



HAROLD PAGE

- 1
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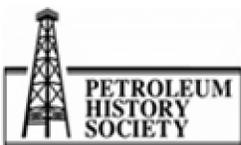
13 GJ: So, after the War, then you went on to Aluminum Company of Canada and then Dow Chemical
14 Canada in Sarnia.

15 PAGE: Yeah.

16 GJ: When did you first start hearing about the oil sands?

17 PAGE: I didn't have a clue until 1968 after I'd come back from Europe. And, I was a technical case
18 of a guy that went overseas for five years and didn't fit in when I came back. That happens to a lot
19 of people. I had more scope internationally than there was back in the domestic operation. So, I had
20 moved the family in Etobicoke out of Toronto, just to get reoriented. And, decided to look around
21 for something else because I could see I couldn't fit back into the domestic organization. At that
22 time, there was a headhunting outfit. I don't know what the hell their name was, Stevens-Johnsons,
23 anyway a Toronto firm that does executive headhunts. They had a Canada-wide advertisement for
24 Sun Oil Company for an executive VP of Great Canadian Oil Sands and VP of Sun Oil Canada. So,
25 that's the first I heard of it, it turned out.

26 GJ: So, why did you apply?



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27 PAGE: Well, because I was looking for another challenge. And, typical of the majority of Canadian
28 engineers that go overseas into bigger operations, you don't usually fit back in very well. Partly, well
29 there are different circumstances, sometimes because they fill in behind. Other times because you're
30 expected to go to head office in the States, which I wouldn't go. Other times because you had a
31 bigger job overseas than what exists in the domestic organization. Plus, the fact that you've been put
32 on a separate or different payrolls and different pension plans.

33 GJ: So, how did you get the job?

34 PAGE: They asked me to take one of their psychology tests; you know how these industrial
35 psychologists work, interviews.

36 GJ: So, when did you first see the oil sands?

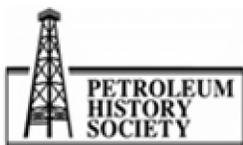
37 PAGE: After I accepted that job which was either June or July in 1968. And, met the so-called
38 Canadian president in Toronto and it was obvious that even from a preliminary discussion, that they
39 were in deep trouble. The whole plant wasn't running and they couldn't get it started. I said, "Hell,
40 first thing I'm doing is to go out there and we're going to look at this plant." So, it would be about
41 either June or July in the summer, certainly the summer of '68 that I had my first look at the Great
42 Canadian Oil Sands.

43 GJ: How did you get them out of trouble?

44 PAGE: I didn't.

45 GJ: What was the trouble? Was it the whole plant?

46 PAGE: I've got to back up a little bit. My experience with my whole activity in Europe, I was
47 responsible for Dow's building and operating plants in Europe. Dow Chemical, like many other
48 multi-national companies was heading into Europe. And, in Dow's case we had a very substantial
49 market for a lot of our products both in the United States and Canada in Europe and in the UK.
50 And, the post-war several things happened: one thing was that the Marshall Plan made available
51 multi-million dollars for the reconstruction of many of the European countries. In addition to that,
52 six of the European countries, specifically, Germany, France, Italy and the three Benelux countries
53 [Belgium, the Netherlands and Luxembourg] formed the European Common Market. And, that's
54 grown now to too many countries but that's another story. And, those two developments of course
55 were inter-related. And, one of the objectives of the European Common Market was to -- they did
56 establish a plan whereby they went over a period of, I think it was about five years, reduced to zero
57 their tariffs amongst themselves. So, that the six countries would have a free market amongst them
58 and simultaneously raise by an agreed amount the external tariffs. That put Dow's export market in
59 jeopardy, that portion of its export market; which necessitated building or acquiring plants inside
60 those countries and that's what prompted them. But anyway, I don't know how I got onto that. So
61 now, being a big American company that knew all the answers, they decided to do all the design of
62 their plants in America and that's how they were going to build them in Europe. And, I found out



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63 when I got there that, "Hey, that doesn't work." For example, in Italy and in Greece these American
64 engineers had specified structural steel supports for all the process area. Well, in Italy and Greece
65 they didn't use structural steel supports. They used reinforced concrete. They also specified
66 American compressors, American pumps.

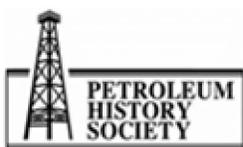
67 Well, Italy and Germany make better compressors and pumps that are just as good, if not better
68 than Americans. As a consequence, those two projects and some of the others were months behind
69 schedule and over budget. Plus, the fact that the bloody equipment had arrived had English on it
70 and the Italians operators don't speak English. So, I learned very quickly that the only way a
71 company could become successful internationally was to first of all identify its own technology, what
72 its technology is. And, it boils down to this: that Dow Chemicals' technology lies in the process
73 itself, not in how to put them up on the third floor and the second floor. And, the technology is say
74 you're compressing a gas for example, that technology is not a Worthington Compressor type 34V,
75 it's to know what the input conditions are and the ethanol be at a temperature and pressure and the
76 output temperature. That specific piece of American equipment is not technology for export.

