

PETROLEUM
HISTORY
SOCIETY

ARCHIVES

Newsletter of the Petroleum History Society

November, 1998; Volume IX, Number 3

if you missed the...

FIELD TRIP TO HISTORIC TURNER VALLEY

Saturday, August 29, 1998

...update your knowledge of oilpatch history and share our entertaining outing in this issue of Archives, complete with photos.

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Next issue - oilpatch evolution over the past 50 years.

NEXT LUNCHEON

Your Society's next luncheon will feature

Edward E. (Ned) Gilbert

who will tease imaginations and memories with:

Recollections of Early Oil Sands

Land Acquisition

Ned, as a 1947 geology major from the University of Wisconsin, moved to Canada with Sun Oil Company (now Suncor) and immediately became interested in the McMurray Oil Sands. Realising their worth, he persuaded Sun to acquire acreage with the object of bringing these deposits into production thus dominating the initiation of successful oil sand projects in Canada. Ned's contributions have been recognized by many oilpatch organizations, such as CAPL, APEGGA, and CSPG (bestowing him Honorary Membership for persistent pursuit of visionary endeavours). Join Ned as he...*tells it like it was!*

Date: Wednesday, November 18, 1998

Time: 12 Noon (receipts at the door)

Place: The Calgary Professional Club

Cost: \$20 for members, \$22 for guests

FLASH: Members support luncheons by attending - but also remember to post this Notice at your office and encourage associates to join us for an entertaining Lunch and Learn and earn APEGGA PDH points!

Please RSVP to **Bill McLellan, 286-2191** no later than Noon, Monday, November 16th. See you there!

THE PETROLEUM HISTORY SOCIETY
Calendar of Events and Daily Tips

Next Director's Meeting: December 2, 1998 – 3:00 p.m., Glenbow Museum

Society Web Site: Volunteer your expertise for the design and installation of a Society web site in exchange for promotional exposure of your product and/or services. Please contact Dag Nilsen at 260-1026.

Society Scholarship Program: 1998 PHS Graduate Scholarship of \$800 has been awarded to Matthew Foss, a graduate student at the University of Calgary Masters Program, at a ceremony in October 1998. The subject of Matthew's thesis is "Relationship of the Petroleum Industry to the Alberta Economy".

Society Library: Detailed listing of books and videos assembled for PHS custody will be included in next Archive issue. Would all Members undertake a search to determine if they have any library items out (several are unaccounted for) or if they have additional items to supplement our collection? In either case, please contact Bill McLellan at 286-2191. A goal for 1999 will be finding a permanent display to facilitate Member access and, in selective cases, loans.

Society Oral History Project: Includes more than 250 interviews. Diverse topics such as first-hand recollections of Turner Valley's boomtown excitement, trying to fuel the Pacific fleet in the Second World War with the Canol project, and the early quest to release the riches of the tar sands. There is still room for a lot more, so contact Doug Cass at 268-4203 with any ideas.

Future Field Trips: Success of the Society's latest, the August 29, 1998 Turner Valley Tour, ensured that additional proposals will be forthcoming in 1999. Please forward your suggestions to Clint Tippett at 691-4274 (Shell)

New Society Service: Members and the public are encouraged to donate a copy of recently published energy industry related books or technical papers. Reviews, limited to 500 words and provided by the author, literary critic, or PHS if requested, will be included in future Archive issues. Contact Neil Leeson at 217-2974.

New Society Goal: More public and industry awareness of PHS objectives and contributions by encouraging media attendance and coverage of events.

1999 Member Commitment: Encourage one new member to join before year end 1998. Contact Bonnie Mech at 268-7944 or ask Bill McLellan for a membership form at our Luncheon. Reaching our goals relies on adequate motivation to drive and staff our committees. Exciting announcements of new involvement will be forthcoming in future Archive issues. This is everyone's chance to be part of history.

Tip For The Day: Under lots of work-related stress? "*Ultimately nothing matters, and so what if it did!*" – Ernie Zelinski, Edmonton Self-Help author.

OUR HALLOWED GROUND

What does today's stock market turmoil have in common with Turner Valley at the turn of this Century?

