

H. Tracy Hall

Profession & Work Outline

(10-31-08)

- 1928 (4th Grade) Earned highest test score in Weber County School District out of 1st thru 12th graders. Tracy tells teacher: “I want to be an engineer for General Electric Company—the Company founded by Edison.” (*A Short Biography of H Tracy Hall, ASBHTH, from now on*) (*Brief History of My Life, BHOML, from now on*)
As a young boy, Tracy took apart and rebuilt things electrical and mechanical. (*BHOML*)
- 1933, December 16 Howard & Florence leave/lose their farm in Marriott and leave for Odgen so Howard can find work. Exactly 21 years later Tracy synthesizes diamond. (1933_Moving from farm in Marriott in GE-Diamond Synthesis-Leave)
- High School Tracy invented things and was scientific-minded at early age. Also how they divided up study assignments and passed classes. (Lane Compton, 22:15-37:30)
- 1938 Graduated from Ogden High School (*ASBHTH*) Had excellent grades in high school. Excelled in math, chemistry, physics. Mentions that he, as the inventor of the Belt, almost couldn't go to college because of \$20 fee. (*Weber College Days*)
Favorite subjects at Weber College: Math, Chemistry, Physics, Geology. Did not like biology or cutting up frogs. (*BHOML*)
Water in bike tire scientific experiment. Photography, Flour Mill jobs, He wrote a lot about the chemistry behind these jobs...lots! (*My Flour Mill 1938-41*)
- 1938-40 Biggest problem about college was paying for tuition and books. (*Working My Way Through Weber College 1938-40*)
- June 1940 Graduated from Weber College (*ASBHTH*)
- June 1942 Graduated from UofU w/ Honors. Employed at Sperry Flour Mills (*BHOML*) Employed as Chemist at US Bureau of Mines. (*ASBHTH*)
- June 8, 1943 Graduated w/ Master of Science, UofU (*ASBHTH*)
- 1944-45 Served in Army. Became a radar officer. (*ASBHTH*) (*BHOML*)
- 1944 Put in charge of Navy base and Pacific fleet. (*Officer of the Day*)
- May 5, 1946 Separated from service. (*ASBHTH*)
1946 Goes to Purdue for teaching fellowship, but there was no housing for Tracy's family. Purdue scientist threatens to blackball him, but Tracy goes back to U of U for his doctorate. Turned out well because he studied under Henry Eyring. (The Joint Oral History Project, page 9)
- August 8, 1948 Received PhD, w/ Honors from UofU (*ASBHTH*) (*Receiving My Doctorate Degree From The University of Utah*)

Accepts Employment at General Electric

- September 1948 Interviews with Kodak, National Carbon, Dupont, GE (*BHOML*) Left for Schenectady, N.Y. to work for G.E. (*ASBHTH*) Works very near area where Edison did on Mohawk River (*BHOML*) The Schenectady branch of the church was really thriving with LDS people. (Leo Merrill, 29:44-30:50)
- 1948, October Agreement for Employment at General Electric. Tracy agrees to communicate to company all inventions made or conceived by him, and to do all he can to help the company patent the inventions. (1948_Ge EmploymentAgreement in GE Docs folder in GE – Diamond Synthesis – Leave folder)
- 1949 Tracy's salary increases to \$6800.00 per year at GE. (1949_Salary Increase @ GE in GE-Diamond Synthesis-Leave)
- 1948-55 Talks about previous educational milestones and people who had helped him get jobs as he prepared to go to Schenectady. (*The Schenectady, New York Period*)
- 1951 Tracy volunteers to be transferred to Super-Pressure Project, G.E.'s last-ditch effort to make man-made diamonds. (*ASBHTH*)(*Tracy's Account of Diamond Discovery*)
- 1952 Apparently everybody knew diamond should be able to be made from graphite, as is evidenced by this Donald Duck Diamond Sythesis Comic that aired in 1952. (1952-5-11_Albany Times Union Donald Duck Diamond Comic 1 & 2 in GE-Diamond Synthesis-Leave)
- 1952 Tracy invents a new method of making diamond tools. (1952_New Method of Making Diamond Tools1 & 2 in GE-Diamond Synthesis-Leave)
- 1953, February **Invents reaction cell that's part of the belt.** This was the beginning of the "Belt" invention. Tracy discloses it to GE. (1953-2-4_HP-HT Reaction Cell Disclosure of Invention 1 & 2 in GE-Diamond Synthesis-Leave)