77 Anyway, I'm getting into too much detail. To get back to answer your question: the Sun Oil
78 Company, well Sun Oil Company had retained Bechtel to do the... they relied totally on Bechtel.
79 They gave them a cost plus contract to just build the bloody thing. And, of course, part of the
80 incentive there is it goes back to Sid Blair and the study he did for them, but Bechtel is a big deal.
81 They had other things early. But, another aspect of what I learned from the European experience
82 was that in addition to specifying what plant you want, you'd better identify the local people that are
83 expected to run that bloody plant and maintain it. I'm going perhaps a little too far back. But
84 anyway, I've got all this experience and I find that here's this first ever oil sands mining plant, part of
85 it has been designed in California and the Sun Oil Company that owns the bloody thing have only
86 assigned two junior engineers to be there to do engineering, not even to run the plant.

87 They didn't have anybody with any manufacturing experience that had been involved, should be
88 involved at the design stage in order to know how to run the bloody thing. In Europe, of course,
89 one of the first things we did once we decided we were going to build a plant as we did at Southern
90 Holland for example, from the time we made that commitment and started the design we had
91 selected Dutchmen to go there and be in on the design stage of the plant. So, that they knew what
92 the hell was being planned for their operation. So, I had just come back from several years of
93 experience realizing that a successful industrial project in the chemical industry dictates that the
94 design team has to include the operational and maintenance people. So, that I would identify as the
95 most serious and the most basic problem of GCOS which was compounded by the fact that it was
96 new technology.

97 GJ: So, did you wind up having to try and overcome these things as executive VP, was that your job?

98 PAGE: I tried to. It was frankly, very difficult. I was reportable to and was identified as the ultimate
99 replacement for -- the ultimate successor to the president of GCOS who had his office in Toronto.
100 And, apart from them having a refinery in Sarnia, the Toronto office was mainly a sales office. And,



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101 although I was the director of the -- I was named as the -- I forget what they call it, Sun Oil
102 Company they call it, the Canadian subsidiary anyway. The board meetings were controlled entirely
103 by the vice president of Sun Oil Philadelphia. They were also on the board, yeah. But, what the
104 president of the Sun Oil Company and the president of GCOS based in Toronto had his own little
105 group and they had set them up mainly for the little refinery in Sarnia, including a personnel
106 manager. I guess the term now that is used is: human resources; and, a lawyer and whatnot. But, the
107 human resources were the main thing and he had named two people to flush around and hire people
108 but they were not very effective. Plus, the fact that the need was obvious; we needed people with
109 operating experience.

110 But, Fort McMurray in 1968 was not a very attractive community. In fact, it was designated by the
111 Alberta Government as a new town; legislation which they introduced specifically for Fort
112 McMurray, which meant that it was controlled by a provincially appointed bureaucrat. There was
113 still a hundred miles of gravel on the road or highway. There was no dentist in town. There was an
114 oriental doctor. The school system was still operated -- was part of the Northland School District of
115 which you may have read some pretty -- some recent reports on it; which was set up specifically to
116 make sure that some semblance of education was available for aboriginal children. So, it was very
117 difficult to retain people even though we could. But, McMurray's a different place than that. In 1968
118 to 1972 the population was about 6,600.

119 GJ: Not much there.

120 PAGE: It's different now.

121 GJ: Did you go and visit the place personally much? Were you stationed in Toronto during this
122 period?

123 PAGE: I lived there. I moved there. I moved my family up there. I felt that where I needed... if I
124 had it to do over again, I'd stay in Toronto or Edmonton.

125 GJ: Why is that?

126 PAGE: Yeah.

127 GJ: Was it a pretty hard place to live then?

128 PAGE: It was a little different Zurich, Switzerland and even different from Toronto, yeah. It was a
129 frontier. Which brings up another thing that might seem critical, but I think it's certainly my
130 impression that neither the Provincial Government nor the developer which was basically, Sun Oil,
131 either certainly didn't adequately appreciate the fact that the oil sands industry is a different game
132 than the conventional oil patch. The oil sands industry has a great deal more manpower
133 requirement, much higher manpower requirement. And that, in a remote area such as it is, there has
134 got to be a community, a viable community that provides enough of the essential amenities to retain



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135 people and a hell of a lot of well-trained, well-paid people. And, I don't think that was recognized
136 that the Sun Oil Company's entire concentration with refining.

137 GJ: Oh, okay.

138 PAGE: And, indeed you might apply that to much of the oil industry. And, even in the upstream
139 part of it, it's drilling holes. The oil sand mining industry which is what was involved here, involves
140 surface mining currently and very quickly, its development involves surface mining more material
141 than the rest of surface mines put together in the rest of Canada. And, much more technologically
142 demanding and that in turn, requires a very large manpower force. Not only to operate it but also to
143 maintain very complicated equipment in winter. The mining aspect of the thing was a real dilemma.

