wouldn't hear from me again until the job was over. That would be at least 36 hours. With the necessary action taken, I decided to take a little snooze in my car until the café opened; so I could eat a good breakfast.

I woke up around six. One doesn't sleep too soundly in the front seat of a Ford motel,

particularly when you're six foot three and the bed is only about 4 feet long. I crawled out, stretched, tried to shake off my drowsiness and rid myself of the various aches, which occurred from being curled up in the car. Before heading for the café, I gassed the car up, paid the attendant and went into the men's room to freshen up a bit. Soon I was feeling like a human being again, though on the hungry side. I ate a good breakfast, grabbed a little transportable food for my operators and headed back north. About 10 miles out I looked to the west and could see the Cat trudging across the prairie angling to the northeast. He should intersect the road a little south of the truck, I thought. It had quit snowing in this area but the road was still a mess and I moved northward around 15 to 20 miles an hour. After arriving at the truck about 8:30, I gave the operators the chow I had brought and explained the situation while they were eating.

Soon we could hear the Cat off in the distance to the south. Before long, he was on site just about as scheduled. I wheeled on in front of the truck and waited in a relatively dry spot while I watched the Cat extricate Big Blue. Soon the truck and bulldozer came up behind me and stopped. We still didn't know the condition of the road up ahead and we still had 25 miles or so to go. The operator of the Cat agreed to come with us in case we had further problems. He would leave the bulldozer. We would bring him back after the job or maybe from the next trouble spot if it were needed. As luck would have it, we crawled slowly northward to the well without sticking Big Blue again, arriving on location some 12 hours late. The geologist had called the Schlumberger dispatcher, sure enough, and understood our problem. He was in good humor and the rig started pulling pipe immediately while we took care of the necessary preliminaries.

A LENGTHY JOB

In the vicinity of the rig the snow had stuck rather than melt and a foot or so had accumulated. By the time the last stand of drill collars was on the bank, I had the necessary paper work done and all the tools had been checked and calibrated. Even the FT (Formation Tester) truck was on location, having come in via Lamont and we were ready to go to work. The job was rather routine; as far as the I/ES, Sonic and Density were concerned. I do remember having a little recorder trouble, which required re-logging a considerable section of the well. I also remember defining a nice thick coal seam, about 100 feet thick, and several lesser ones. However, they lay at 6000

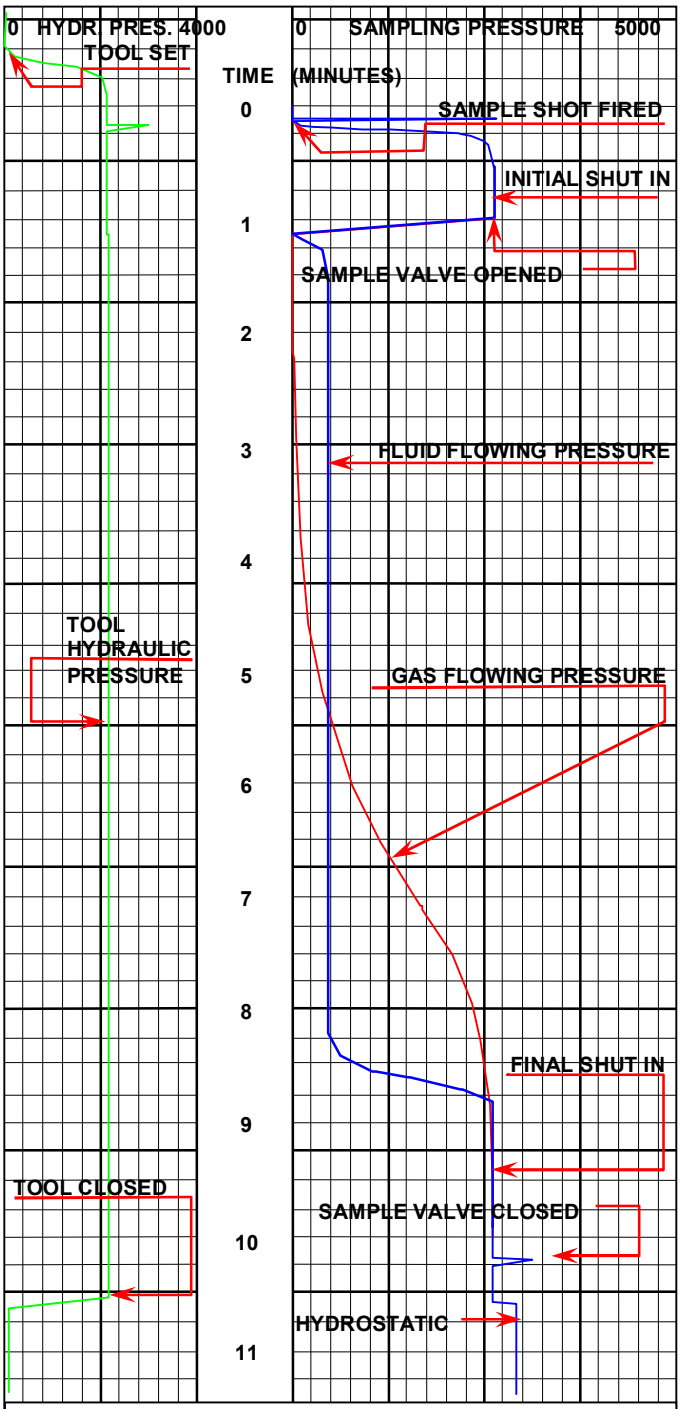

Figure 13-29 A drawing illustrating a typical Formation Tester pressure profile recording.

feet or so, which kind of eliminated them for any economical mining venture in the near future.

By early morning the logs were run and the geologist picked five different zones to test with the FT. You may remember from chapter seven that the device could obtain a sample of formation fluid as well as a pressure profile of the sampling action. I have reproduced the pressure profile of figure 7-65 in chapter 7 as figure 13-29. The primary difference between the tests I ran and the profile in figure 13-28 was the length of time taken to test. Instead of 10 minutes or so, we tested 60 to 90 minutes so as to obtain as large a sample of the formation fluid as possible. Such sampling time was typical in the Rocky Mountains because of the lower formation permeabilities in most formations. As I remember, no gas was recovered but only formation water contaminated with mud filtrate.

Each test required about 4 to 5 hours because of surface time, descent and tie in time, sampling time and finally sample recovery time upon exiting the hole. Consequently, we spent another 24 hours running the five tests. I was rather bushed, having obtained only 4 or 5 hours sleep in the last 46 hours. I was able to grab a few winks between tests, which helped but spending another twenty four testing was just about the limit. By the time we left location, I had spent over 72 hours without a bed since I left home. We were some 30 hours getting to the well, another 4 or 5 getting ready to log, 13 more running the first three logs and finally 24 or so running the formation tests. Add these up and the answer is roughly 72 hours total.

After rigging down, we were advised to go east from the well to Lamont, Wyoming, as shown in figure 13-28. The road was snowy but passable and shorter, whereas the one going back to Wamsutter was still one big mud hole. Our Cat driver was still with us. He would ride around the loop with us from Lamont to Rawlins and then Wamsutter. From there, he would pick up the Cat when the weather was a little better. On the way to Lamont we came across two vehicles mired down in snowdrifts. One was the geologist's and the other some crewmember, I guess. Anyhow, we pulled them out with our mud winch and helped get them started. Snow was packed all through the engine compartment and the air filter was clogged with the white stuff. We pulled the filter, used a little starting fluid and soon had both of the vehicles running. The general area had received a foot to 1½ feet of snow, which had formed drifts up to 5 or 6 feet. We used the logging truck to break trail, followed by the FT truck and then the cars. By the time we reached Lamont we had a little caravan, i.e. three Schlumberger vehicles and two other cars. It was touch and go all the way until we approached Baroil. Boy, were we glad to get back on blacktop and roads that had been plowed. We knew we would soon be sitting down to a nice hot meal and eventually a hot shower and a soft bed. I suppose we killed a couple of hours in the restaurant at Lamont before heading back to Rock Springs. After eating and warming up, I called the office and gave an ETA. I arrived back at the office some 4 hours later, the fourth day after leaving home. I checked in at the office and took care of a couple of items before going to the house.

TRYING TO PASS THE BUCK

I'll leave it up to the reader to try and determine the reason for this particular title, which should become apparent as the story unfolds. Our unit had been dispatched to a well east of Baggs, Wyoming as shown in figure 13-25 to set a plug and perforate a new section. Unfortunately, our Baker setting tool was in use on another well and I had to borrow one from our Vernal, Utah location. I carefully went over the necessary items with my counterpart in Vernal including the BST, a power charge and igniter as well as the junk basket and associated gauge rings. He would send the equipment by commercial hotshot to meet the perforating truck at the well.

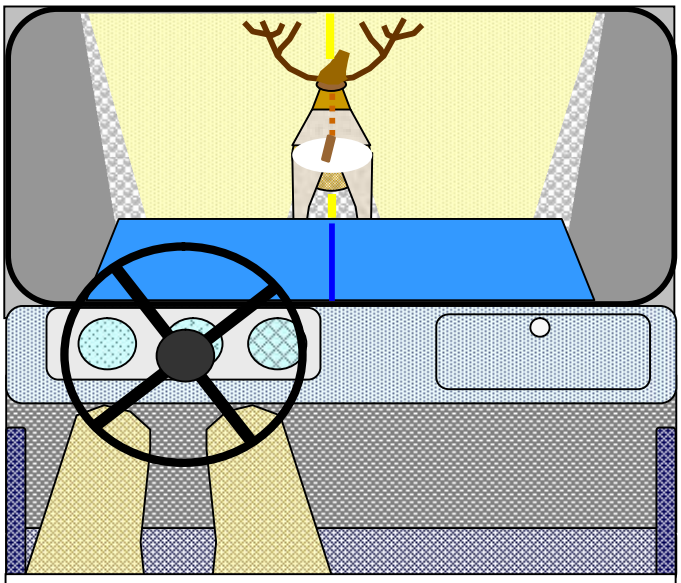

Figure 13-30 illustration of my view ahead that night as I tried to decide whether to go left or right.

You may remember from the discussion in chapter 8 that a junk basket with an appropriate gauge ring is run prior to setting a Baker plug. This assures the operator that there is no junk in the hole and the casing ID is sufficiently large to allow the plug to be run to setting depth.

