PETROLEUM HISTORY SOCIETY

ARCHIVES

Newsletter of the Petroleum History Society *October 2001; Volume XII, Number 7*

NOTICE

"SNACK AND LEARN" SUPPERTIME MEETING

5:00 p.m. Wednesday, October 24, 2001

Mike Miller (Safety Boss) – Blowout Control Expert

TOPIC

Experience with Blowout Recovery Operations

Spectacular blowouts underpin a significant amount of oil patch lore – for example the Pelican Rapids well, Royalite #4 and Atlantic #3. These events bring to the fore the dangerous nature of subsurface pressures while often heralding major new discoveries. The human side of these events is no less interesting with the often-tragic consequences contrasted with the bravery and heroism of both the rig workers and the blowout control and recovery specialists. In this talk Mike will focus on the impact that these activities have on operating companies and their relationship to the blowout contractor. We will gain an appreciation of the size of these events, the number of people involved, the on-site costs and the long-term impacts that large blowouts have on the industry. Mike will illustrate some of the latest equipment and will explain the various types of blowouts from simple to the worst case scenarios, including a review of the 1982 event at Lodgepole. Finally some comments will be included on dealing with the media – do's and don't's, public perceptions, predictions and resulting problems. Mike is well known in the industry, in particular for the role that he and his company, Safety Boss, played in the aftermath of the destructive early 1990's Gulf War in the Kuwait oilfields. Mike has recently been involved in the ceremonies surrounding the Canadian Petroleum Hall of Fame.

TIME: 5:00 p.m. (receipts at the door), October 24, 2001, presentation at 6:00 p.m.
PLACE: Palliser Hotel (133 - 9th Avenue S.E.) – C. P. Room (but check marquee on arrival).
COST: $10 Members and Guests (most welcomed), cash bar, snacks will be provided.

R.S.V.P. Clint Tippett (691-4274) by noon, Monday, October 22, 2001

In This Issue ..

If you missed the talk…

Early Days in the Oil Patch-
Cable Tool Rigs and Other Adventures

Thursday, September 27, 2001
by Garnet Edwards
... catch a condensed version of Garnet's presentation on page 3

THE PETROLEUM HISTORY SOCIETY
Calendar of Events

Next Director's Meeting: November 7, 2001 at the Glenbow Museum.

Future Luncheons: We have arranged to have Dick Shaw, the author of a number of fiction and non-fiction petroleum-related books, address us on Thursday, November 15. Dick was formerly a Senior Vice-President at Shell Canada, among other industry activities. This luncheon will double as our annual awards ceremony. The remainder of the 2001-2002 luncheons have not yet been scheduled. A number of possible speakers have been identified. If you have something that you've been working on and would like to present, please contact one of the Board members and we'd be very happy to fit you into our slate.

News: Member Helen Turgeon reports that the Calgary **Desk and Derrick Club** are celebrating their 50th Anniversary this year. The **Canadian Society of Petroleum Geologists** is celebrating their 75th Anniversary in 2002 with the theme "Our Past is the Key to Our Future". We note with regret that long time member **Andy Baillie** passed away on September 26. Finally, Shell Canada is celebrating the 50th Anniversary of their **Jumping Pound** Gas Plant and is holding an open house on Saturday, October 20 from 11:00 a.m. to 4:00 p.m. with tours and a bar-b-q. Please contact Clint Tippett at 691-4274 for details if you'd like to come out. It's southwest of Cochrane.

Canadian Petroleum Hall of Fame Nominations: The two individuals nominated by your Society were inducted into the Hall on October 5, 2001. These deserving industry leaders are Don Axford and Ted Link. Any ideas for next year?

Society E-Mail Address: petroleumhistorysociety@canada.com. All members with e-mail service please send in your address to Micky Gulless, Past President, Membership Committee " *micky@fuzzylogic.ca* " to build our file. Currently P.H.S. has e-mail addresses for 33 members.

Oral History Project: Quarterly Reports have been distributed to all Board Members. Interviews began again in April. Transcriber has a backlog of interview tapes to work on and a list specific to the C.S.P.G. that is the current focus of the project. An application has been submitted to the A.H.R.F. for additional funds.

History Trivia: Service to Members. Submit any question (person, place, thing – why, what, who, when) you may have on oil patch history and anyone can submit an answer. Queries and replies to be printed in this section. Our two outgoing questions from March 2001 concerning Turner Valley still stand.

Executive and Board of Directors: President – Clint Tippett; Vice President – Bill McLellan; Treasurer – Doug Cass; Secretary – Peter Savage; Past President – Micky Gulless; and Directors – John Frey, Aubrey Kerr, Hugh Leiper, Neil Leeson, Peter McKenzie-Brown, Joyce Wright, Debbie Knall and Edith Wenzel. Jack Porter continues as an Honourary Director. The editor's apologies to Debbie for missing her on the Board list in the last issue of Archives.

Dynastic Chart Project: The events of the last few months have highlighted the vigor with which acquisitions and mergers are being pursued, in particular by major American companies anxious to increase their share of the Canadian oil patch. Stay tuned. These developments are giving rise to an additional impetus for this project.