144 GJ: Did they get out trouble during your five years there?

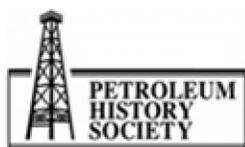
145 PAGE: Yes, yes. Specific to mining, the oil sands is variable like most natural ores, it is variable; first
146 of all, it underlays different levels of overburden that has no bitumen in it. The lease that the Sun Oil
147 Company acquired was a choice lease because it had an oil sand deposit of 100 feet deep roughly,
148 but overburden only about 50 feet deep. The mine development, everything was planned and well-
149 planned that it would take the overburden off down until you got about 6% bitumen. And then,
150 excavate down to the bottom. But, the bitumen varies in that lease anyway from 6% near the top to
151 18% at the bottom. When you expose the face in the summer the bitumen which is more properly
152 called tar, runs like syrup and the mine face is very unstable.

153 In the winter, it turns hard as concrete. Bechtel, of course, are recognized world-wide as mining
154 experts and the plan they devised was to remove the overburden with scrapers and that worked all
155 right; and to mine the oil sand face with bucket-wheel excavators which they got from Germany.
156 Like most thing in Germany, they are very, very well advanced. They have used bucket-wheels for
157 their coal industry and they manufacture and sell them all world-wide. And, they are very efficient
158 except in the winter in the oil sands when it turns to concrete. Plus, the fact that the steel that they
159 use in the bucket-wheels that were purchased for GCOS had a critical temperature of, I think it was
160 in the region of -30° to -40° Fahrenheit. Anything below that, you ran the risk of the steel cracking.

161 Well, the winter of '68-'69 that's when your general used to issue diplomas for people that lived
162 through a week of -40°. We were measuring temperatures on the mine face of -52° Fahrenheit. But
163 anyway, I could go on and on and some of the stuff may not be to any interest. Better you should
164 ask what aspects you're interested in.

165 GJ: I'm interested in...

166 PAGE: I will just finish that cold weather story. Bechtel had no answer to that. The first thing, of
167 course, Sun Oil is going to do is call Bechtel, call Bechtel. They flew in and looked at it. I hired a
168 mining engineer, incidentally, Sun Oil had gone already before I arrived, had gone through two
169 damn good Canadian engineers. One of whom had served World War II with Royal Canadian



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170 Engineers. And, they had different ideas that didn't fit with Bechtel so they got rid of them. Another
171 guy was a PhD in mining and he couldn't get along with Bechtel and Bechtel wouldn't do anything
172 he wanted done. This non-descript mining engineer that I hired said, "Hell, we'll fix that." And so, I
173 think he got in touch with a professor of Queen's that he'd studied under. And, he came up with a
174 plan to use explosives. Well, everybody just shit their drawers. "Wait a minute. You cannot do that."
175 You had to do it. And, Bechtel's answer was, "But a butane torch on the end of the bucket-wheel
176 and try to melt that part of it." And, they even patented the bloody thing. Anyway, my mining
177 engineer said, "Well, we're going to blast it." I thought, "Oh, Jesus." Because, the mine face at that
178 time was only, "Oh hell, 300 yards or so from the upgrader."

179 In any event, they decided, "Well, what the hell. This has got to be done." So, we brought in a drill,
180 brought in ammonium nitrate, put a fuel line on it and blasted the face. That's the only way that we
181 were able to mine the oil sand face in the winter of 1968-1969. The only way it could be done. But,
182 that's a local solution. It should have been looked at it. It was obvious before the money was ever
183 committed that that stuff was going to freeze over winter. However, I don't know if that's what you
184 need. I could go on and on. I shouldn't but...

185 GJ: So, you had to almost invent the whole operation as you went then?

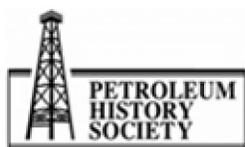
186 PAGE: Exactly.

187 GJ: It was kind of trial and error?

188 PAGE: Exactly. It was a mining process on that scale. See, Bechtel and Sun Oil declared GCOS
189 completed and ready to operate in the fall of 1967. And, it was a huge ceremony. NAR ran a train up
190 there of officials and fortunately, none of the Natives shot at the train that day. They did shoot at
191 the locomotives at times. But, it just didn't. It just bloody well wouldn't start. This was before my
192 time, but I knew from talking to people once I got up there. In the winter of '67-'68 they had
193 created the biggest ice sculpture that had ever been made. The steam plant designed by Bechtel in
194 California when they did the design, it did not take into account the fact that the extraction plant
195 which required steam to mix the oil sands, water and caustic to extract the bitumen demanded more
196 steam when the incoming grade of bitumen was low. And, the steam plant was not designed to
197 accommodate those variations. And, as a result of it, their condensate tank overflowed at -30° to -
198 40° and it just froze up the whole thing. But, I'm not sure this is helping you. I could go on.

199 GJ: During your time there as executive vice-president, was all of this overcome?

200 PAGE: No, by no means, no, no. I didn't have the resources. The person I reported to in Toronto
201 was more of a sort of a communications circuit with Philadelphia. And, the person that they had
202 that was in place at the plant site was a very intelligent American who had been in charge of
203 inspection for Sun Oil during the construction. And, he was a very competent engineer but had
204 never had any operating experience. And, he was in direct contact with Philadelphia continually.



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205 And, he had access to them whereas even the guy in Ottawa and Toronto didn't. So, it was almost a
206 dysfunctional organization totally.

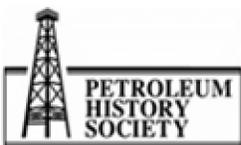
207 GJ: Was that why you left in '72?