CONVERGING WITH THE HOTSHOT AT THE WELL SITE

After loading the necessary guns, we set out for the well. The weather was fine and we arrived at the location on schedule about midnight. The rig was located on the side of a good-sized mountain in the Bridger National Forest. The rig was pulling pipe and we began preparing our equipment to rig up. I was busy making out the paper work when one of the operators came into the truck and mentioned the hotshot had arrived. Being naturally suspicious from previous experiences with commercial hotshots, I asked, "Have you checked everything?" He answered, "Yes" where upon I countered with, "How about the power charges and igniters?" He said he had seen the power charges but he wasn't real sure about the igniters. I jumped up and immediately went out to verify the transport was complete. Sure enough, everything was there but the igniters. That was comparable to the horseshoe nail being missing, which you'll remember resulted in the loss of the battle and I guess the war. I couldn't move forward without the igniters. I asked, referring to the hotshot driver, "How long ago did he leave?" The operator shot back, "Not more than ten minutes ago". I countered with, "I believe I can catch him before he gets too far". With that, I jumped in my car and headed down the mountain towards Wyoming 70, which intersected US 789 a few miles to the west. As I skidded around the curves, I thought, "How fast is that guy going"?

A RACE AGAINST TIME

Ten minutes is a lot of time to make up when trying to catch someone in another vehicle. Consider; if the first car is traveling at 65 miles per hour, the second will have to travel at 75 to catch him in an hour. A mere 70 MPH will require two hours for closure and so forth. I wasn't sure just how much lead time he had on me and I also knew the term "hotshot" referred to speed as well as reliability and timeliness. I would do well to catch him in an hour, which meant a 130 mile round trip minimum. Vernal was about 170 miles to the southwest. Maybe, just maybe, I could catch him in Craig, about fifty miles to the south, at a coffee stop or just gassing up his vehicle.

Well, I hit the throttle and skidded down the dirt mountain road to Wyoming 70 in record time. It was about one AM and there was little or no traffic on these roads. As I hung a right on 70, I raised my speed to 60 to 65. It was a dark night, no moon, and road was rather curvy into Baggs. Hardly slowing down, I hung a left in Baggs on 789, heading south for Craig. I knew this road like the back of my hand, having traveled it numerous times. I raised my speed to about 80 and would slack off to 65 or 70 on the curves. I thought to myself, "I doubt he is traveling over 70 and I should see his taillights in about an hour even if he doesn't stop in Craig". Just after entering Colorado I came down a hill on a nice straightaway when a big buck of 4 or 5 points on a side raised up out of the ditch about a hundred yards ahead. I hit the brakes to give him time to cross but, much to my surprise, he took a right and headed down the middle of the road straddling the white line. He was going full bore and I was braking as much as I dared without losing control. I straddled the white line as well, waiting for him to make his move right or left so I could go around. As you can imagine, the gap between us was closing rapidly. I suspect our differential speed before I began braking was at least 60 MPH. Even so, it seemed like an eternity as my car closed in and I tried to make a decision how to avoid him. I thought, "If he would only veer a little one way or the other". I was almost on his rump, when he swung left and I swung right, missing him by only a whisker. **Sure enough, I had passed the buck.** Needless to say, I was a little shaken but I gradually edged my speed back up again in hopes of finding my prey at a coffee stop in Craig. I made the trip between Baggs and Craig in record time, I'm quite sure. Naturally I slowed down as I cruised through town and by the only all night coffee shop. He wasn't anywhere around, as best I could tell.

As I exited Craig on the west I hit the throttle once again with yet another 115 miles left to Vernal. This was road I also knew well, having traveled it numerous times. By and large the road was straight and one had to slow down in only a few places. I kept the pedal to the metal all the way but never did catch him, arriving in Vernal about 1½ hours later. No one was at the shop, so I cruised down town to a telephone and called the manager. He assured me he had personally loaded the igniters in the hotshot and was sure they would still be there. He gave me the driver's address so I could check his pickup.

I found it and the igniters within 10 minutes and was headed back to the well 170 miles to the northeast. The trip back was uneventful but not quite as fast as my trip into Vernal. An extra half hour would make little difference at the well. However, in those days my car's transmission was only two-speed, i.e. stop and full speed ahead. I arrived back at the well in roughly 3 hours or 7:00 in the morning. The job was uneventful from there on. We completed it without further problems and headed for home late that afternoon. I thought, "I'll never pass the buck like that again".

GAS CAN BE SOMEWHAT TROUBLESOME

The Baggs area of Wyoming was known for its relatively shallow but high-pressure gas sands during the late sixties. There was considerable activity in the area with several different operators taking part. In general, all were aware of the situation and handled it with rather standard drilling procedures. The pressure gradient was rather high until the hole exceeded 4000 feet or so, depending on structure and surface elevation. Below surface pipe, 13 to 14 pound mud was the order of the day until the bit had drilled through the over pressured zone. Beyond that point the gradient returned to that of any other typical well in the Rocky Mountain area. Operators set an intermediate string through the high-pressure zones and reduced the mud weight to 9 or 10 pounds, as needed to prevent lost circulation in deeper permeable zones. The situation is illustrated in simple form in figure 13-31. Though not too apparent, the slope of the blue line is steeper than the red.

Uncontrolled gas can be both painful and embarrassing to any individual, as most anyone will testify. It may be comforting to know that old mother earth can produce much the same problem when one approaches her nether regions with the drill bit in an improper manner. Such was the case for an operator drilling east of Baggs in the summer of 1967. To cut drilling costs, they had set a minimum length string of surface casing but the real culprit was a mud column, which was too light to contain the formation pressure of the deeper gas sands. As luck would have it, the cement job on the surface string was poor as well. You see, the surface string with its associated BOP constitutes the control valve needed to contain any pressure, which may get out of hand. When it's not cemented securely, it becomes like any plumbing problem wherein the water or fluid involved leaks around the threads of a connection. In the case of the surface casing, however, there are shallow water sands into which the gas can flow. You may want to refer

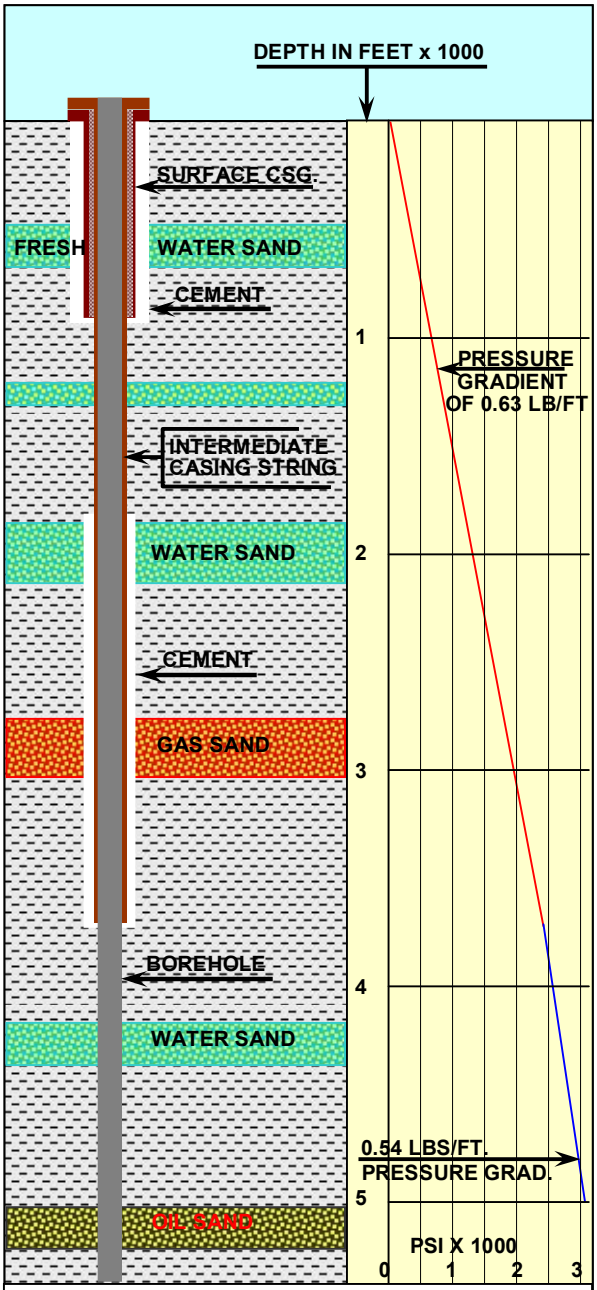

Figure 13-31 illustration of the changing pressure gradients near Baggs, Wyoming.

to figure 13-32 from time to time as I progress with my story.

The operator in question drilled out from underneath surface casing with mud, which was too light to contain any fluids encountered in permeable sections of the over pressured zone.

In the 3000-foot area he encountered one of the high-pressured gas zones and the well began kicking. That is, gas began appearing at the surface with the mud returns. Realizing the danger, the driller shut the pipe rams around the drill pipe to hold the gas. They would weight up the mud and kill the well by circulating in the necessary heavier mud.

However, before they could accomplish that, gas began flowing out from around the surface

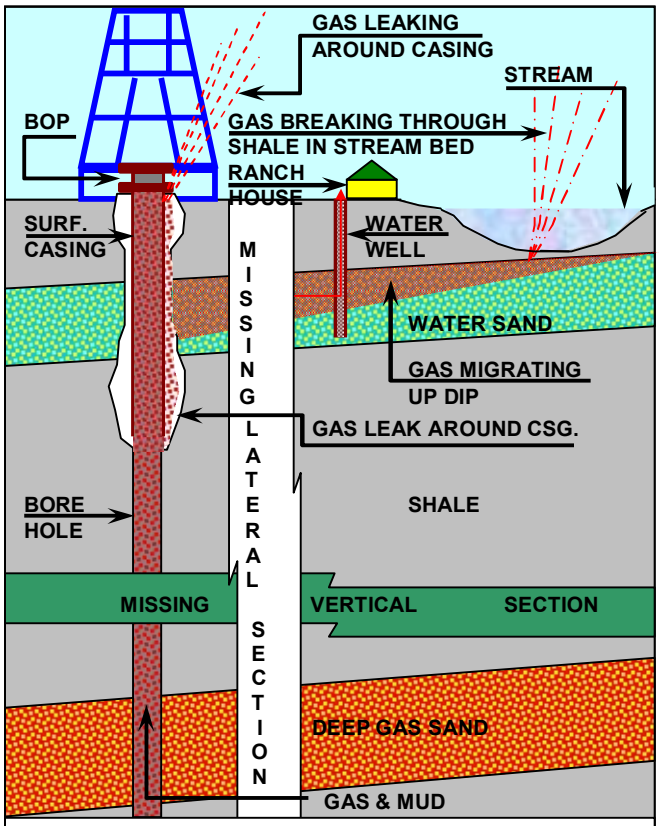

Figure 13-32 An illustration of an improperly secured drill hole near Baggs, Wyoming in 1967.

casing. Though they didn't realize it at the time, it was also entering one or more shallow fresh water sands and charging them with natural gas. As I understand it, they finally got the well under control and, quite fortunately, saved the rig. However, ranchers in the area began complaining about natural gas coming out of their faucets. Realizing now that the gas had charged their drinking water source and the danger posed by the situation, they evacuated the people from several area ranches. About the same time one or more people spotted gas bubbling up through the waters of area streams. Needless to say, the event made the news and was the talk of the town for several days.