Members, guests, and friends of the Petroleum History Society (PHS) were treated to this, and many other curious, answers during a fact finding bus tour on 29 August 1998. Organizational assistance from Shell Canada and the Canadian Society of Petroleum Geologists contributed to an ideal outing for the 44 participants. This highly successful venture, the first of hopefully many for the PHS, was aided and abetted by near perfect weather.

Given the full day itinerary, our chartered bus left promptly at 08:30 AM with a full complement. Other than lunch at the Turner Valley Hotel, Field Trip co-ordinator Clint Tippett had ensured a march through a half-century of oilfield history with little interruption. Considering the inexpensive cost (\$30 each, including lunch), by day's end one could not help appreciate the education and entertainment value. Here's a sample of what to expect NEXT TIME.

To all Albertans who want, or claim, to be knowledgeable of our historic significance to the global oil and gas industry, you would regret missing a recent Petroleum History Society guided tour of the Turner Valley Oilfield. It's not too late to take the challenge – how many of these facts did you already know?

- Alberta's first gas discovery was accidental; a CPR crew was drilling for water in 1883 at Langevin siding, in southeastern Alberta, and discovered gas instead at 1155 feet. Encouraged by 500 psi wellhead pressure, lines were quickly laid to the nearby city of Medicine Hat. For years thereafter streetlights burned 24 hours a day in the belief the cost of fuel consumed was less than a Lamplighter's salary.
- Alberta's longest living "blow out" was drilled in 1897 at Pelican Rapids, along the Athabasca River, where gas blew wild for 21 years.
- Oil seepages in central Alberta were known to the aboriginal peoples for centuries and employed as medicine and canoe caulking.
- Gas seepage along Turner Valley's Sheep River provided convenient cook stops for cattle drives of the late 1800s.
- Turn of the century Turner Valley rancher William Herron snapped a match to a rock fissure on his property and amazed a group of prospective investors by cooking their meals over the escaping gas.
- Herron's Turner Valley 2700 foot discovery well, Dingman #1, was drilled at one of these seeps by a partnership which included Sir James A. Lougheed, future Prime Minister R. B. Bennett, A. E. Cross and legal magnate W. H. McLaws. It flowed 4 MMCF/D sweet gas on 14 May 1914, putting Turner Valley on the world map with front-page coverage throughout the British Commonwealth.
- Within days over 500 oil companies and hundreds of brokerage houses sprang up in Calgary to promote stocks. Upper story office windows were draped with cotton banners displaying the names and prices of new stocks. In the desperate rush to invest, up to \$500,000 changed hands daily. "Brokers were forced to pile cash and cheques into waste baskets when the cash drawers began to overflow. With a rental payment of twenty-five cents an acre for the first year plus a filing fee of five dollars, a swindler could lease 160 unseen and unprospected acres' worth of mineral rights for forty-five dollars, then peddle his shares for whatever price he could wheedle from the investors." - Turner Valley Historical Society

Back to the present, August 29, 1998. Our diverse contingent of oilpatch veterans and novices patiently awaited arrival at the first of five tour stops and a 20-minute black and white video depicting early oilpatch life. Digesting Turner Valley's significance to Canadian heritage teased many to surprise and disbelief.

STOP 1: TURNER VALLEY TOWN HALL AND OILFIELD MUSEUM

- the only known important oil accumulation in the Alberta Foothills;
- Canada's first, largest and most productive source of oil and naphtha until Leduc's discovery in 1947;
- high pressure absorption plant, built in 1914 at Dingman #1 to extract natural gasoline from naphtha, was the world's second after a West Virginia plant in 1913;

- home of Canada's first sour gas scrubbing plant in 1935, first propane plant in 1949, and one of first two sulphur plants in 1952;
- major supplier of aviation fuel to the British Commonwealth Air Training Plan during World War II, with production peaking at 10,000,000 barrels in 1942 and subjected to intense security against sabotage for the duration of the War; area well flares served as navigation aids for pilots in training, visible from as far away as Lethbridge;
- production reached 500 MMCF/D in 1931, mostly flared, resulting in \$28 worth of gas wasted to recover \$3 worth of naphtha(gasoline); resource loss, symbolized by massive flaring, resulted in creation of the Energy Resources Conservation Board (ERCB) in 1938 to limit waste and maximize economic potential and became the industry model for regulation;
- developed and perfected equipment and techniques for processing sour gas globally.