208 PAGE: Partly. I guess I was beginning to realize, well if there is no other aspect to this thing. There
209 were several areas where I felt there had to be some improvement very promptly was in the tailings,
210 which has become a public -- pictures on National Geographic and all that. In my Alcan experience
211 with manufacturing and extracting aluminum from bauxite, which we brought in from what was
212 then British Guiana [now Guyana]. Once we extracted the aluminium out, we were left with what
213 you call red mud, all the stuff we didn't want.

214 So, we had tailings ponds, enormous tailings ponds. It was obvious that every day it was a matter of
215 balancing which problem we were going to deal with. Until one day, they decided they were going to
216 look at tailings ponds. It was obvious that the tailings pond which is right smack on the Athabasca
217 River wasn't going to serve the purpose because we weren't able to recycle as much water as we
218 were sending out there. What I set up was a contact with the aluminum company to get information
219 on some of our experience back there. But, the Sun Oil Company had nothing to do with that. They
220 wouldn't do it. So, I hired a guy, a PhD actually, to look at what was happening in the conditioning
221 drum. It became apparent that the basic problem in the tailings pond is the clay.

222 Now, this gets into the whole area of physical chemistry. And, it's an area that I'd be surprised if you
223 could name me an oil company that knows what it's all about. And, I don't profess to except that I
224 know that there are people that do know. What happens is that the clay that goes out the tailings
225 attracts much of the bitumen and the bitumen comes attached to it. The clay is very complex; there
226 are different types of clay. We found out that of what we were discharging from the conditioning
227 drum over the screens were clays. And, I put this guy to work and said, "You've got to tame and
228 study that." Because, if we're removing clay in the conditioning drum, you find out what the
229 mechanism is by which we do that, we can take the clay out there and we won't have a tailings pond
230 problem. Well, we were working on that for a couple of months. And, I began to see a little bit of
231 light. But, the Sun Oil people from Marcus Hook [the Marcus Hook Refinery, south of Philadelphia,
232 which was owned by Sun while Page was with the company] who were their research department,
233 they made frequent visits up there to check things out.

234 They found out that we were doing this and instructed the guy that was running the extraction plant
235 to send the samples to him. I had already set up meetings, provided samples to our Canadian
236 Federal Department of Energy, who had an excellent research lab in Devon and were working with
237 them on that. But, the people from Marcus Hook took that project over and I heard nothing more
238 about it. All of that is by way of explaining one other thing that convinced me that we wouldn't
239 under those conditions, be able to put these things right. By that time, certainly the people in
240 Philadelphia were getting pretty pissed off with my doing things differently and not telling them. I
241 think it was sometime in 1970, I wrote a letter to the guy to whom I was reportable in Toronto and
242 set forth a plan whereby, I would plan to move my office to Edmonton where I could access more



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243 of these facilities and hiring good people and access to more Canadian labs. I guess, in effect, he
244 seemed to go along with that but just by way of -- and, I made the move in 1970. But, at that point,
245 was not kept in touch of what was going on. By mutual agreement, I think we decided we couldn't
246 work together.

247 GJ: So . . .

248 PAGE: By, 1972 they said after a year or so they said, "We don't need your service any longer."
249 And, I said, "Wait a minute. The conditions under which I accepted this job with the head-hunters
250 were that we were going to Canadianize this operation." But, the observations I had made convinced
251 me that it is just the reverse every time something comes up, they would send someone from
252 Philadelphia or Marcus Hook. So, I sued them for wrongful dismissal and they settled out of court.

253 GJ: You were pledged never to tell the settlement, probably.

254 PAGE: Well, there was the usual legal document, of course. You've seen those.

255 GJ: Yeah. So, then you set up Hydro-Carb Consultants.

256 PAGE: Yeah.

257 GJ: And, you did an environmental study of the Alberta Oil Sands. Why an environmental study way
258 back? People nowadays think nobody cared about the environment and yet, here you are in 1972.

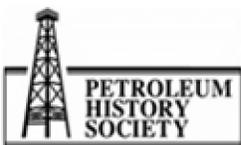
259 PAGE: That's one thing that did concern me were the tailings ponds. Do you remember Bill Yurko?

260 GJ: Yes.

261 PAGE: Alberta's first Environment Minister. He commissioned this study. We put together a group
262 of people that bid on it and we got it. This is the only copy I have left, but of course, it's available at
263 Queen's Printer. If you're interested at all, you can read it.

264 GJ: I'm just going to scan through before I leave. I'll be damned. I bet you I know where I can get a
265 copy of this, right in the ERCB library. I'll bet you it will be right there.