I was in the Baggs area on other business soon after the event and took a drive out near the rig. I witnessed gas bubbling up through the streambeds in two or three places myself. I've tried to illustrate the various events that took place in figure 13-32. By studying it, I believe you can get a good idea of the need for a good cement job on the surface casing as well as the need to set a string, which completely covers all fresh water aquifers.

THE WHITE SHADOW ON A DARK NIGHT

In the early autumn of 1968, the truck I was assigned to was dispatched for a logging job near the Green River Lakes north of Pinedale, Wyoming. You can spot the location in figure 13-25. There wasn't anything unusual about the job other than the location, which was well up in the pine-covered ridges of the Wind river Mountains. I looked forward to a pleasant experience in a rather unusual oil field setting. Having left Rock Springs 45 minutes behind the truck, I caught up with it just south of Pinedale. The weather was good and I cruised on towards Cora, a little town north of Pinedale. I found the road leading to the rig and started winding up the grade on a single lane road. There was no moon and it was dark as Hades. The headlights would often shine off into space as I rounded a curve on the steep hillsides. It was hard to say how far down the creek bed lay below the road. I could see no sign of the rig and eased along taking no chances on the narrow road.

After about a half hour from the main road, I came around a hillside and there lay the rig in a shallow bowl or maybe ravine with hillsides all around. I pulled up near the end of the pipe racks and parked. The crew was pulling pipe and would probably be on the bank soon after the truck arrived. The rig was poorly lighted but I could see the outline of the tool pusher's trailer over on the right side of the pipe racks. The geologist would probably be in there asleep. I would have to wake him to confirm orders and get any special information he might have. I stepped out of the car, grabbed my briefcase and began gingerly walking towards the trailer. The footing was precarious and I could hardly see where I was going. I used my free hand to steady myself as I rounded the pipe rack. As I came to the door, I questioned whether I should wait or go ahead and disturb the guy. About then, I heard a noise and looked to my right. There was a big white shadow coming straight for me full speed ahead. I wasn't sure just what

it was and felt it would be wise to get inside before it arrived. I fumbled with the door handle but before I could get the door open this white shadow hit me broadside and knocked me against the pipe rack. I dropped the briefcase and was struggling to defend myself, not knowing just what my welcoming committee had in mind. Before I could even ascertain what kind of beast was on me, I felt a big warm tongue licking my face. You guessed it, a big white dog, and a husky by breed, was straddling me and giving me about as warm a greeting as any man has ever received. My heart had jumped into my throat as he had knocked me to the ground but I quickly found that there was nothing to worry about. He was just welcoming me and needed his ears scratched a little. Had my heart been on the weak side, his greeting might have done me in but such was not to be that night.

PHILLIP'S BLACK'S FORK FIELD

In the summer of 1966, Phillips Petroleum discovered an oil field in the Dakota formation of lower Cretaceous age. The average depth of the wells in the field was 16,000 feet. It was located on the north flank of the Uinta Mountains just south of Mountain View on the headwaters of the Black's Fork River. The actual name of the field escapes me now, it being named after a creek draining into the Black's fork. Refer to figure 13-25 to gain a perspective of its location relative to Rock Springs.

This field, developed by Phillips, presented many drilling problems. Fishing jobs were common on early wells until a proper casing program and mud design was found, which together stabilized the drill hole. Most of the fishing jobs involved drill pipe and/or test and coring tools but one did involve Schlumberger wire line while another involved the wire line of a completion services company and I happened to be involved in both. These drilling problems made logging income sporadic and difficult to predict. Consequently, during many months my income predictions for the district were at the mercy of Phillips Petroleum or so it seemed. Similarly, when one of the wells did call for logs, a truck might be tied up for 3 or 4 days, which complicated the job of covering other activity in the district. Even so, the money was good and I was grateful to have the business such drilling provided. They typically ran a Dual Induction Log, a Sonic Gamma Ray and a Formation Density with an occasional Seismic Reference Service and High Resolution Dipmeter. Also, Phillips usually logged twice and maybe three times per well, which multiplied the income.

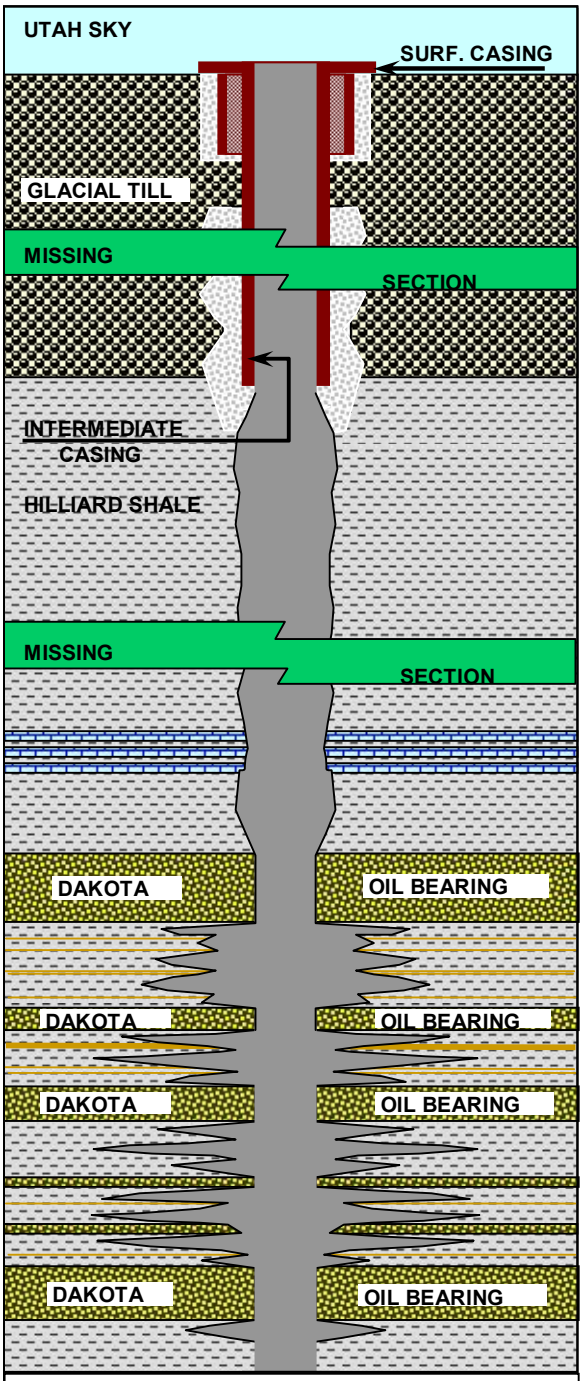

Figure 13-33 An illustration of a typical borehole profile in the Phillips Petroleum wells of northern Utah.

Such an operation was always valuable to us and we did our best to provide good service.

The oil field was in the foothills of the Uinta Mountains as previously mentioned. At one time

these mountains underwent extensive glaciation, though none exist in the area today. Such glacial activity resulted in several thousand feet of so-called glacial till or glacial debris composed of rocks, sand, silt and even boulders. This mixture of debris is incompetent and continually sloughed into the drill hole, which resulted in stuck drill pipe and associated fishing jobs. The solution lay in setting a casing string through the till as soon as competent sediments were reached at roughly 3 to 4 thousand feet. Several fishing jobs had ensued before this solution became evident.

The Hilliard shale, some few thousand feet thick, is upper Cretaceous in age and produced few problems. However, as the Dakota formation, lower Cretaceous in age, was approached with the bit the shales became very unstable, which resulted in severe caving around the drill hole and more fishing jobs. Finally a special mud

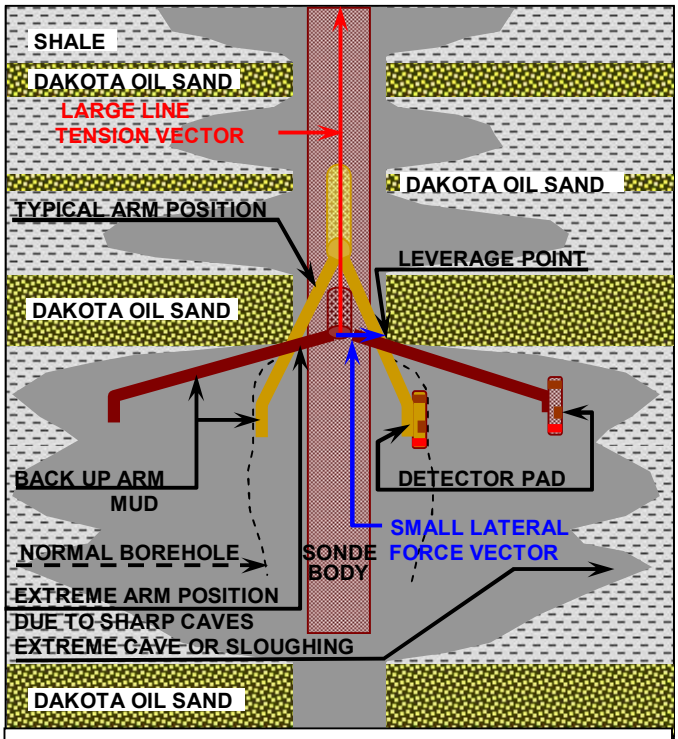

Figure 13-34 An illustration demonstrating the small amount of force, which the upward pull of the cable exerts on the open arms of the sonde.

program seemed to control that problem to a reasonable degree. Even so, considerable caving still persisted but it was manageable at least. This caving seemed to result in thin plate like segments of shale lying between hard, thin silt streaks. Figure 13-33 illustrates the profile of a typical drill-hole in that field, drilled through the glacial till and the producing Dakota formation. It may help clarify some of my earlier comments.