Despite our tight schedule, it was still painful not to have more time for all the wall paintings and exhibits displayed abundantly around the Town Hall (which doubled as a museum). As a token of our appreciation, the PHS presented a donation for \$100 to the Turner Valley Oilfield Society. It was indeed a valuable investment, as two guides accompanied us to STOP 2 (Turner Valley Plant) and provided a comprehensive and informative walking tour.

STOP 2: TURNER VALLEY GAS PLANT

- designated as a Provincial Historic Resource in 1989;
- designated as a National Historic Site by Minister of Canadian Heritage;
- ceased operation in 1985 after 71 consecutive years(Canada's oldest processing plant);
- original Compressor Building(10 Cooper Bessemer compressors created jet engine type noise and stifling heat, both magnified by lack of ventilation, necessitating soundproof outhouse-size shed for internal and external communication); original Scrubbing Plant (H₂S removed in towers, water collected and disposed, and CO₂ vented); original Sulphur Plant); Dingman #1 discovery well; original Lunch Room(only smoking on site);
- consecrated 31 year history with 2 accidental deaths in the 1940s and 1 in 1971
- new compressor station, owned and operated by Talisman, transports the remaining limited gas production to Quirk Creek Plant 15 miles west.

One could not help drifting back in time and visualizing the working conditions, given the primitive and dangerous equipment by today's standards. The Compressor Building, for instance, had no fans, air conditioning or soundproofing. In the heat of summer, only the top portion of windows lining the walls was hinged for opening. The noise was said to be so great that internal voice, and external phone, communication was only barely possible from inside a 3' by 3' size shack at the centre of the compressor bank. On the positive side, all gas lines were buried to prevent an explosion from a stray spark. Almost hidden by the masses of steel tanks, piping and structures was the Discovery well that started it all. Calgary Petroleum Products drilled Dingman #1 over a three-year period, beginning in 1913, to a depth of 3924 feet. Although last commercial production was 1913, it was not officially abandoned until June 04, 1968.

Armed security 24 hours a day emphasized the importance of the plant complex to the Allied war effort. All staff had to wear picture identification and a manned searchlight on an overlooking hill to the east illuminated the site. By an odd twist of fate, the U.S. steel manufacturer for many of the Plant's valves and fittings during the 1930s, Crane Steel, stamped a swastika as the company logo on all their products. Needless to say, this was discontinued once WW II broke out.

LUNCH BREAK: TURNER VALLEY HOTEL

Arranged in advance, the soup, sandwich and dessert buffet bar was ideal for the short duration and warm weather. At \$5.95 plus tip and GST, it complemented Big Rock bottled beer at under \$3 for a true rural lunch value.

STOP 3: HELL'S HALF ACRE

- secluded coulee to contain horizontal flame for up to 20 MMCF/D sour gas from Royalite #4, discovery well of the Mississippian gas cap completed at 3740 feet in October 1924;
- took nearly two years to drill, averaging only seven feet per day;
- burned with such intensity that it could be seen from Calgary, provided enough light nearby to read during the darkest nights, shook the ground and seared the local rock into colorful volcano or moon-like transformations.

Despite the historical significance of this site, a new residence has just been built and landscaped at the entrance to Hell's Half Acre. We were uncomfortable treading over the recently seeded lawn, yet the owners must have considered this intrusion on privacy as an acceptable risk. Nearby, either a connecting highway or housing subdivision was in the works, as evidenced by the large number of parked earthmovers and graders. Given all the open land around Turner Valley, it appeared that historical preservation had lost out to urbanization. Pity!

The geological enthusiasts on the tour took time out to collect samples of "moon rock" abundantly available along the cliff sides of the coulee. Perhaps a few samples will be donated to the Society's literary and artifact collection.