266 PAGE: While we're on the reasons for why we came apart. I explained about how this young
267 mining engineer I hired came up with blasting -- which turned out to be the only way they could
268 mine... This Canadian mining engineer got interested in this blasting project. The guy that was the
269 mining manager at the time was an American that Sun Oil had sent up from California. And, the
270 only experience he'd ever had was running a mercury mine. A mercury mine would be about the size
271 of that kitchenette there. And, he absolutely refused to even consider this blasting program at all. In
272 fact, the first thing he did was to phone Philadelphia and say, "This guy Page wants to put blasting in
273 my mind." So, we couldn't work. I just couldn't work under those conditions. But, it was just a
274 classic example based on my past experience, where a company just did not -- a company wanted to



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275 develop in another country and didn't comprehend that there is talent available in Canada. And, not
276 only talent but technology; particularly, technology which the developer himself doesn't have. I
277 experienced that in aluminum for example, where the company bought a polder to build a plant.
278 Polder, as you probably know, is land recovered from the sea. And, the American engineers insisted
279 on specifying the foundations for the compressor plant. Well, hell that didn't work because the
280 ground is not firm. So, I had to go over to the Delft University of Technology and get a Dutchman
281 to tell us how to design a foundation.

282 GJ: It's like prophecy, this report.

283 PAGE: You might get something out of it if you hadn't had any direct exposure to the place.

284 GJ: Oh, yeah. I'm sure I could find this in the ERCB. So, Intercontinental Engineering was the sort
285 of the name on this. And, your Hydro-Carb was involved...

286 PAGE: At that time and still to a certain degree because all the engineering in Alberta especially at
287 that time, in 1970 or whatever it was, '72, was in a very formative stage. It went to little tiny
288 companies mostly that had done civil engineering and built a couple little bridges; competing with
289 each other and depending on especially the Provincial Government for at least 40% of their
290 contracts. Now, it's changed now with Stantec. It has become big and international and some other
291 companies. And, simply that Innovations thing is a good write up on all that. But anyway, when
292 Yurko put out this request for proposals it was one of these typical, small-time but aggressive and
293 surviving consulting engineering firms. And, it was headed up by a guy named Percy Butler. And,
294 like many other consulting engineers he had to keep a sharp eye and keep close contact with
295 government and hope that some of these contracts might fall his way.

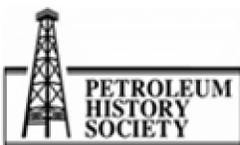
296 When this thing came out, he got in touch with a foreman in Vancouver; this Intercontinental Intex,
297 which was an on off-shoot of Balfour Beatty Engineering in the UK. And, said, "Well, let's put
298 together a team." And, I had just started my consulting to stay alive, sort of thing; anybody that
299 wanted some information. And, he told his contacts in Vancouver that he knows a guy that just
300 came out of the oil sands industry. So, they propositioned me to head the project. And, they would
301 provide the horses and the back-up in the office and what not. So, we put it in and we got it.

302 GJ: There is some pretty strongly worded material on here.

303 PAGE: If you want to borrow it, you can. It's the only copy I got, so give it back to me, will you.

304 GJ: I'm pretty sure I know where I can get a copy of this. But, when I read this, it's quite strongly
305 worded. It describes a whole lot of problems and it leads me to ask, whether the environmental
306 criticism that is going on of the oil sands nowadays, is correct?

307 PAGE: Much of that criticism has merit, yes. I remain convinced that the research project I tried to
308 start is still a possible solution to the tailings problem. And, I'm absolutely convinced that at the time
309 of at least... in fact, I initiated contacts with people that I know damn well that had the technical and



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310 specialized skill and knowledge for physical chemistry to deal with it, which I don't pretend to have.
311 But, I can recognize people who do have it.

312 GJ: So, you're absolutely convinced it could have been solved?

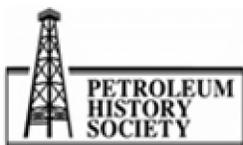
313 PAGE: Yes. But, every attempt that we made under my direction at improving or changing
314 something went nowhere, because my impression and my conviction are that I hope to hell that
315 some of this stuff is going to the public, so if I could talk freely about anything and everything. And,
316 I cited what I thought was a ridiculous example where mining engineers in my time, put a propane
317 torch on the end of the bucket-wheel excavator. And, they wanted that to illustrate why I convinced
318 them that they actually did get something like, I think I have it on reasonably good authority, can't
319 prove it, but I think they've got something like over \$100 million from Syncrude by selling them
320 their extraction technology. Even though, as a Canadian that bristles at that because the hot water
321 extraction process was designed by the Alberta Research Council.

322 GJ: Then you became managing director of the Alberta Chamber of Resources.

323 PAGE: That was essentially semi-retirement, yeah.

324 GJ: Okay, okay. But, during that period though, according to my timeline here -- it was in 1984, you
325 started at the Alberta Chamber of Resources its Oil Sands Task Force, to promote national benefits
326 and wanted to encourage Alberta and federal governments to establish a fiscal and regulatory regime
327 against which the industry can evaluate oil sands prospects. And, if deemed to viable, proceed with
328 confidence. What did that mean in the context of the times in 1984? What does that statement
329 mean?