Bottom-hole temperature of the wells, when they reached total depth, TD, was around 300° Fahrenheit and tools had to be in tip-top shape to operate reliably. We often heat tested each one before a job and made any necessary corrections. We also carefully checked them for general physical condition including a complete change of O-rings. The district had the facilities to test any logging device up to 500° F via a so-called heat oven. Standard tools were rated to operate in temperatures up to 350° F and 20,000-PSI hydrostatic pressure, so it was a matter of maintaining the tools in top condition. In so doing, we seldom had any tool problems.

FDC DIFFICULTIES

The sharp ledges existing in the Dakota section made it extremely difficult to run the Compensated Density log. This device compensated for the presence of mud cake in front of the pad, preventing it from influencing the recorded density of the formation. To minimize the need for such correction, the pad was pressed against the formation wall with a pressure of 70 pounds per square inch by the hydraulic system. This force pushed the pad through much of the mud cake leaving only a small amount of cake in front of it. Such force helped the system register the correct density of the permeable formations and produce better answers for interpretation. However, this hydraulic pressure made it difficult to close the sonde or push the detector pad and back up arm into the sonde body. On the surface such closure was accomplished by activating the hydraulic pump. In the well a gently tapering borehole wall would provide the necessary pressure as the tool was pulled upward by the logging cable. Sharp changes in the diameter of the borehole, as is seen in the Dakota of figure 13-33, were another story. Only a small portion of the upward pull of the logging cable could be transmitted to the pad because of the angle of the sonde arms, as I will soon demonstrate. Consequently, the tool would become stuck under each ledge it was attempting to pass in its upward movement. Simply pulling on the tool would exceed the weak point strength of the U-Head (discussed in chapter 6) and the tool would be left in the hole. We soon learned to stop the winch, if the tool did not come loose with an extra 1000 pounds of cable tension, close the sonde so it would come free, open it

again and resume logging. Such activity was time consuming and produced a log, which had to be doctored up before it was presented to the customer but it did allow us to obtain a Density log through the zones of interest and satisfy the customer's needs. It wasn't unusual to stop the winch 5 or 6 times as the tool was raised through the Dakota section covering a couple of hundred feet. It also had the effect of lodging ones heart in his throat each time the tool began to pull because a person couldn't be sure it would come free, at least until after the fact. To appreciate changing this latter effect, you need to realize that a fishing job at that depth would consume some 36 hours or so in work that produced no income. In addition, it meant another 24 hours minimum getting the truck back on line when it arrived at the shop. Yes, fishing was expensive and time consuming for Schlumberger as well as the customer.

Now, let's get on with the explanation of why the sonde arms would not close under these circumstances. Consider figure 13-34, which illustrates the sonde arms in such a predicament as well as in a more typical position. In a normal hole the diameter changes relatively slowly and the lateral force is applied against the detector pad and back up shoe as they press against the borehole wall (light brown arm configuration). In the extreme caves of the Phillip's well in the Dakota section neither the detector pad or back up pad are touching the borehole wall and the only force on the arms is that of the cable tension being applied at the leverage point indicated, which allows little of it to be re-directed as a closing force on the sonde arms (dark red arm configuration). Maybe one percent would be transmitted as a lateral force, i.e. if the cable tension increased 5000 pounds, only 50 would be applied towards closure of the sonde. That's insufficient to close the arms. The weak point of the cable system would break before the arms would close.

SEISMIC REFERENCE LOGS

The seismic reference service, you may remember, is one that provides accurate velocity information to the geophysicist. Armed with such data, he can draw more accurate geophysical maps and predict the potential hydrocarbon traps more accurately. This service was discussed in chapter seven. It requires the down-hole jug or listening device to be in a stationary position for considerable lengths of time with all engines shut down. This is necessary because the extremely sensitive phones or jugs pick up all noise along with the geophysical signal. By the same token, any wire line device that remains in a stationary position compromises its freedom of movement. That is,

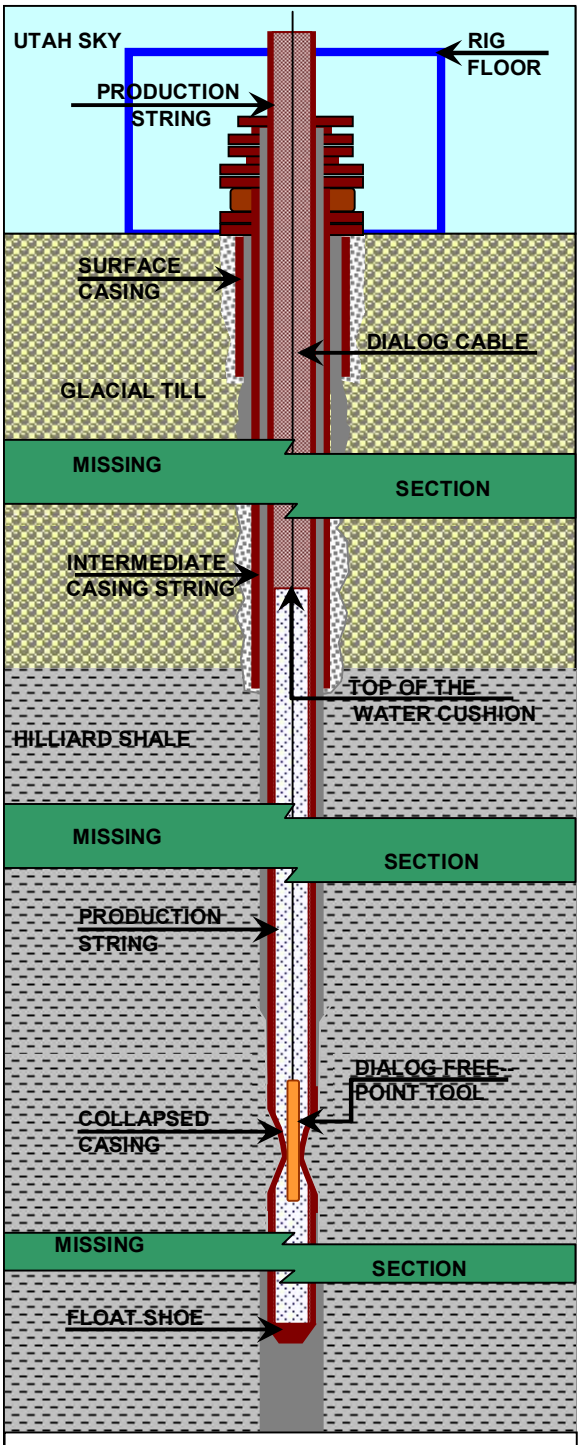

Figure 13-35 An illustration of the Dialog tool and borehole configuration requiring our cut and thread technique.

the longer it is stationary the more apt it is to become stuck and result in a fishing job. As a result, Phillips Petroleum decided to run their SRS's after casing was set. They knew they had to set a long string anyway and the service could be run in a much safer mode after the hole was cased. Better to wait than risk a fishing job.

I may well be boring the reader to death but then again I repeat, the object is to provide a snapshot of Grandpa to my posterity. I like this kind of stuff and you should try to figure out why if you are serious about getting to know me. By now I suspect you are asking, "Is becoming acquainted with that old geezer really worth this kind of suffering?" Well, on to other stories, which probably won't be much more interesting?

A NO FEE CUT AND THREAD JOB

I have mentioned the rather frequent fishing jobs that occurred in the field, only one of which involved Schlumberger equipment. Usually they were carried out through standard methods, which didn't involve us but only delayed pending logging operations. One fall, however, I got a call from the drilling supervisor wherein he asked for our help. Schlumberger was the recognized cut and thread expert throughout the industry and really the only company with ready access to necessary supplies.

In the case just mentioned, the production string of casing had become stuck in the casing at about 13,000 feet. They had unsuccessfully tried for several days to free the pipe by various means and finally reached the conclusion they would have to leave a portion of the pipe in the hole. They would then drill around the abandoned casing or fish to total depth. The first step was to define the shallowest point at which the pipe was stuck so it could be cut off. A company offering free point services was brought in, Dialog I believe, to run that particular service. During the job, their tool became stuck inside the casing, apparently in a collapsed section. That's an unusual situation for new casing and even more so for a free point tool. Where casing has collapsed, the free point device wouldn't normally pass that point in the hole and if it did, it would also pass back through such a spot. Whatever the reason, the device was stuck tight and Dialog had no means for fishing it out, hence the call to Schlumberger. The situation is illustrated in figure 13-35.

I agreed to round up the necessary equipment and come to the well and help. Dialog's cable was 7/16" in diameter whereas ours was 15/32". I had to have the correct cones in order to adapt the Bowen Overshot and spear to the cable ends, once it was cut. I also needed 7/16" inserts for the T-Bar. See the details in chapter 6 if interested. We had the inserts but no cones. I called headquarters in Houston and discussed the situation, after which they sent the necessary cones by airfreight. I called the drilling superintendent back and told him my estimated time of arrival. The cones arrived early the next morning and I set out for the well with the necessary equipment and an experienced senior operator, Mac McCulley. We were on location by noon. The situation hadn't changed. According to the Phillips Petroleum drilling superintendent, they had tension on the casing while Dialog was running the survey. Such was a necessary part of the free point operation. However, midway through the survey, the casing collar at the surface failed and the casing dropped below the rig floor. They were able to get a hold of it and re-establish the tension but the Dialog cable or tool was now stuck. Both the tool and cable had to be out of the hole before proceeding with casing retrieval.

The rig crew had been involved with cut and thread operations before and consequently needed directions only at appropriate times during the operation. Dialog, on the other hand, had no idea of the procedure involved. Consequently, we spent a while explaining just what we would do and what their part would be. Mac and I placed the proper grapples in the overshot and prepared the T-Bar. It was then clamped on the cable and allowed to rest in the top of the protruding casing. After cutting the cable, we rigged Dialog's sheave wheels up in the proper configuration and were ready to begin running pipe in the hole. The rig crew picked up the first stand of pipe and after the usual time necessary to get everyone used to the operation, the operation began to move along smoothly. I was surprised it went so well. Because of the depth, the operation was rather lengthy, 18 hours or so, as I seem to remember. The tool was engaged and came loose rather easily. Dialog broke their weak point and sucked the cable out of the hole. Our job was done. The drilling superintendent was most appreciative. We collected what Schlumberger gear we could and said we would pick up the rest later. After stopping in Mountain View for a well-deserved meal, Mac headed the pickup back to Rock Springs. Both of us were dog tired

but pleased we had helped a valued customer who was truly in a predicament. We had received no income for our trouble because there was no such service offered by Schlumberger. However, the effort cemented our relationship with the Phillip's personnel for the remainder of my time in Rock Springs.

