



The Oil Business - Then, Not Now! **By Jack Browning**

This is the edited text of Jack Browning's Noon presentation on May 1, 1997.

Much of what I have to say is known in part to all you old timers. To the younger members I doubt that you will believe it anyway.

I have been one of the luckiest geologists that ever lived in as much as I seemed to be in the right spot at the right time with the right company. The right spot that I am going to concentrate on today was Western Canada. The right time was 1949. The right company was a series of companies that were small, ambitious and had enough money to satisfy my wild ideas. Today though is the story of Pacific Petroleum.

I was described once by my staff as "That geologist that had an infectious optimism and enthusiasm throughout the trials and travails of oil exploration. He has a proclivity to go along with the wildest dreams of his addle-brained geologists."

I have always been a success, not because of

me but I had a hard and fast rule never to hire anyone that didn't know more than me. I was always lucky to have not only good geologists, but they always included one or two oil finders. These were people that made the companies, not me.

I was lucky enough to work in the pre-Cambrian for two summers with the GSC (Geological Survey of Canada). In one I had a mentor in a Metis canoe man, Tommy Clare, who taught me about the bush, everything from how to use an axe to knowing where I was at all times, and how to take a short cut home. In the other I had the luck of spending three months living in a tent with John Tuzo Wilson, just the two of us for the most part. This unusual genius taught me more geology in three months than I was to learn in the next 20 years. Mainly he taught me imagination and the ability to use the multiple hypothesis theory. Rocks came to live in my mind because of John Tuzo, although to everyone he was Dr. Wilson, not John nor yet Tuzo.

From 1940 to 1949, with two years in his Majesty's Armed Forces, I was a surface geologist in the wilds of South America. I had a number of fights over ethics with my last boss and quit. Just as I quit, I got a letter from

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Art Nauss offering me a job as Chief Geologist of Pacific Petroleum.

My wife asked me what the job was and I told her I would be in charge of the surface and subsurface geology, the wellsite geology, the geophysics, the reservoir engineering and the economics. Her remark was that I didn't know any of those things and I told her that it would take them six months to find out and by that time I would know how to do them.

The shock was that we were drilling 12 wells and didn't have a geologist who had ever seen a rig. We missed compulsory tests of the Viking in Imperial Oil farmouts on three wells in one afternoon. In those days we had to pick the top of the zone to be tested, rat hole ahead and run a rat hole packer in the top of the rat hole. No toolpush would risk a full hole packer in a well in those days. It always meant fishing out the packer and the pipe we had left in the hole.

To give you one example of my problem, we were drilling a well at Fort Saskatchewan. We had no communication system with the wells so I had the geologist go to a telephone at a number I knew and I would call him at a certain time. I was at Legal, north of Edmonton and called the geologist and asked him what he was drilling in. He said, "Mr. Browning, this is really weird. I am drilling in grey marbles, blue marbles and white marbles." I told him to put the rig on the bank and I would come right down. I looked in the microscope and said, "Man, those are chert pebbles. Don't you know chert pebbles when you see them?" "No," he said. I asked him what kind of a geologist he was and he asked, "Did you think I'm a geologist?" "Yes" I said. "What are you?" "I'm a second year psychology student at the U of A. I just took

this job for the summer."

Most of the other geologists were not good well sitters. They got all wrapped up in the stratigraphy and correlations, and forgot that we were principally there to test porosity for oil and gas. We missed many tests and core points. One of them had the best collection of ostracods in Western Canada. I found that the sample catchers we had were better wellsite geologists than the geologists. I started training them (the sample catchers) and soon most of the geologists were moved into the office. These technologists as we would call them today were a godsend to me and I relied on them heavily.

I drove thousands of miles that summer; my wife beside me slapping my face to keep me awake, and our two babies and the dog in the back seat. I did not have my clothes off in one three week period and certainly never went near a bed. I flew 100 hours in company aircraft.

I have to thank many geologists in major companies, people like Ray Sluzer of Imperial Oil for teaching me wellsite geology.