330 PAGE: Back up to 1977. As a lot of other guys were, I was active in two or three organizations. I
331 had been a director of a -- The Alberta Chamber of Mines went through a whole series of changes
332 of names. It started out as Alberta Chamber of Mines and Mike Finland started it. Mike was a pilot
333 and a geologist who worked for Cominco. And, he was involved in that capacity with Cominco
334 when they developed Pine Point Mines. And, he was primarily instrumental in setting up the Alberta
335 Chamber of Mines. In its initial form, it provided information to local investors who wanted to put a
336 little money and gamble in the mining industry in the Northwest Territories. And, it morphed into
337 an association through which Edmonton suppliers and manufacturers could sell their goods and
338 services and professional services to the northern mines. In addition to that, it morphed into a hiring
339 hall for miners. So, the northern mines that needed help to get desperate to get people up there that
340 could stay sober or hoped they could stay sober and do some mining, have some mining experience.
341 And, the Chamber of Mines would arrange to get people primarily from the Cecil Hotel and arrange
342 to get them dried out and had a deal with the Baker Clinic to test them to make sure they didn't have
343 too much syphilis and send them up there to the mine; all for a fee. Another thing the Chamber of
344 Mines did was sell claim tags for people who wanted to up there and stake claims. And, mining maps
345 to go where people -- In fact, there were several very colourful people living in Edmonton who had
346 been and still were prospectors, like **Mike Zanick**. Northern Transportation Canada Limited under



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347 Bruce Hunter was a stalwart member of the Chamber of Mines, because they had contact with all
348 the mines.

349 By about 1977, I was looking for something more involved than just advising people or giving
350 information; teaching about the oil sands, sort of. And, there wasn't that many people interested in
351 the petro-chemical industry anyway. And, I was looking more for a hands-on thing. In any event, I
352 was through that time attending meetings; Alberta Chamber of Mines and Chamber of Commerce
353 to keep in touch as you have to do when you're looking for jobs. And, it turned out that Finland was
354 finally serious about retiring. And, his replacement wasn't working out. And, I was on the board at
355 the time and we had a guy come in as president, Murray Trigg, who was a PhD in geology at the
356 time. And, he and his partners had actually developed mines that became open. His partner
357 developed a mine that became a uranium mine.

358 Anyway, Trigg decided he'd be president of the Chamber of Mines provided we reorganized the
359 damn thing, clean it up and get it the hell out of the hiring nonsense and all that crap. Besides, the
360 Northwest Territories had created their own Chamber of Mines, I take it. So, I forget I was vice-
361 president, but anyway we decided we'd take a good hard look at the bloody thing. And, either fold it
362 up or turn into something useful. I hired another guy, looked into that and wrote it up. And, it was
363 the sort of thing I liked doing anyway. So, we laid out a plan whereby we got out of that nonsense.
364 And, for one thing recognized that the mining part of this thing, as just one of the resources, Alberta
365 was already the biggest surface miner in Canada with very advanced technology; draglines bigger
366 than anybody else in the country. With computerized electronic systems that nobody else ever had
367 and hell, that's the kind of technology and development we should promote and recognize for
368 Alberta. And, let's get out of this crap of selling tags and whatnot; leave that to the bloody
369 government and maps and crap. And, let's get the hell out of this bloody little building and whatnot.

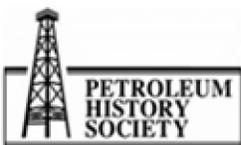
370 The guy that was managing at that time wouldn't buy it. He wouldn't go along with us. So, I agreed
371 to temporarily only look after it. I ended up saying, "Okay, I'll run the damn thing." Throughout
372 that whole background, the Alberta Government had representatives on the board of directors. It
373 was the Deputy Minister of Mines, who the hell was that, he was a real colourful character and his
374 name escapes me. Anyway, he got interested and certainly the oil sands rang a bell with him. And,
375 that's how the organization got initially in cooperation with the government more into oil sands and
376 understanding it and doing something about it, which is does now.

377 GJ: Yes. Well, very much.

378 PAGE: The main thing that turned it around was the recognition that the oil sands represented one
379 of the principals of Alberta's Natural Resources. Oil plants included.

380 GJ: Was Alberta missing something? This makes it sound like it was missing...

381 PAGE: What is that?



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382 GJ: This is your Alberta Chamber Resources history. And, so that they say that when you set up that
383 Task Force, the Chamber had stated that it wanted "to encourage the Alberta and Federal
384 Governments to establish a fiscal and regulatory regime against which the industry can evaluate oil
385 sands prospects. And, if deemed to viable, proceed with confidence." Did that mean there really
386 wasn't any kind of yardstick that you could use to figure out whether a project would work?

387 PAGE: The ACR hired some guy to go through all those records. Is that what this is?

388 GJ: Yeah. This is the history.

389 PAGE: He went back through all the bloody records and meeting minutes and everything? Yeah, I
390 met him.

391 GJ: Yeah. Was that...

392 PAGE: I can't get that in context at the moment. 1984?

393 GJ: Yeah. Was Alberta missing a policy that enabled companies to make decisions about whether to
394 go ahead?

395 PAGE: I am having difficulty putting that into focus. I think he is referring there to the approval
396 process. Where a developer is required to have public hearings and that's where George Govier used
397 to shine forth; sit up on his high pedestal like the Lord almighty and question everybody. And then,
398 Norbert Berkowitz [deputy ERCB chairman] got involved in it. And, then of course the
399 environmental people came out in droves and were paid to protest. And, I think that is what they're
400 referring to. I'm having a little difficulty getting the items right. 1984, Syncrude started up in 1978.