Whoppers: Somewhat delayed to you but still of interest. On April 11, 2001, Scott Haggett of the Calgary Herald reported that "the facts" of the Talisman-Petromet deal. Apparently it gave Talisman a combined Canadian production of 452 million barrels of oil equivalent a day in 2001 – and that, further to this, Petromet's "current production is 17.7 billion barrels of oil equivalent a day". Not even the math is right here! Thanks to Hugh for pointing out what a great deal Talisman got!

Early Days in the Oil Patch –
Cable Tool Rigs and Other Adventures

A talk presented to the Petroleum History Society Luncheon
September 27, 2001 by **Garnet Edwards** – Builder
(summary notes by Clint Tippett)

Garnet Edwards presented a very interesting talk to this recent luncheon about his life in the oil fields and about how cable tool rigs operate. The writer does not intend to be comprehensive in these notes but rather to touch on some of the many insights Garnet gave us both during his presentation and in the question and answer session that followed. Readers are reminded that most P.H.S. luncheon talks are being videotaped by Director Joyce Wright and that reference to a full set of remarks is always possible. We also saw one of Garnet's rig models.

In 1941 Garnet became the second youngest driller in Canada while working in Turner Valley. It was recalled that Wartime Oils funded the high level of drilling activity in the Valley at that time on a cost-plus basis in support of the war effort. He mentioned that in 1946 he went to Oilwell Reflow as a cable tool driller on Westflank #2 where they prepared and shot the well with 5300 quarts of nitroglycerine and two tons of marbles – but to no avail!

Some aspects of cable tool drilling and related topics:

1. Cable tool rigs are a very economical way of drilling – a three man crew working daylight hours only, boiler could use coal, wood or gas to raise steam.
2. Would often drill to 2000-3000 feet with cable tool and then switch to rotary.
3. Estimated that the first rotary rigs in Canada appeared in 1925 (Turner Valley gas boom).
4. Strong rope used to lift the bit about two feet and then dropped. Gradually turned the curved bit to produce a circular hole. Weight of about two tons was sufficient to penetrate the formation.
5. Would drill 10-15 feet and then run in with "bailer" to remove cuttings. My question – where did the 10-15 feet worth of cuttings go in the meantime? Answer seems to be that they would get plastered up against the sides of the wellbore from where they would be knocked down and jammed back up into the open-ended bailer for the trip up to the surface.
6. Some wells would take up to ten years to drill. Discussion of such a well near Lundbreck took place. According to Don Redmond it was the deepest cable tool hole drilled in Canada and required a special type of cable.
7. Casing was run on a "continuous" basis as follows: The hole was deepened by the length of one casing joint. The drillers then ran in an "under-reamer" that would enlarge the hole diameter to greater than that of the casing. Once the hole had been cleaned with the bailer, a new joint of casing would be screwed onto the existing string of casing at the top (a difficult job done by hand in the absence of tongs). The lengthened string would then drop into the hole either of its own accord or by being physically forced down to the bottom. Only when it proved impossible to get any more casing of that size into the hole would a small amount of cement be squeezed in around the base of the string to hold it in place. Drilling would resume with a smaller bit and hole size. I always wondered about this in terms of wellbore instability given that there wasn't mud in the hole to hold back the formation's natural tendency to cave into the hole.
8. Wellbore deviation was measured by lowering a glass bottle filled with strong acid (HF?) into the bottom of the hole. After allowing it to sit for a while it was pulled back out and the orientation of the top of the etched part of the bottle could be measured to tell how far off vertical the well had become. Of course there was no way to tell the actual direction the well was going – only the inclination of the wellbore. Direction came later with magnetic tools.
9. Plugbacks were accomplished by running in a mixture of "field stone" (boulders) and old pieces of rope to stop the bit from going in the undesirable direction.

Pembina – the Largest Oil Field? (from 1954, Part 1)

Schlumberger Well Surveying Corporation played a vital part in helping to discover this huge new field in Alberta, Canada. Now we are helping to develop Pembina's vast resources.

Pembina! Remember that name, for it may soon take the place of the East Texas field as the largest oil field in North America.

Pembina is new, discovered in June, 1953, in the foothills of the Canadian Rockies, about 70 miles southwest of Edmonton, Alberta. So far, about fifty wells have been drilled over a wide area and although there is much fill-in drilling to be done, there is good reason to believe that the field is at least 250,000 acres in size. The fabulous old East Texas field, hitherto the largest, is 134,000 acres in area. Like East Texas, Pembina is an enormous stratigraphic trap.

The major discovery has already given a tremendous boost to Canada's oil industry and also to Schlumberger's Western Canada Division which services it. From all indications, this is just the start.

Schlumberger's Part

Schlumberger has a keen interest in Pembina, for it was a Schlumberger electrical survey that proved the discovery well a producer despite fears that it was dry.