Wellsite work was just one of my problems. Our big play was Redwater. I had one subsurface geologist and she had no experience but she worked day and night. We zoned Redwater, making maps of the frontal edge that we called the clastic fragmental zone, then we had the internal reef where the best porosity was, and the back reef. It was essential to map the anhydrite cover since towards the back reef, this was a large part of what was called the D3, now the Leduc formation. We mapped the unconformity at the top of the Devonian which was essential in our seismic interpretation. It is interesting that our

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Letter to the Editor

DR. P. S. BARRY
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May 7, 1997

Editor, Archives
Petroleum History Society
Calgary, Alberta

Dear Sir:

I'm afraid Professor Stelck is a little confused about the role of Guy Blanchet in surveying the Canol Project Pipeline route in 1942, as given in his memoir published in the April issue of Archives.

Blanchet, a retired Dominion Lands Surveyor, was hired out of retirement by J. Gordon Turnbull, the contractor, to take charge of the location and survey of the Norman-Whitehorse pipeline route to Sheldon Lake, which he and his native guides Fred Andrew and Edward and George Blondin of Fort Norman, accomplished by dog-team Oct. 25 - No. 28, 1942. Kent Fuller and party found the location from Johnson's Crossing on the Alaska Highway to Pelly River.

On Jan. 15, 1943 a plane picked up Blanchet at Sheldon Lake and flew him north to Fort McPherson to explore a route through Rat Pass to the Yukon. Major Burwash had nothing to do with these two events.

Full accounts of these surveys, documented and accompanied by detailed maps are in my book, The Canol Project: An Adventure of the U. S. War Department in Canada's Northwest (1985), of which there are copies in various libraries including those in Calgary and Edmonton.

Sincerely,

P. S. Barry

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text book on reefs was Darwin's treatise on reefs written about 100 years before. It was our clue on what the surface of a reef looked like. Some of the surge channels we mapped and interpreted were 10's of feet deep and certainly influenced the recoverable reserves. These influenced our seismic studies but didn't show up. They were interpreted mainly from a little evidence and a lot of imagination. Bidding on Crown sales was a hectic and scary part of my life. To determine the pay zone we used seismic to a large degree and I had an expert in Lou Costelli. From his maps, corrected from a little subsurface geological data we had, and our imagination, we subtracted the thickness of the anhydrite zone, calculated the thickness of the pay and so isopached the pay zone. We had a fine young engineer called Fleming who, using micrologs, came up with a good idea of the porosity. Maurice Tixier, the chief interpreter for Schlumberger said that we couldn't calculate porosity from micrologs since it was all empirical, but we used it anyway and it was fairly accurate. Our zonation of the reef was a big factor in feeling comfortable with Fleming's work.

We had no idea on the recovery factor, but since there was no gas cap we used 15%. We decided in our great wisdom that, because we were dealing with vuggy porosity, the connate water would be low and we multiplied all these numbers together and came up with what we called "the recoverable reserves."

To be safe we took 25% of that number and since there was no market for oil, and no pipeline, we even cut that number. We finally came up with a bid and we bought about 80 wellsites.

We were conservative and lucky. Our porosity was low, connate water high, recovery factor was 40% at least due to water drive, and the Interprovincial Pipeline was built. Most factors operated in our favour.

Now we had no money. We used to get our pay cheques on Friday and Frank McMahon would say not to cash them until Tuesday because there was no money in the bank. He borrowed the money from the bank for our bids. Frank was the greatest promoter I have ever met and I have known many. Once we had the land, he would farm it out for 100% of the bid plus 100% of the drilling and completion costs. That was the start of many companies, including Calvin, Bailey Selburn, and Fina.

It was a crazy world. Where did I learn to do all this? I read all three volumes of Uren, I'll bet three times in a matter of two months. This was my source for engineering data. I read everything I could find in 1949 on reefs. Much of this, like the Leduc field, was of little use since they were dolomitized. I talked to dozens of geologists of other companies but they knew little more than I did.

I have to tell you about Jan, the subsurface geologist. She was no movie star and the men all had pictures of semi-nude girls on the wall and used to tease Jan about it. They were called Petty Girls. She went out and bought one of those body builder magazines and pasted pictures of the men all over her wall. That ended any comments. Jan was never shy and I think won every war she was in.

I must say a few words about Bear Oil. We were the operator of that group and had an

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interest for the work we did. The partners were all substantial US companies including Pacific Western, a Getty company, and Sunray DX, among others. They were a very critical group. To give you an idea, I was asked to pick up Cyrus Wright, the President of Sunray at the airport. He had one small bag which I put in the back seat of the car. He asked me to open the trunk, looked in and told me to close it. I asked him what he was looking for and he told me "golf clubs." He said, "If you had golf clubs in there I would have fired your ass right now. No one that works for me has time to play golf."