TYPICAL WEATHER CONDITIONS

Phillips drilled in the Mountain View area for the last three years I was stationed in Rock Springs. We logged wells during the beauty of summer in the Uinta Mountains as well as during the numbing cold of winter. On a typical winter job in that area, the temperature would fall to 25° F below zero at night and rise to 15 or 20 degrees above during the day. It made work a little slow during the colder periods but all in all the temperatures we experienced weren't bad. The area was really beautiful and the jobs long but one was usually well paid for the work.

A DEEP TEST AT CHURCH BUTTES

Mountain Fuel Supply Company scheduled a Devonian test on the Moxa Arch in a field known as Church Buttes about the summer of 1967. It was projected to a depth of 21,000 feet, the deepest well ever drilled in the Green river Basin at the time. I was called in to discuss the logging program including the types of logs to be included and the necessary preparation of trucks and equipment for the temperatures and pressures expected. The best we could project, the bottom-hole temperature would be around 325° F and the hydrostatic pressure in the neighborhood of 16,000 PSI based on temperature gradients in the Church Buttes area and the anticipated 16-pound mud. Both were within the design specifications of our normal tools. We wouldn't have to get any special tools in but we would test those we would run for temperature reliability and be sure the O-ring seals were in top condition. We would also acquire a 25,000-foot roll of new cable prior to the final run and allow a month or so for it to stabilize by running it in wells of normal depth.

FIRST RUN LOGS

We logged the well through the Dakota formation at roughly 13,000 feet. There was nothing special about that job other than the borehole size, which was larger than normal, it being 10 ¾ ". They would set 9 5/8" casing at that point and drill to total depth with an 8 ¾ " bit. All had proceeded as planned to that point. Of course, they had drilled numerous wells to that depth at Church Buttes. From here on they would enter new territory, namely the deeper formations of the Permian, Jurassic, Triassic, Mississippian, Pennsylvanian and Devonian. That would leave the Silurian, Ordovician and Cambrian between them and so-called basement or granite. The drilling would be slow going because of the hardness of the rock. We expected them to TD in roughly 6 months.

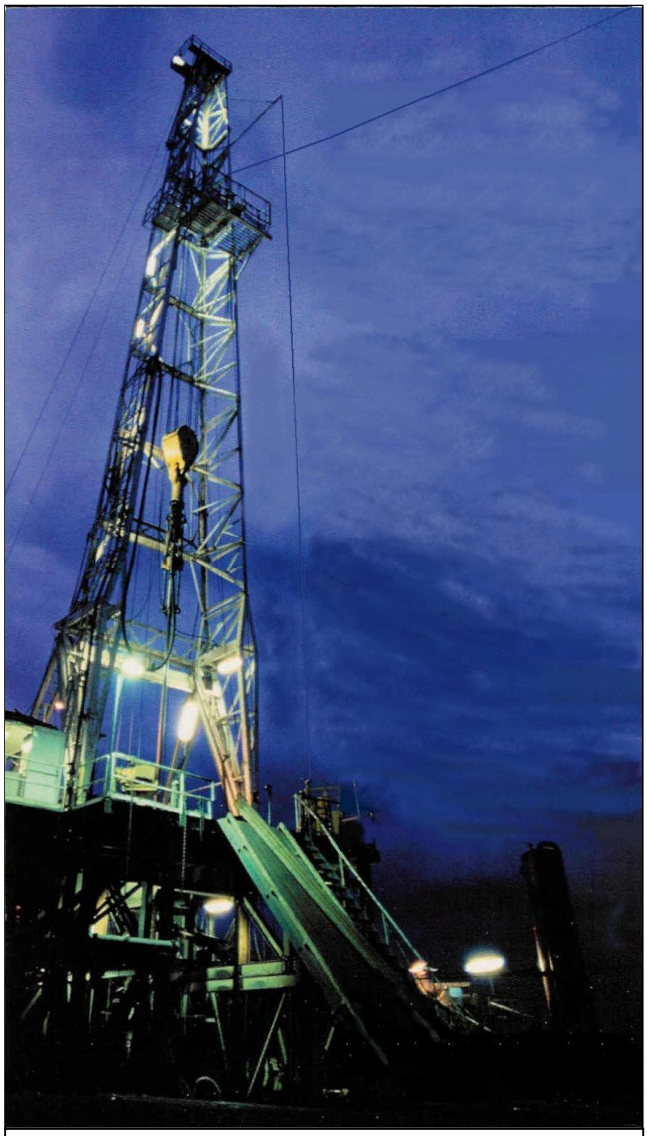

Figure 13-36 An illustration of a big rig similar to that used to drill the 21,000 foot test for Mountain Fuel supply Company in Church Buttes Gas Field in the summer of 1968.

The well came in for logging at total depth in the summer of 1968. We had placed a new spool of cable on our newest truck, an 8000 series. We had the division mechanic thoroughly inspect the

truck to be sure it was in top mechanical condition and we began heat-testing tools. They would run 6 services, which included a DIL, the integrated Sonic, the FDC, the SNP (sidewall neutron porosity tool), a Proximity log and a Dipmeter. Each device was raised to 350° F and held for one hour during which time its performance was monitored for normal operation. If it failed or intermittent noise was observed, the technician replaced suspect components until the device was stable. I planned to be on location with the engineer assigned to the truck who would actually perform the logging operation. I wanted to be sure the job went well.

A GRUELING JOB

As lady luck would have it, I was riding truck when the job came in. Not only would I be on location during the job, I would also be running the logs. With six services to run from 21,000 feet to about 13,000 feet, I fully expected to be on location 36 to 48 hours. It would be likely that some problems would occur and probably extend the job beyond that. Needless to say, we arrived on location with groceries sufficient to last a couple of days as well as a good night's sleep under our belts but we were hardly prepared for what followed.

To help set the stage, I should mention the size of the rig. The rig floor was 27 feet above ground level. The rig I substituted in figure 13-36 is a little smaller but illustrates the size to a degree. Twenty-seven feet is the equivalent of a 3 story building or thereabout. Such space is necessary under the rig floor to accommodate the massive BOP required for the well. As far as the job was concerned, it meant climbing the equivalent of two flights of stairs each time we went to the rig floor. Although they can't be seen in the photo, I believe there were two sets of blank rams and pipe rams; one providing backup for the other. The rig pulled triples and the crown was about 150 feet above the ground. Although the rig employed 4 ½"-drill pipe for the bottom 8 or 10 thousand feet of hole, they utilized 5 1/2 "-drill pipe above that. The larger drill pipe was required to support the tremendous load of the drill string at the rig floor level. When the entire drill string was in the derrick, it was contained in two massive stands or groups equaling twice that of a normal rig. Obviously, the rig floor was also larger in area to contain the pipe. I must say, I was impressed by the immense size of the whole complex from rig to location and associated supplies as well as support equipment and trailers.

Our first log, the DIL or Dual Induction, ran without a hitch. Even so, from the time we rigged up until we laid the tool down after finishing the run, we had consumed about 5 hours or so. Before hooking up our second tool, the Sonic-Gamma Ray-Caliper, I checked the line insulation. Much to my surprise there were leaks or poor insulation on two or three wires. I hadn't expected this because the DIL run had been completed without any indication of a problem. The operators broke off the bridle after which we checked both bridle and cable to ascertain the location of the leaks. Well, we found them and opened up a whole can of worms in the process.

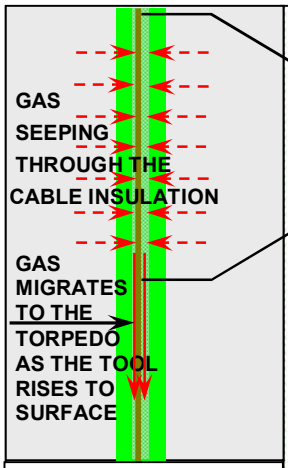

Figure 13-37-A "C" An expanded view of a single wire of the adjacent cable, which illustrates the gas entry and its migration towards the torpedo.

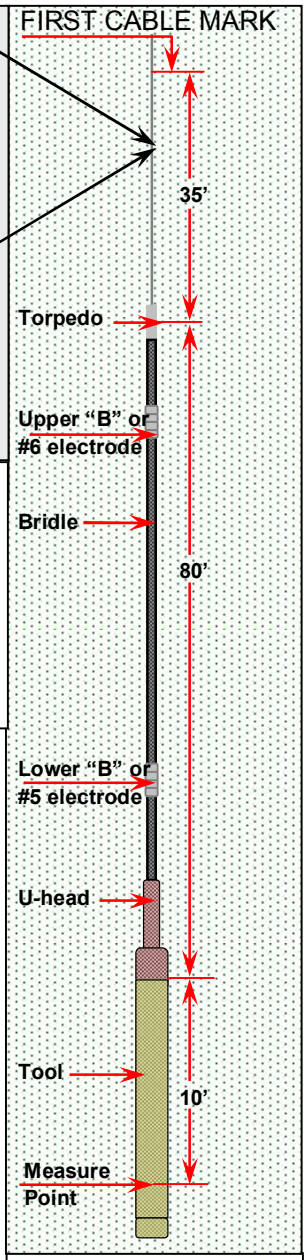

Figure 13-37 An illustration showing the relationship of the first mark to the tool measure point.

To help me explain the problem and refresh your memories of this particular hardware, I'll reproduce a couple of figures covered in earlier chapters. First take a look at figure 13-37 and its companion 13-37A. The first is a duplicate of figure 6-18 except for the caption, while the latter provides an expanded view of a cable section and illustrates the gas entry through the insulation and its migration to the torpedo. They will help you visualize the equipment involved in what was to become an arduous and repetitive task of re-building the cable rope socket after each run in the well. The second figure, derived from figure 9-5, illustrates the torpedo internal makeup with its associated rope sockets and is designated as figure 13-38. Finally, I will add figure 13-39, which portrays the actual problem we experienced.

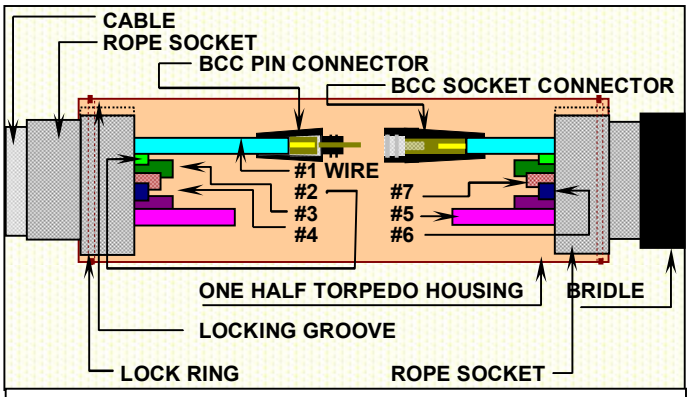

Figure 13-38 A drawing, which illustrates the construction and principles of the split torpedo.