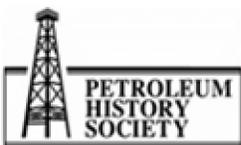
401 GJ: I guess what I am asking you: you didn't have at that time, a federal tax and royalty regime that
402 was set up to be the same for everybody did you?

403 PAGE: Oh, yes. Well, that's correct. It was negotiated with each developer. That's correct. The
404 deputy energy minister was Michael Day. And, Michael Day was the Alberta Government
405 representative on the Alberta Chamber Mines and what had become the Alberta Chamber of
406 Resources. And, I think that is what that referred to. Michael was really the author of most of those
407 regulations and negotiated with developers from time to time. But, beyond that I have difficulty
408 putting that into any clearer focus.

409 GJ: What did you want that task force to achieve?

410 PAGE: Where the hell was I in 1984?

411 GJ: Let me put this way. Instead of thinking back to 1984, think ahead to the whole job, the whole
412 period. Like, that task force worked for more than ten years. What was the main thing that it
413 achieved from your point of view?



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414 PAGE: I have difficulty recalling. I don't know. I'd have to reflect on that. And, there is reference
415 here... I don't recall when I was around at that time.

416 GJ: It says it worked for a number of a years, a couple of years and it proposed the concept of a
417 regional upgrader?

418 PAGE: Oh, yes. Yes.

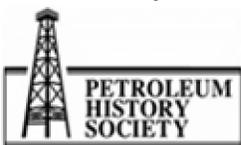
419 GJ: What was the thinking behind that? Why did you need that?

420 PAGE: It was prompted partly by the concept of exporting bitumen. Some of the developers and
421 their preliminary approach to the province were suggesting shipping the bitumen out. They didn't
422 want to upgrade it on the site. As a matter of fact, some of that has been done already by bringing it
423 -- Shell was bringing some down here. And, in today's situation of course, the whole Keystone XL
424 pipeline would export diluted bitumen to Texas. That concept surfaced way back there in the 80s,
425 where some of the developers were saying they would mine the oil sands, extract the bitumen and
426 then move it somewhere else to upgrade it. And, I think that has reference to saying, "Well, wait a
427 minute now. You should do it at least in Alberta." That is as close as I can come to recalling what
428 that is saying there.

429 GJ: Was that your view? Did you think that?

430 PAGE: Yes, yeah. I would certainly want that. Incidentally, that brings to mind at least my concept
431 of the product from what has become the Alberta oil sands, of synthetic crude oil I think is
432 unfortunate. And, it obviously reflects the objective of the oil companies who acquired essentially
433 control of all the leases. That their concept was strictly to get a crude oil that could be synthesized,
434 similar to what they get from conventional oil patch by drilling and bringing it up. And, that's
435 understandable, perhaps inevitable in oil company objective. If you look at it from a chemical
436 perspective, there is no technical reason for stopping once you get the bitumen fluid enough to go
437 into a refinery. As a matter of fact, the synthetic crude oil which we finally succeeded in producing at
438 Great Canadian Oil Sands was of kerosene quality.

439 We operated all of the mining equipment with our own product. For a full season in 1969, we
440 supplied a substantial quantity, admittedly of selected petroleum product from the product tank, of
441 that so-called synthetic crude oil to the CNR and convinced to run it on their diesels in the
442 mountain division. Now, that's a hell of a lot better than crude oil. As a matter of fact, the industries
443 that we're involved in and especially Sun Oil and Shell Oil, our production of so-called synthetic
444 crude oil from GCOS, 75% of it went to the Sun Oil refinery in Sarnia. 25% of it went to Shell Oil
445 at their refinery in St. Boniface [in Manitoba, a plant that closed in 1983]. At the time, the value that
446 was put on that was 25 cents above the \$2.50, which was the standard price for conventional crude
447 oil. So, that product even refined to that point, was a damn sight better and more valuable more so
448 than what was being mechanized. The limitation in how the whole process is reduced to its ultimate
449 simplicity is reacting with hydrogen -- And, the limitation of that is the availability of natural gas
450 from which you make the hydrogen. But, the chemical process as such, adds more hydrogen and



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451 would it take it right to the clone of gasoline. Well, somewhere along the line you have got to do the
452 economics and the cost of natural gas and availability. But, the whole thing to my mind sort of
453 represents the objective and mentality of oil industry. Give me a crude oil because I've got the
454 refineries.

455 GJ: So, we short-change ourselves then in the oil sands? We could do better?

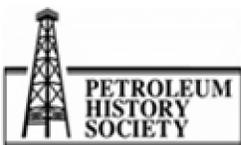
456 PAGE: Well, I don't know. It's always easy to do this in hindsight of course. But, there are some
457 areas in which I think Alberta could have done better. And, it starts with the sale of the oil sand
458 leases. And, I don't even know the exact time, but obviously certainly sometime prior to the 1960s,
459 the Alberta Government was enamoured with and indebted to the American Oil Industry for
460 developing Devon [the Leduc field] and all the conventional oil. And, the oil industry as such, was
461 drilling a hole in the ground and if you didn't want to drill there, that's right. And, by the way you
462 get yourself there and build your own bloody road.