Pembina's discovery goes back to 1950, when a permit was taken by Seaboard Oil Company of Delaware and Honolulu Oil Corporation to explore a virgin area in west central Alberta between the Pembina and Saskatchewan rivers. Three years later, following an extensive seismographic program, the group, now reorganized, drilled the first well. Then, Socony-Vacuum Oil Company, as operator, held a 50 per cent interest in the program with Seaboard, Honolulu, Merrill Petroleums Ltd., and Canadian Collieries Oil & Gas Ltd. holding the remaining percentage.

Survey Requested

On May 15, 1953, Schlumberger Engineer Bill Martenson, then in Edmonton, with Operators H.K. Thompson and L.R. Carpenter, logged the Socony-Seaboard Pembina 1. The well had been drilled to the Devonian, but the log showed nothing there. However, the Cardium sands at 5310 feet looked good on the log. Socony plugged back and tested the 30 feet of sand. It came in with an initial production of more than 450 barrels of 36^{o} oil a day … no water, no gas.

Following the discovery, a number of major companies jumped into the Pembina area with both feet, leasing tremendous blocks of acreage. Imperial Oil Company, for example, latched onto four townships of 144 square miles. The Texas Company, Stanolind, Imperial, Socony, Seaboard and Hudson's Bay are the majors involved, with a few independents grouping together to get in on the play.

(Article continues on next page)

“Pembina – The largest Oil Field?” Part 1 (continued)

Partly Outlined

So far, only the south and east sides of the field have been delineated. Possibly it might be even larger than presently believed. But within the known boundaries, there is room for 3100 wells with the 80-acre spacing now used, and this spacing may eventually be reduced to 40 acres. To date, Schlumberger has run an ES and MicroLog on every hole. Many wells are also completed with the Expendable Shaped Charge.

Two Locations

Two locations serve Pembina: Wildwood and Drayton Valley. Scott Sherriff opened Wildwood on April 1, 1954. With him are William Neil, Glenn Brown, and Albert Nero. Bill Martenson, who logged the discovery well, opened Drayton Valley on June 1, 1954. With him are Earl D. V. Thomlison and Lloyd Olsen.

Pembina is in rolling foothill country with the prairies to the east, the Rocky Mountains to the west. It is timber country, sparsely settled, and largely unsurveyed. Every location must be hacked out of a wilderness where there are no roads, no facilities of any kind. Dense forests of spruce and jack pine give shelter to a population of deer, bear, elk, moose and beaver. The crew of a wildcat rig in Wildwood’s territory shot ten overly curious bears during the time they were on location.

Like Lewis and Clark

Working in this rugged frontier country brings about some unusual situations. One Schlumberger crew took their truck into a wildcat well in a genuine Lewis and Clark manner: the truck was put on a railroad flat car and taken to the end of the line. Then an Indian guide was hired and a bulldozer procured. The guide struck out across country, followed by the bulldozer which plowed a path through the bush. Behind the ‘dozer came the truck. After seven days, they arrived at the rig.

Bane of this part of Canada is the muskeg, for it makes travel in the bush difficult, and often impossible. Muskeg is a spongy blanket of rotting vegetation which looks much like manure. In the Pembina field, it may be anywhere from one to 135 feet in thickness. Ordinary vehicles like cars and tractors bog down hopelessly in muskeg, and it is impossible to build a road on it. Roadways and drilling locations must be scraped clean of muskeg to the underlying clay.

Reprinted from “Sonde Off”, a employee publication of Schlumberger Well Surveying Corporation, October 1954. Thanks to Bill Martenson, a participant in this discovery and a previous speaker for the Petroleum History Society, for providing a copy of this article. Part 2 will appear in a subsequent issue. Thanks to Jocelyne Tippett for the transcription.

APPLICATION FOR MEMBERSHIP and RENEWAL FORM:

PETROLEUM HISTORY SOCIETY

Individual Member: _____	Corporate or Institutional Member*: _____	
New Member: _____	Renewal: _____	
Name: (If a corporation or institution, please give company name, plus name of representative.)		
Address:		
Postal Code:	Email address:	
Business phone:	Home phone:	Fax:
Individual Members - please indicate your company or institutional affiliation (if desired):		
Note: P.H.S. memberships are annual, with renewals due each January. For NEW members joining after June 30, first year membership will be extended to the end of the following year. See your address label on the P.H.S. Archives newsletter for your expiry date.		
Individual members select your membership type:	_____ Individual Member ($20 / year) _____ Sustaining Individual Member ($50 / year) _____ Lifetime Senior (+65) Member ($100 one time only)	
Corporate / Institutional members select your membership type:	_____ Institutional Member ($100 / year) _____ Sustaining Institutional Member (over $100 / year)	
Please enclose a cheque or money order (for the amount indicated above for your membership type) payable to **The Petroleum History Society**.		
Date:	Signature:	
Please mail fee and completed form to:	Membership Committee - Petroleum History Society c/o The Glenbow Archives Attention: Doug Cass 130 – 9th Avenue SE Calgary, AB T2G 0P3	

***** All employees of a Corporate / Institutional member are eligible for Member rates at P.H.S. functions. We can also provide additional copies of our newsletter on request. And your company will be doing more to help preserve our colourful past, for which the Society is very grateful.