The bridle is a device designed to adapt a logging tool to the logging cable. It is typically about 80 feet long and contains two electrodes (see figure 13-37), which are used in various applications of well logging. The lower end of the bridle is hooked to the so-called U-Head or universal head, which contains electrical sockets within an O-Ring protected cylinder and threaded ring configuration, which allows it to be connected to the head of the survey tool both electrically and mechanically. The upper end of the bridle is terminated in a so-called rope socket designed for a mechanical and an electrical connection to the cable (See the right side of figure13-38). The lower end of the logging cable is also configured with a rope socket so it can be adapted to the bridle (see the left side of figure 13-38). The torpedo is composed of two half cylinders, which snap around the rope sockets of both the cable and bridle providing the necessary mechanical strength to hold the weight of the tool. They are held in place by so-called snap rings, which can be quickly added or removed with a special tool. Within the steel cylinder of the torpedo are seven electrical connectors, which provide the necessary insulation as well as rapid connection or disconnection when bridles must be changed. They are designed to withstand the expected high hydrostatic pressure experienced in a deep well but have little mechanical strength.

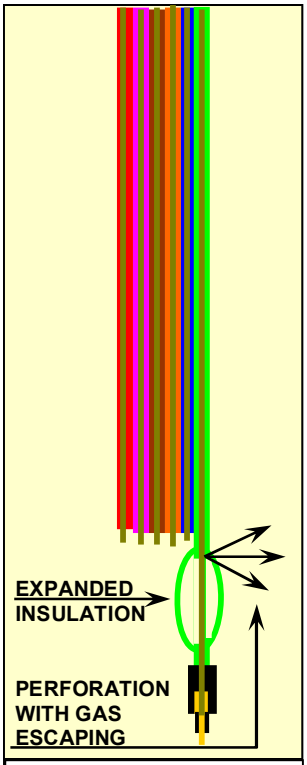

Figure 13-39 An illustration of the ballooning insulation due to escaping gas.

Figure 13-39 simply illustrates one wire and BCC connector with its associated problem but keep in mind that the same problem occurred in all seven wires. The drilling mud of the well contained some gas, which seeped in from the deeper formations and as anticipated, the hydrostatic pressure was in the vicinity of 16,000 PSI at total depth. Mud and mud filtrate enter the cable through the metal strands and the filler material but is normally stopped from entering the individual wires by the insulation, which has extremely low permeability to fluids. In this case, however, gas having very low viscosity and being under extreme pressure was able to penetrate the insulation and collect between the wire and the surrounding insulation. This is illustrated in figure 13-37A. No problem is experienced in the well because gas is non-conductive. However, as the cable is brought out of the well, the gas expands and moves along the conductor inside the insulation moving towards lower pressure. The cable armor holds the insulation firmly in place preventing it from swelling and breaking. When the gas reaches the torpedo, however, there is no armor to support the insulation. The gas pressure expands the insulation like a balloon as it passes through the rope socket on the cable end and it ruptures, as shown in figure 13-39, allowing conductive fluid to enter. This,

of course, produces an electrical leak or short, which must be repaired before further work can be done. Now, all who understand the problem please raise your hand. Hmmmmm, I see no raised hands. Could that be the mark of a confused posterity or simply a confused explanation of aging progenitor? Oh well, let's finish the story anyway.

Would you believe, I couldn't go to sleep even after having been without a wink of sleep the past 80 hours or from the time I left home until I returned?

We always carried the spare parts necessary to build a rope socket and completed the same without any problem. The process took an extra hour and a half or so but soon we were going in with the Sonic Gamma Ray Caliper. It also ran without a hitch and some 8 hours later we were out of the hole and ready to pick up the next device, a Gamma Ray Formation Density tool. Of course, we checked the cable and, of course, it was leaking. We didn't have to look for the problem because we knew where it was, in the torpedo of course. Back we went to build another torpedo. To do this, a piece of cable, maybe a foot in length, has to be cut off, the armors unwound, the metal rope socket pieces installed and then all the wires cut to length and fitted with the BCC connectors illustrated in figure 13-38. Once again we lost one to two hours. The building process took a little longer than normal because we had to allow all of the gas to bleed out of the conductors before installing the new BCC connectors. The first time the torpedo was rebuilt the operator rushed it a little and the insulation swelled up again. Fortunately, he was able to remove the BCC and allow the gas to bleed off. I could see this would be a problem each time we tripped the hole, so I had several more sets of rope socket components sent to the well. I also explained the problem to the client. It was beyond our control and we had to compensate for it.

Well, the operation continued rather smoothly except for the torpedo problem. We had one tool failure, which required a second trip in the hole to finish that service and, of course, an additional rebuilding of the torpedo but all in all the job was reasonably smooth considering the well depth. We spent 70 hours on the well site or right at three days. I left location just ahead of the truck and felt sure I would never make it back to the office without pulling off for some sleep. Usually such a long job was broken into segments when the rig tripped the hole but this job had been continuous. Luckily I knew the operational procedures backwards and forwards because I was running on automatic before we were finished. One stays riveted to the recorder during the job to be sure all is going well but after the stress is over there is little to keep you awake. Though one should be wide awake when driving, many is the time I have negotiated a route back from a well and not even remembered having made the trip. Anyhow, I surprised myself by driving back some 50 miles without a hint of going to sleep. I arrived home, took a shower and hit the sack. Would you believe, I couldn't go to sleep after having been without even a wink the past 80 hours from the time I got up to go on the job. I tossed and turned for a couple of hours and finally crashed. It was 12 hours before I came to, struggled out of bed and had some breakfast. Esther said I snored like a gorilla the whole time I was in bed. Though I still resembled a zombie in action, I managed to climb into my car and go to the office to handle other events, which were bound to have occurred in the last four days. Sure enough, I wasn't disappointed and managed to spend the day there.

SOME SALES EXPERIENCES

Although a district manager has the support of a division sales force to help him get commitments for the work going on in his particular district, he has to coordinate the efforts and even carry out some of it himself. His performance as a manager is judged partially upon how effectively the district sales effort is carried out. Though such work is routine in nature, I remember a few instances that seem to stand out in my memory.

RIGHT DOESN'T GUARANTEE SUCCESS

In chapter seven, I discussed a device called the dipmeter. From its measurements we could determine the dip of the various sediments surrounding the borehole. You might remember that the dip of a given formation refers to the magnitude and direction in which the bedding plane is slanting. For your benefit I have illustrated this property pictorially in figure 13-40. You might also remember that the dip of a given set of sediments may depend upon structure, i.e. anticlines, faults, etc., the nature of the surface upon which the sediments are deposited or the amount and types of sediments involved. Originally the dipmeter was used to define structure or help the geologist find the high point of a reservoir where the oil and/or gas might be

collected. Later improvements in hardware and computations provided a means for stratigraphic interpretation or a way to define the shape and location of sand bars, which might contain oil.

While this technique was still in its infancy, I used it in the Big Piney area to help Belco Petroleum define an old river channel about 3000 feet deep. I felt that if I could prove the idea worked, I could get them to run the dipmeter on most development wells. It would significantly boost our income per well. Consequently, I agreed to run a dipmeter on such a well at no charge and then interpreted the results myself to see if I could improve their chances of success. Figure 13-41 describes the problem they faced pictorially.

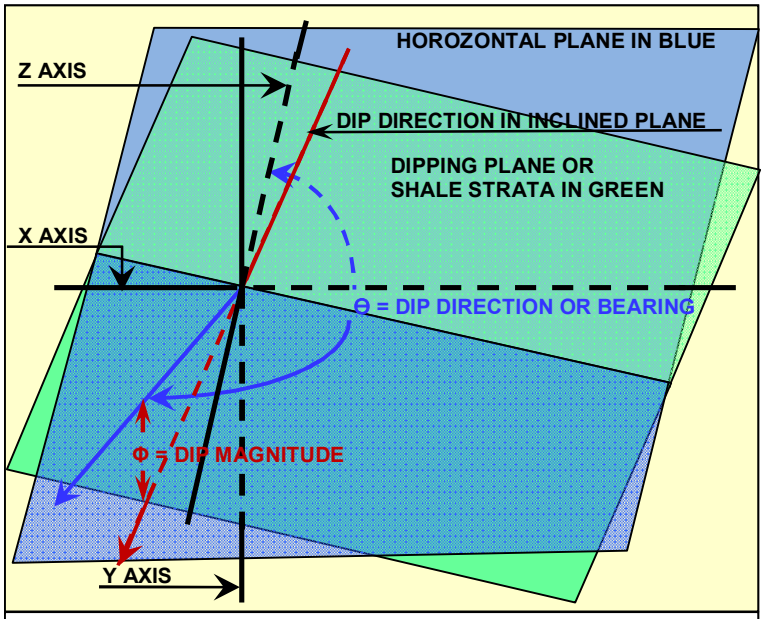

Figure 13-40 A pictorial review of the parameters, which establish the dip of a sedimentary formation.