Synthesizes Diamonds in Belt Press

- Dec. 16, 1954 Tracy makes diamonds with his BELT apparatus. (*ASBHTH*) (*The First Synthesis Of Diamond*) (The Joint Oral History Project, pages 10-13)(1975_Centennial History of BYU)(1954-12-16_Synthetic Diamond Crystals Grown Dec 16, 1954 in GE-Diamond Synthesis-Leave) (Tracy's Account of Diamond Discovery) Leo Merrill talks about discovery. (Leo Merrill, 1:05.38-1:16:07) Lane Compton, who grew up with Tracy, talks about Tracy's diamond accomplishment. (Lane Compton, 46:37-51:52) David mentions that Tracy's invention goes way back to his thinking at U of U. (david 11-3, 6:43-7:23) Lane Compton also talked about how Tracy was thinking about diamonds at U of U.
- 1954 Tracy wrote later in life this summary of GE's first diamonds. (GE First Diamonds folder in biographical-professional summaries section)

See David's Interview, titled "david 11-3." Look for his comments about keeping the book from being too negative, professional competition, building on Bridgeman's work, and Tracy's thinking about diamonds in meteorites back at the U of U. (4:36-7:23)

- 1955, Jan. 10 Tracy's contributions to diamond synthesis. (1955-1-10_Tracy outlines his contributions to diamond synthesis1 & 2 in GE-Diamond Synthesis-Leave)
- 1955 Picture of leaky Watson-Stillman press. (1955_Leaky Watson-Stillman water operated press @ GE where 1st diamonds were made-Wentorf & Hall in GE-Diamond Synthesis-Leave)
- 1955 Picture of the "Belt" apparatus. (The Belt in GE-Diamond Synthesis-Leave)
- 1955, February 11 Tracy Hall, Herbert Strong, & Robert Wentorf Jr. sign "Method of Making Diamonds" over to GE. (1955_AgreementToGiveDiamondRights 1 & 2 in GE Docs folder in GE – Diamond Synthesis – Leave folder)
- 1955, February 15 GE announces accomplishment. (Promotion pictures at GE Promotional Pictures folder in GE-Diamond Synthesis-Leave) (1955-2-15_New York Daily News Clip in GE-Diamond Synthesis-Leave)
- 1955, Feb 14 Henry Eyring congratulations note to Tracy; inquires if he wants job at U of U. (1955-2-14_Congrats note and job offer from Henry Eyring in GE-Diamond Synthesis-Leave)

There are many newspaper clippings and articles on this event at (Diamond Announcement Clippings in GE-Diamond Synthesis-Leave) Some of these will be put into book.

- 1955 Diamond-maker creates new way to mount stones. Originally came up with ideas in 1952 (1955_New Way to Mount Stones Clip in GE-Diamond Synthesis-Leave)
- Late Summer, 1955 Not happy with GE. (*BHOML*) Tracy is offered 1 of 2 different positions at BYU, accepts less-prestigious option because it fits his talents and disposition better. (*Coincidences*) Transfers to BYU Director of Research & Creative Endeavor position. (*ASBHTH*) Taught for 25 years at BYU. (The Joint Oral History Project)
- Later, 1955 GE comes to Tracy to see if he will consult for them. Tracy recalls the story of his inventing a process to produce man-made diamonds at GE and figures how much he is worth per day. (*Coincidences*) Consults (The Joint Oral History Project, pages 14-15)
- 1955, April Tracy visits Utah and is showcased in several newspapers (See 1955-4-2&3 Ogden Standard Examiner & Deseret News Clips in 1955-59 of BYU H of R Folder)