Bear Oil was a theory of Ted Link. I believe it was based on the tar mats of Venezuela with giant, lighter oil fields down dip. He reasoned that the oil in the tar sands seeped out of the Devonian and that down dip huge reserves would be found.

Our land holdings stretched all along the Athabasca River from the town of Athabasca to north of Waterways, now Fort McMurray. The reason for these lands was two fold. It was down dip of the tar sands and the river was the only means of transportation.

We did surface geology along the river and some of the tributaries, largely based on the fact that Art Nauss, who was our VP of Exploration, when he worked for Imperial Oil had noted a reversal in the North Saskatchewan River where the Redwater field was found years later. That reversal had nothing to do with the discovery of Redwater because a half degree reverse dip in the Cretaceous was not considered significant. We never found any reversal in our work.

Charlie Stelck was one of the part chiefs and John Andrichuk was on one of the (field) parties. We decided to deliver food to one of the parties working on the Clearwater River and since we couldn't land, we wrapped it all up with great care and threw it out of the plane. I don't know how much of it was useable, but one box hit a cabin where they were and painted the cabin bright red with ketchup.

There were about 20 wells drilled along the river. These were drilled by Boyle Brothers, a company usually connected with the mining industry. The wells were drilled by diamond bits and cored from top to bottom. These were the best set of cores, over 50,000 feet of them, in the industry. They were in great demand and we used them as trade bait, not just to see other cores, but we got seismic data, and in one case, an interest in a well.

We were the first to name the formations below the D3 (Leduc). With great imagination we called them D4, D5, and D6. Now that was real originality!

A personal story occurred when we tested a well at Pelican Rapids. There was a road in, but we decided to go by air in -20°F weather. The temperature dropped to -40°F and the plane couldn't get in. I finally arrived by truck, strapped on top of a load of pipe dressed in a heavy parka and wrapped in two eider down sleeping bags. The things one did for \$600. a month.

I visited every well that pacific drilled; some of them several times. I say that I saw more wells in two years than most geologists see in a life time. Some I should have seen sooner. One, #3, missed the reef and should have been abandoned. The engineer got there

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before me and saw the log to TD on the table and assumed I had seen it and he ran pipe. I arrived just as it was being cemented. There were two gas shows in the well, one in the Viking and the other in the Basal Quartz. Gas was not worth a string of pipe. But since the pipe was in the hole, we perforated the Viking and got nothing. The mud was bailed down to within 100 feet of the top of the Viking when she blew out from the Viking. The rig caught fire and we had a mess. Red Adair and Bud Cootes came up and put it out. No one was killed. We weren't so lucky with a Yoyo well where, when it blew out, four men were badly hurt including a good friend of mine, Bill Danyluk, who lost a foot.

You will all remember that life was rough in those days. At Pelican Rapids we were sleeping in tents at -40°F. There were no camps, no cooks on any rig I was on. Drinking and fighting were real problems. Many a wellsite geologist worked in the back seat of his car.

But it was exiting. We found lots of oil and gas. Gas was worthless at the time, and we didn't even complete those wells.

We were not very good at our jobs and we made lots of mistakes; some cost us oil fields.

I am sorry time does not permit me to tell the story of West Coast Transmission or the glory days of Bay petroleum or the start of Tenneco in Canada. I was involved deeply in all three, but that is another story.

Those were hectic days, but for sheer excitement they couldn't be beat. I am happy I was there and I must admit it beat the high tech days we are in today. Today I see little imagination in the geologists. In those days, much of what we did was imagination. They were great days!

WE NEED YOUR HELP

We would like to get "the word out" about our Society to all retirees of the petroleum industry. If you know of any retiree newsletters that might be interested in passing information about us along to their retirees, please call
Pete Savage at 249-3525

Do you have any "fond" memories or anecdotes about your life in Canada's petroleum industry you would like to share? Why not write a brief article or even a note on the subject for our new column in the PHS *Archives* beginning in the Fall. Mail **your** stories to Bill McLellan, 24 Varslea Place N.W., Calgary, AB T3A 0C9 or send them in by fax: (403) 244-2018.