The hypothetical map I have drawn represents the oil field configuration as I remember it. Obviously, it will only be semi-accurate. In any case, the darker grid lines represent mile markers, the lighter ones half-mile markers and the dashed lines quarter mile markers. Thus, each large dark square represents a square mile or 640 acres and each small square 40 acres or 1/16th of a square mile. The black dots represent completed oil wells while the blue dots represent dry holes or water wells as they are designated. The two sand bodies nearer the bottom of the map have been defined by drilling and represent oil reservoirs and the blue line winding around them is the proposed location of the old stream in which the bars were deposited. Near the top of the map are three possible locations of the streambed and the probable associated sand bars. The middle one is the location they felt was the most likely case and they drilled well D meaning the dipmeter well. I ran the logs myself and, of course, there was no sand at the expected depth. They had missed it. Well, that gave me an opportunity to do my stuff and tell them where the next location should be. I ran the dipmeter, a three-arm device, and gave our computing engineer in Denver instructions to compute as many dips as he could find through the section of interest. In those days all dip computations were done by hand. Although later hardware improvements made high density dip computations more feasible, he was able to calculate several at the proposed depth. Well, I found some dip patterns, which indicated the sand bar lay to the northeast of well D. By the time I gave my results to them, they had already spudded a well 40 acres to the south of D. I explained my interpretation to them and recommended they drill to the northeast. Of course, they completed the first offset, labeled 1, which turned out to be a duster, i.e. no sand. With that completed, they drilled well 2 and made a well as I had predicted. They went on to drill # 3, also a well, which really validated my interpretation. Even so, I couldn't seem to convince them to run dipmeters on succeeding

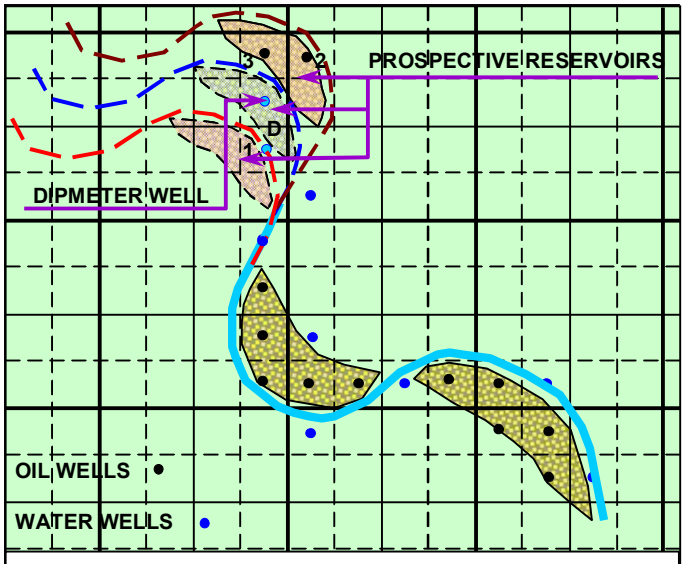

Figure 13-41 Illustration of the Belco Petroleum oil field being developed and the results of my dipmeter interpretation and recommendation.

wells. They were too expensive, according to them, for the budget they had. I had proven my point, i.e. that the dipmeter could improve their odds for success but they wouldn't pay for service on later wells. Thus the title of this little episode in my life, "**Right Doesn't Guarantee Success."** It does, however, provide a nice boost to one's professional ego.

APPLE PIE AND MOM'S TWIN SISTER

Belco Petroleum was one of our best customers. We did all their logging and perforating work. I visited their offices on a regular basis, interpreted logs and generally did all I could to maintain good customer relations. They were located in Big Piney, Wyoming, which was a little over 100 miles northeast of Rock Springs. See figure 13-25. I would usually make a big circle during the process to avoid driving the same road all the time. I might go west through Green River, take the Green River cutoff, which is now known as Wyoming 372 and then go up US 789 to Big Piney. Then I would usually return by going east from Big Piney across the Big Piney cutoff or Wyoming 361 and then south on US 187, which has been renamed US 191. I point this out because of a couple of experiences that occurred along the route at different times.

Located just north of the junction of 372 and 189 is a little café known as the **Names Hill Café**. It received that name because of the locale it was in. Nearby was a sandstone bank next to the Green River on which early Mormon pioneers scratched their names as they forded the river, hence the name. Two ladies, who lived on nearby ranches, ran the café and the meals served therein were ranch style. All of the food was good but I was particularly fond of the pies they made. They were really delicious. I would go out of my way to stop in and enjoy a slice. The café wasn't convenient to the oil and gas field out of Big Piney and LaBarge but it was on one route home. Consequently, we would also make it a dinner stop when going to or from a job in those fields. As I mentioned, however, I couldn't resist the pies and always included that route in my sales travels to Big Piney.

One late summer day I had been to the Belco offices in Big Piney and was headed home around 4:00PM via the Big Piney cutoff to US 187. By this time it had been paved and was a decent road. As I neared the eastern end, I came across an elderly lady stopped beside the road. It was obvious she had a flat tire and was in a quandary about what she should do. I stopped, got out and introduced myself while asking her if I could help. She said, "Oh yes, please. I would appreciate it very much." She reminded me of mom, being of • similar build and age. Mom would have been about 74 at the time. She said she had been visiting her children in Pinedale and was headed home to Kemmerer. Well, I looked in the trunk of her car for a spare. Much to my surprise, it was empty. She didn't even have a jack. She remarked that someone always helped her in Kemmerer and a spare was unnecessary. Besides, she didn't really expect any problems just coming up here. There was nothing to do but leave her there or take the tire to Big Piney for repair. I suggested the latter, used my jack, removed the wheel and headed back over the 25 miles I had just traversed. She went with me, of course and we arrived at a service station a little before six. The tire was quickly repaired and cost about $4 in those days. I waited for her to pay but when the attendant approached her, she said she didn't have any money with her. Of course, I anted up and loaded the tire in my car. Once again she was very appreciative and off we went back to the car. I replaced the wheel, put my jack back in the trunk of my car and wished her well. It was getting dark by then. She then made a remark that caused me to take another look at her. Could this really be mom in disguise? She said, "Thank you so much. I really wasn't worried because I knew some nice young man would come along and fix my tire". Now, if that isn't a Violet Obenchain remark I've never heard one.

JUST FOLLOWING THE BOSSES ORDERS

Bill Hartsell was the manager of the Southern Rocky Mountain Division around 1967 when this incident occurred. We had a relatively new engineer, Larry Wells, who was an excellent engineer technically but lacked overall experience. Because of our short supply of engineers I felt it important to train him in all phases of the work, which included perforating. He had completed that training and was substituting for the perforating engineer, Don Pearson, who was on days off.

The job was for Belco Petroleum and called for two zones to be perforated. This could be accomplished with one trip in the hole through a select fire system Schlumberger had. The two guns were run in tandem. The lower gun would fire first, which in turn set a mechanical switch and allow the upper gun to be fired. The

engineer would position the bottom gun, fire it and then position the top gun for the second zone. It would then be fired and the job was done. As luck would have it, he got a false indication that the first gun fired but it hadn't. The second gun was then positioned and when he put the juice to it, of course, the first or bottom gun fired. Thinking all was well; the operators brought the guns out of the hole. To their surprise as well as Larry's and the customer, only the bottom gun was detonated. After analyzing the situation, they realized what had happened. Only the second zone was perforated and it in the wrong place. Belco would have to squeeze the perforations (pump cement into them) and re-perforate later. When Larry got back to the office, I attached a letter to the service order suggesting we cancel charges on the perforating job, which would just cover Belco's cost for the squeeze job. We would then perforate again in a few days.

Well, Bill Hartsell didn't like that. It didn't look good to cancel charges and the division would receive a ding for that kind of performance. He called me on the phone and said, "Obenchain, we can't cancel charges. That makes us look bad, like we are running an inferior operation. I want you to talk to Belco and get them to agree to pay for the job." Of course, such a problem in and of itself wasn't such an indicator though repeated errors would be. I also knew Belco wouldn't stand for such charges but all my arguing was to no avail.

The next day I went to the Belco offices in Big Piney, explained the situation to the District Engineer and suggested that rather than cancel charges we would re-perforate for nothing and thus offset their expense for squeezing. That would actually save them money because there would be no setup charge to pay. He agreed and we carried out the job two days later without any trouble. I knew that that was the thing to do. Bill didn't suggest it but all he wanted was to keep that ding from being placed on the division's record. A week later he called and complemented me on handling it appropriately. I never said what I did and he didn't ask because free jobs had to be approved by Houston. I knew that he knew what I had done and I suspect he knew I knew that he knew but we were both happy.

A WINTER SALES TRIP TO CASPER

I frequently made sales trips to Casper because many of the operators drilling wells in the Rock Springs territory had their controlling offices there. Some visits were of a good will nature but I almost always had two or more companies where logging of current or future wells was at stake. I had two or maybe three routes I could take, which enabled me to have a little variety in my travels. These are illustrated in the map of figure 13-42. The route marked in red was the more common route. In good weather, it was faster even though the distances didn't vary that much. In the winter, I would listen to the weather report and choose the route that seemed least entangled with snow whether falling or just blowing around. Sometimes one of the more northern routes would be relatively clear and the southern route would be plagued with blowing snow or so called ground blizzards. On this particular day I opted for the northern route after hearing of severe ground blizzards around Rawlins. It would take me through Riverton and on in to Casper on state route 26, passing by Hells Half Acre.

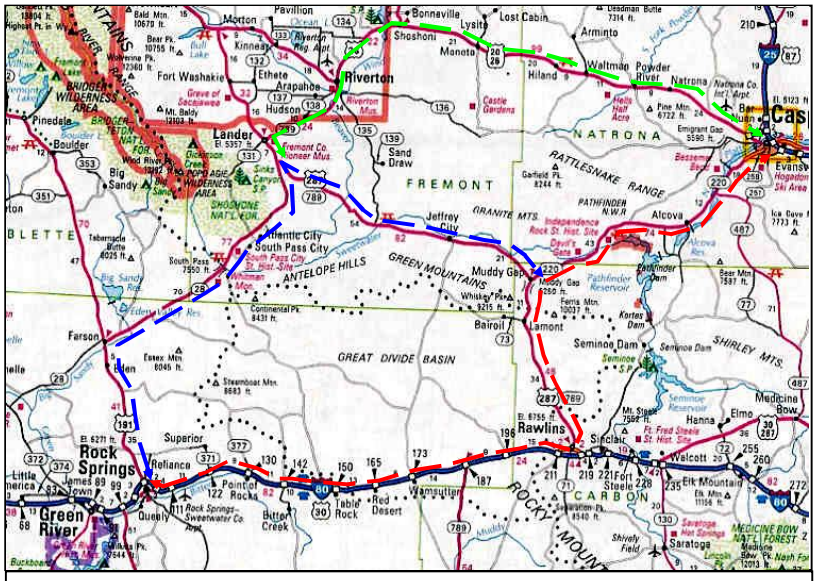

Figure 13-42 A map illustrating my choice of routes between Casper and Rock Springs, Wyoming for sales calls.

After being tied up in the office most of the day, I elected to head for Casper, a three-hour trip, and spend the night there. I would rise early, get my sales work done and return home that evening. I headed north to Farson and across

South Pass about three that afternoon. My first problem came on South Pass. It began snowing heavily as I climbed up from the Sweetwater River but I continued to make relatively good time because it wasn't too deep on the roadway. As I topped the pass, I came up behind a snowplow moving along at a rather slow pace. I knew I could negotiate the road without his benefit and tried to pass on a straight stretch. He blew his horn and wouldn't let me come around, so I settled in and followed him to the bottom of the hill where he pulled over. By the time I arrived in Lander it was already about six o'clock and I stopped for dinner. During my stop I heard another report that steered me away from the green route through Riverton and elected to take the blue route to Muddy Gap where it intersected my usual path.