463 Surprising though that it was the Alberta with their Alberta Research Council that invented the hot
464 water extraction process. It was the Alberta Government that recognized the sufficient recognition
465 of that invention to fund the bitumen pilot plant, forgetting the fact that the feds tried a different
466 approach. Although, that was a totally Alberta operation at Bitumount and even with Karl Clark in
467 charge of it, the inventor, either didn't look beyond that or didn't have the resources. But, Bechtel in
468 California had the foresight and the resources and the financial clout to study that. And, that's where
469 they hired late Bob Blair's father Sid Blair to look at it and decide what to do with it. And, I don't
470 think a guy could criticize the Alberta Government or Alberta people at that time. It's not surprising
471 that they felt that, "Well, hell this is oil. This belongs to our patrons in the oil industry to do that.
472 That's fine. They're doing that." And, of course, based on Sid Blair's work a consortium of
473 companies would end up with Cities Services. They built a pilot plant which is located on what is
474 now the Syncrude lease. So, they recognized the potential.

475 Now, perhaps that's not too surprising either technologically, except that and presumably the
476 Alberta Research Council or the government didn't have those kinds of resources.

477 GJ: Didn't have the resources to build their own...

478 PAGE: Presumably. They had the knowledge. They invented the bloody thing. And also, should
479 have been apparent, like in hindsight. But, that bloody process would involve moving hundreds of
480 thousands of tonnes of soil. It is going to involve thousands of men and equipment. And, wherever
481 you do it the people are going to have to live. So, if one would want to be really critical and I don't
482 think I could be, but anyway, once the potential is recognized which Bechtel did with their resources
483 and the American oil companies did. Then the ball was clearly in Alberta's court when it came to the
484 matter of how do you authorize this, this is our oil sands and I think that's the only point at which I
485 would not hesitate to be critical. It's in the sale of those leases where I think the error was made.
486 And, they put them up for sale if my memory corrects me, about 10 cents an acre for 21 years
487 automatically renewable for 21 years with the sole right of development. All of the American major



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488 oil companies snapped them up along with scores of American wealthy investors. Some of those
489 leases are in private names and families. Later on, about the time that J. Howard Pugh who sent
490 copious quantity money to Ernie Manning's Back to the Bible Hour, strictly for religious reasons
491 and managed to get the first permit; and up somewhere along the line before the Alberta
492 Government, raised the cost of those to 25 cents an acre.

493 GJ: So, we could have done a better job with the oil sands?

494 PAGE: The leasing. And, it should have gone more progressive. See, presumably the incentive was
495 getting the money for those leases. If it had been done more slowly it could've made a mint more
496 progressively. And, had time and money to develop a community that was viable or build it into the
497 requirement, the permit part of the cost. But, the whole subject of oil and oil sands, of course, is to
498 me it's sacred in Alberta. To criticize any aspect of it is a no-no. That's Alberta's wealth.

499 GJ: Okay, 1995. Were you still involved with this in 1995? No, you retired at Edmonton.

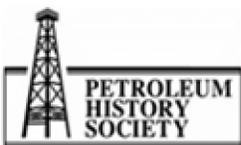
500 PAGE: Yeah, long gone. I don't even know if I mentioned this here. Oh, yeah, yeah. I worked half-
501 time and was retained by consulting to the Alberta Department of Energy. They were on this kick of
502 hydrogen as the ultimate fuel. So, we did hydrogen research.

503 GJ: Was that a good kick?

504 PAGE: Yes, yeah. Technically, hydrogen is the ultimate clean hydro-carbon fuel. Because, when it
505 reacted with oxygen the only result is water. The Germans invented internal combustion engines
506 that will operate on hydrogen. Fuel cells use hydrogen. For transportation purposes the hooker is,
507 how the hell do you store hydrogen? That is such a small molecule that it takes very high pressures
508 to store it. But, I think there are some places like Iceland, for example, that are farther along than
509 any other country on this. Because, they've got huge geo-thermal sources that are generating energy
510 and electrolyzed water to make hydrogen.

511 There are some experiments in the automotive companies and they've got some test installations for
512 hydrogen stations that derive a light hydrocarbon dissolving the bitumen out of it. From a technical
513 point of view, that's an obvious first approach. That project I know had some pressure on it because
514 it was the early part of the war when the Germans were sinking some of the ships out of Venezuela.
515 I don't know of the specific dates. If I've read them, I've forgotten them. I think it was within a few
516 years subsequent to that, that Alberta developed a pilot plant at Bitumount downstream from Fort
517 McMurray. And, their approach was the hot water extraction process. Anyway, just curious to know,
518 to me that is the beginning of the industrial -- well, I'm sorry, it isn't the beginning. You go back
519 further than that and Cities Services ran a pilot plant on what is now the Syncrude lease. So, it
520 depends how far back you want to go. Another aspect to that is Bob Blair's father, Sid Blair, you got
521 that part where he was working for Bechtel at the time and studied the Bitumount operation. So,
522 you must have a handle on the Bitumount thing.

523 GJ: I think we do, yeah.

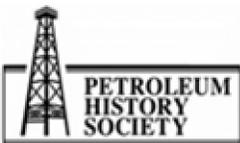


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524 PAGE: Anyways, I'm just curious to know, because I don't have any recollection. Any direct
525 involvement I had doesn't start until 1968.

526 [END OF RECORDING]



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