STOP 4: LONGVIEW (LITTLE NEW YORK)

- nearby Royalties #1 flowed 650 barrels per day in 1936 after nearly two years of drilling and was Turner Valley's first oil discovery, extending the Field 10 miles south. At 6828 feet, it remained the deepest Alberta oil well until 1949, producing 700,000 barrels in its 13 year life;
- Longview natural gas was cheap, costing less than \$1 per month per stove. "There was a gas flare in every backyard and it was almost brighter at night than during the day. The vibration from the flares was so great that businessmen had to put a string across merchandise shelves to keep their contents from spilling onto the floor." - Turner Valley Historical Society;
- Three National Hockey League players, "Red" Dutton and the Thompson brothers, opened Longview's Twin Cities Hotel in September 1938.

Talisman Energy 3-29-18-2 W5M (Royalite 39) pumping unit provided an appropriate backdrop for a group picture. Just to prove the "old Oilfield" is not dead yet – a nearby well was receiving a workover stimulation. Based on the fleet of service vehicles on site, confidence in continued performance was evident by this substantial investment.

STOP 5: MILLARVILLE

- "actually named after Malcolm Millar, an early resident who emigrated from Scotland in 1879....and served with the North West Mounted Police in the 1880s and settled in the area in 1886 along with the Turners (i.e. Turner Valley). In 1892 he ran the locality's first post office and store from his ranch house ...which also served as a trading post for the local Stoney Indians who exchanged furs and skins for trade goods...became a popular stopping place for travelers on the Fort McLeod – Calgary Trail. In 1889 a Mounted Police detachment was stationed at the Millar ranch to combat rustling and horse theft and the ever-present illicit stills." - Turner Valley Historical Society;
- Home Oil Millarville No. 2 extended the Turner Valley oil reservoir considerably north when it was completed at 8495 feet on January 8, 1939. By February 1943 it became the first well in Canada to produce 1,000,000 barrels and eventually became one of Canada's most prolific producers.

Our last stop, Anderson Exploration (ex Home Oil) Tank Farm 6-33-20-3 W5M, was the epitome of the oilpatch, agriculture and the environment all co-existing in harmony. Not only was the site spotless, some of the photos taken are scenic treasures.

MISCELLANEOUS TOUR FACTS

- ✓ While most components in natural gas come from organic matter in sediments transformed through geological processes over extremely long periods of time, some come from inorganic matter by phenomena such as volcanism and radioactive disintegration.
- ✓ Natural gas transported over long distances in liquid state by tank truck/rail car is cooled to -160°C and occupies 1/600th of the volume required by gas.

- ✓ Beijing in the 10th Century had streets lit with natural gas, transported by the world's first pipeline (made of bamboo).
- ✓ In 1836 Montreal was Canada's first user of coal gas for lighting.
- ✓ During the 1920s, Turner Valley's highly volatile "naphtha" (blended with heavier hydrocarbons and transformed into auto fuel) was moved by horse-drawn transport to the Okotoks railhead and sold for \$4.40 per barrel (not bad compared to today's price of ~\$13.50 U.S.).
- ✓ Royalite #4, drilled to 3740 feet in October 1924, heralded the second Turner Valley boom at daily rates of 500-600 barrels of naphtha and 20 million cubic feet of gas, produced one million barrels of naphtha and 35 billion cubic feet of gas before abandonment in 1934.

So there you have a test of time. How did you do? If you have a thirst for more, it is as easy as calling Bill McLellan at the Petroleum History Society at 288-9089 (Calgary) or the Turner Valley Oilfield Society at 933-7738.

As it often happens, the most entertaining adventures are in our own backyard, free from expensive travel, accommodation and language barriers. Was this venture a success? You bet it was. The participation of local authors Aubrey Kerr and David Finch, despite being recognized history experts, was proof positive that breathing history is always a rewarding adventure. This was the Petroleum History Society's second (first being a Heritage Park tour several years ago) organized oilpatch tour, it certainly need not, and should not, be the last.

The tour ended particularly pleasant and surprising for one participant. He was the recipient of our PHS Special Door Prize. Hopefully an integral part of future events, a Limited Edition Pin Series, sold by PHS for \$128.40, was awarded through a draw. Only 500 of these 6-pin sets were produced in 1989, commemorating 6 major events in the first 100 years of the Canadian Oil Industry. Any employer in search of a unique collectible gift for retirement, performance or Christmas presentations need look no further. Be sure to communicate this in your travels.