Before I crossed the Sweetwater I knew I was in for trouble. About a foot of snow had dropped in the general area and it was now blowing furiously. The road varied from dry to drifts 3 feet deep. At first I slowed and kind of eased my way into each drift but found I had trouble getting through the deeper ones. Though I made it, I had to back up and hit the drift two or three times. Consequently, I decided to hit it harder on my first try. When I saw I was approaching one, I would put the pedal to the metal and slam my way through it. This was possible because of the alternating drifts and dry road. Just before Jefferson City I came to a rig crew who had their car buried in a drift along-side the road. Apparently they had lost control and slid off into the ditch. Neither of us had a tow chain to pull the car out, so I offered them a ride to Casper. They took me up on it and soon we headed down the road towards Muddy Gap. About half way between Jefferson City and Muddy Gap the drifts began to decrease in size but the visibility became worse. It remained that way until we passed Independence Rock where things began to ease up. We arrived in Casper around 11:00 PM making my trip time about 8 hours rather than the usual 3. The weather had eased by the time I returned the next day and the trip was more normal. That is, a ground blizzard from Independence Rock to Rawlins but with no significant drifts. I made it in 3 to 4 hours, arriving home around 7 or 8 PM.

FIGURES DON'T LIE BUT LIARS DO FIGURE

Schlumberger was always trying to increase their business in terms of the percent of market as well as the income per well. Consequently, they had sales contests, usually on a yearly basis, in which prizes were awarded to those districts and engineers who were most successful in meeting the parameters of the contest. The parameters might be the increase in market participation during a given time period, LSR improvement or some other factor significant to improved profit. LSR meant logging sales ratio and was defined as the number of different logs run per trip to the well. Each trip to the well normally had a setup charge of $150, which was added to any other charges at the well. Houston used the number of setup charges to determine the number of trips to the well. The winner of the contest was that district which improved their LSR the most. Thus, it wasn't the LSR per se but the improvement that counted. The purpose was to improve income per trip to the well during the contest period and hopefully maintain it to some degree after the contest. It's interesting, however, how such contests affect people.

In the fall of 1967 we had such a contest going. Rock Springs had a good LSR, which approached three, but I saw opportunity to improve it even more. We had several wildcat wells going, which generated opportunities for auxiliary logs over and above the basic resistivity log and the FDC. The FDC, though relatively new, had become popular as a porosity device while the sonic was used for both geophysical and porosity work. Consequently, we felt we could sell both a Sonic and FDC on many wells and several dipmeters. We even sold sidewall cores from time to time. It appeared we had the opportunity to raise our LSR from 2.7 to about 3.5 during the contest.

Logging programs are set up prior to beginning the well in many cases. We had contacted all the companies who had staked locations and not only had commitments for the logging but also multiple auxiliary services in many cases. Things looked good. We had an excellent chance of winning the contest. The contest period was three months. During the early part of the contest we were doing quite well. However, a coal mining company providing coal for a power plant near Kemmerer, Wyoming began a new project to define the depth and thickness of the coal seam they were exploiting for that plant. They would drill wells of about two to three hundred feet deep and wanted to run a density only. There was no interpretation involved and no need for other services. Even though the wells provided minimal income and

hardly paid for the cost of performing the job, we were obligated to provide the service. They drilled the wells fast and called us every few days. Our LSR on such wells was 1.0, no more, no less. During the three months of the contest, we logged 26 such wells. It doesn't take a genius to figure out what that did to our overall LSR. Even though we had many good jobs, our LSR for the contest period fell to 2.5 rather than going up.

I was rather philosophical about the whole thing and simply said to all involved, "That's the breaks of the game". I didn't feel too bad, knowing we had done some good work and could have been a lot worse off. However, when I found out which district won the contest and how they did it, I was furious. Our neighbor to the south, Vernal, had similar circumstances. They had logged 24 such wells for another company. The district manager did them on a so-called project basis wherein he charged one setup for the whole project. It cost Schlumberger $3600 in lost revenue and he had twisted the purpose behind the project approach. He had an LSR of 24 for that well, which boosted his composite LSR to about twice its normal value. To this day, I don't know why the company allowed him to carry it out. His district would not have won, had he followed the spirit of the contest. He had won only by manipulating the figures, not by any sales effort. It really turned me off on such contests but I had now witnessed that old adage in action, namely, **"Figures don't lie but liars do figure".**

A FRIEND OF DUBIOUS CHARACTER

During those years in Rock Springs, we still had two Rocky Mountain divisions, namely the Southern Division and the Northern Division. My district was the most northern district of the southern division. If I needed help in servicing my customers, I always called on districts in my division. In general, the northern division was slow to help and made all the excuses they could not to. We had little leverage to get their help and used to laugh about the Chinese wall that seemed to separate the two divisions. I did however occasionally help Casper district and they in turn would occasionally help me. I established a reasonable friendship with the manager there on that basis.

During one of these sales contests I have spoken of, we had a customer drilling in the northeastern corner of our district. His credit was questionable and he had been labeled as CIA or cash in advance. We would only service such a well if we had a check in our hands prior to going in the hole. See figure 13-25 for the location of the well. When the customer was ready for logs, he called our Casper location. They didn't want his business because of the CIA status and the fact that he had only ordered two logs. That wouldn't improve their sales ratio. They very dutifully called our dispatcher and gave the job to us, which was correct. As luck would have it, I happened to make the job. Always looking for an opportunity, I took a sidewall coring tool with me as well as the I/ES and ML he had ordered. Everything went fine. I got the money and sold him some cores in a sand reservoir that looked promising. That turned a double into a triple. They were drilling deeper, so I suggested a density log along with cores and his IES and ML. Well, time went by and he didn't call. Then one day I got a call from Casper for the first run logs. They wanted to composite them for delivery to the customer. It seems the customer had called Casper a second time for logging rather than Rock Spring even though I thought I had made it clear he was to call us. This time he ordered the services I had suggested, i.e. four of them. Well, that would really help their sales ratio in this contest. So, you guessed it, they made the job without telling us and took the credit for an LSR of 4.0. I had a rather frank conversation with the district manager and told him what I thought but there was little I could do. He just laughed and figured he had pulled a fast one on me. Though I never pretended to be of perfect morals, I realized that there were several of my peers who would do almost anything to win whereas I at least tried to stay within the spirit of such contests.

REGULAR DISTRICT MANAGERS MEETINGS

We usually had quarterly district managers meetings in Denver where we discussed everything from budgets to sales opportunities and problems as well as service problems. In between we communicated with the division manager at least weekly by phone. Occasionally I would make a few sales calls while in Denver but the majority of such contacts were carried out by the Denver sales force.

During this hitch in Rock Springs, I-80 was only complete from the western border of Wyoming to Rawlins and again from Laramie to the eastern border. They had left the section out from Laramie to Rawlins because of studies and

arguments regarding the best route. Some wanted to follow the old highway through Medicine Bow, Rock River and Bosler, while others recommended a more direct route along the northern flank of the Medicine Bow Mountains. Eventually, the latter route was chosen but at this particular time only a two-lane highway existed between Rawlins and Laramie and it was hardly a speedy route to drive.

I usually drove to Denver because the flight on Frontier made stops in Riverton and Casper. They never gained any appreciable altitude and the ride was bumpy to say the least. I never got airsick but always left the plane uneasy at either end. It wasn't much slower to drive, I had a car in Denver and the ride was smooth, so I opted for this form of transportation. During my four years in Rock Springs, I had a couple of hair-raising experiences along the way.

On one trip I had cleared Rawlins and was headed towards Laramie when I came up behind a loaded eighteen-wheeler. Though the road was good, there were frequent hills and especially between Hanna and Rock River. We were making reasonable time but the truck slowed significantly on the hills and I got impatient. I could make better time once I was ahead of him. I found a straight section of road clear of traffic and passed him without incident. Because of the hills I began moving out ahead of him and probably stretched the distance to ten miles or so before I passed through Rock River. I suspect I was doing 70 or so, on the two-lane highway, which was typical for me in those days. As I was approaching Bosler, I noticed the same truck gaining ground on me, so I edged my speed up a bit. Soon I was doing eighty, which was about as fast as I wanted to travel on that road. Even so, before long he caught up with me and there was no place to pass. I looked in my rear view mirror and all I could see was the truck radiator. I mean, he was on my tail and I didn't feel comfortable with his being there at 80 miles an hour. I tried slowing down and speeding up but he wouldn't back away. We traveled that way for ten miles or so before I got sick of it. I watched for a good shoulder area to pull over. Seeing one ahead, I slowed and pulled off at a good clip. He roared on by and I pulled back on the highway, thankful to have him ahead. He made me nervous to say the least and I wasn't exactly a slow driver.

On another trip, probably to a January meeting, I had negotiated the highway through Wyoming without difficulty. In fact, I headed south from Laramie to Fort Collins where I cut over to I-25. As I headed south on I-25, I noticed the road was slick in places but didn't think too much of it. I slowed down here and there as seemed necessary and continued on towards town. Near Loveland, I was traveling about sixty with no traffic around me. All at once, the car started sliding and before I knew it, I was in a 360-degree spin and I found myself sitting in the medium but still pointed in the direction of Denver. I sat there a few minutes with my heart thumping and finally eased the car back on the highway. From there on, I kept my speed closer to fifty and was on guard for more black ice. That was the vermin that got me. One can't see it but you can feel it in the way the car handles. If you notice it affecting your control, you better slow down. The biggest danger in a level area is rolling the car. There may be no banks to go down but the sideways movement of the car can be enough to flip it when the wheels encounter a frictional surface such as dirt or rock. In my case, I only underwent a heart stress test.

A TECHNICAL OPPORTUNITY

I had operated short of engineers most of the time I was in Rock Springs and was probably more competent technically than any of my peers who managed districts around me. I suppose such an operation was necessary to maintain a profit. It seems all the division managers from George Ellis through Bill Hartsell and now Frank O'Brien had the same idea. I always suspected it was because I didn't raise a fuss while other district managers complained of being too old or too busy or whatever. In any case, such effort paid off for me in the early summer of 1969 when an opportunity I had dreamed of for several years came up.

Frank O'Brien became the division manager in late 1968 and Bill Hartsell was transferred to Canada. Hank Valentine, Division Engineer, was also transferred. I was promoted to that position and moved to Denver in early June. I had paid $18,000 for the house, put in a couple of thousand in improvements with untold labor on my part. We still didn't receive realty help and I couldn't afford two house payments. I listed the house for $19,500, because of the depressed housing market. It sold in two days and knew I realized too late that I hadn't asked enough. Esther and I flew to Denver and bought a house in Littleton for a whopping $25,000. We were re-located in less than a month.