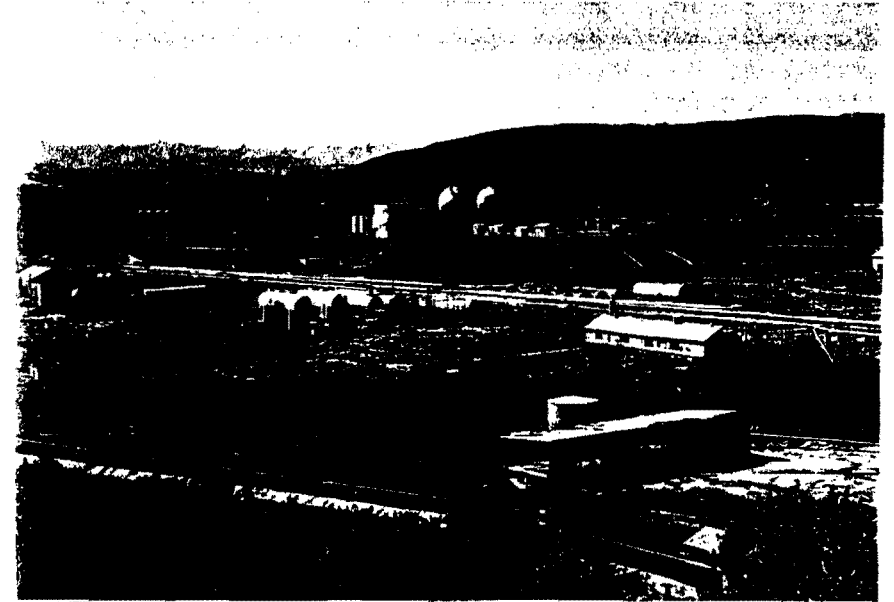
For further reference and detail about local oil industry history, read Aubrey Kerr's "Corridors of Time" (Calgary author) and the Turner Valley Historical Society District Driving Tour (Alberta Community Development, Historic Sites and Archives Service, Edmonton 427-2022 or the Turner Valley Town Office 933-4944).

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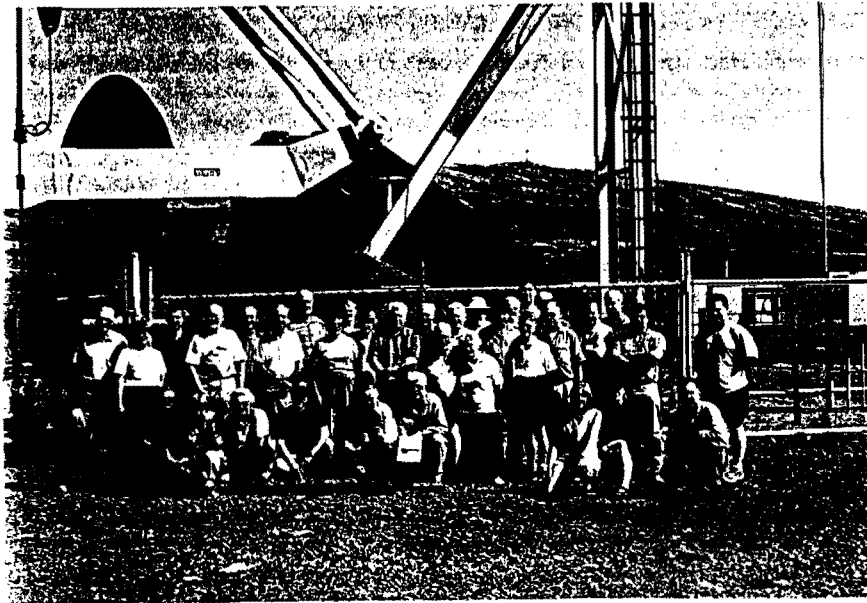
Submitted 1998-09-19 by Neil Leeson, Director, Petroleum History Society (2400 words)



HELL'S HALF ACRE



TURNER VALLEY PLANT FROM EAST OVERLOOK



GROUP PHOTO: TALISMAN 3-29-18-2W5, LONGVIEW



TURNER VALLEY PLANT COMPRESSOR BUILDING