Tracy leaves for job at BYU

- 1955, Aug 18 Going away party note, will appear in book. (Quitting letter from GE in GE-Diamond Synthesis-Leave)
- 1955, Aug 19 Left GE. (Aug.14-27 in GE-Diamond Synthesis-Leave)
- 1955 Started studying PCD, Polycrystalline diamond @ BYU. (BYU Head of Research/1955-59. Research Notebook, pgs. 14-15)(In BYU Head of Research Folder, then 1955-59 folder, then 1955_First PCD Studies folder)
- 1955, September Updating the boys at the lab. No animosity. (1955-9-7_Family move to Provo in GE-Diamond Synthesis-Leave) Also see David's comments about animosity and Hazen and Alzheimer's. (david 11-3, 9:20)
- 1955, November Note to Francis Bundy; doesn't seem to be any animosity. (1955-11-21_Note to Francis 1 & 2 in 1955-59 in BYU H of R Folder)
Along this same subject, on 11-3-08 David told me to be careful to not make this book too negative. (David's Interview 11-03-08, 4:36, 9:20-10:06)
- 1955-80 (*Honors, Awards, and Distinctions of H. Tracy Hall While Employed At Brigham Young University*)
- 1956, February Phillip Abelson is a good friend who works at Geophysical Laboratory in DC. He initially tried to get Tracy to come work there. This letter shows Tracy trying to get important first donations through him. (1956-2-28, 1956-3-8 & 1956-4-2 in 1955-59 in BYU H of R Folder)
- 1956, March Tracy's new letter of appointment from BYU notifies him that he'll make \$8000 this year. Up from \$7200 or \$7500. (1956-3-26_Salary in 1955-59 in BYU H of R Folder)
- 1956, April Tracy writes to GE President Ralph Cordiner warning that the diamond that will be presented to Smithsonian is a fake. (1956-4-20_Regarding GE diamond presentation to Smithsonian in GE-Diamond Synthesis-Leave)
- 1956 Tracy seeks to set up a High Temperature/High Pressure shop at BYU. (Locating funds; shop; safety test pit)
- 1956 Tracy deals with GE and governments Secrecy Order; Can't talk about how he made diamond (The Joint Oral History Project, page 14) (Lots of stuff at BYU library addresses this)
- 1956, June Tracy's note sticking up for his secretary. Perhaps this shows he cares about people. (1956-7-26_Tracy Looking out for Secretary in 1955-59 in BYU H of R Folder)
- 1957, February Consulting letter indicates that ½ of Tracy's daily consulting rate goes to the university. (1957-2-25_Linde Air send men to BYU lab in 1955-59 in BYU H of R Folder)

Begins Consulting Business

- 1957 Begins *H. Tracy Hall, Consulting Scientist & Engineer* (Part II – Since the Beginning). This was a proprietorship. This was the

- beginning of Novatek, as David puts it. In 1965 it became *H. Tracy Hall, Incorporated*, as is evidenced by a new business card (Consulting-Card in 1955-59 in Consulting Folder)
- 1957 First charges for consulting. \$300 per day. \$150 to Tracy, \$150 to BYU. By 1958 Tracy's fee was \$450 per day, with \$150 going to BYU and keeping \$300. (HTH Consulting Book folder in Consulting folder)
- 1957 A publisher, John Wiley & Sons, Inc. of New York, NY, approaches Tracy about writing a book about himself and diamonds. This was one of the first of many. Tracy was interested and was already planning on doing something similar, but replied that he had no time to do it currently.
- 1957, November Tracy reports on his trip East and "holier than thou" attitude that a few LDS workers exhibit out there. (1957-11-25_Trip East Notes 1 & 2 in 1955-59 in BYU H of R Folder)

Makes Diamonds in Tetrahedral Press

- 1957, December Tracy first makes diamond in his tetrahedral press. A secrecy order is now placed on this apparatus. It is removed 2 years later. (Honorary Alumni Award in 1986-2008 in Consulting)
- 1958 Famous Scientist Henry Eyring nominates Tracy for Ipatieff Prize. (1958-3-24_Eyring nominates Tracy for Ipatieff Prize in 1955-59 in BYU H or R Folder)
- 1958 Correspondence with friend in London shows Tracy's sense of humor. (1958-3-24 & 1958-4-1_Correspondence with friend in London in 1955-59 in BYU H of R Folder)
- 1958 Tracy's letter of appointment shows that he will receive \$9500 the coming year for his pay.
- 1958, May U of U offers Tracy a job because they heard he wanted to move. Tracy's reply was that it was a rumor and that it would be a bad time to move "because his research was just beginning to bear fruit." He liked research. (1958-5-1 & 1958-5-6_Leaving BYU rumor in 1955-59 in BYU H of R Folder)
- 1959, January Secrecy order on Tetrahedral press. I think this was instituted in '57. (1959-1-20_Tetrahedral Press Secrecy Order in 1955-59 in BYU H or R Folder)
- 1959, Jan 26 Des News Clip: BYU Scientists Pave Way For New Industrial Tool (1959-1-26_Deseret News Clip in 1955-59 in BYU H or R Folder)
- 1959, April Tracy explains of new Multiple Anvil High-Pressure, High-Temperature Apparatus. (1959-4-20_Advantages of Tetrahedral Press1 & 2 in 1955-59 in BYU H or R Folder)

Secrecy Order on Tetrahedral Press Lifted

- 1959, July Secrecy order rescinded. (1959-7-9_Secrecy Order Rescinded)

- 1959, August In August of '59 GE asked Tracy to return to work for them. (1959-8-5_GE Invites Tracy to Work For Them again in 1955-59 in BYU H or R Folder)
- 1959 Patents & Tetrahedral Press Paper standing ovation. (*Research Corporation*)
- 1959 Tracy joins Henry Eyring as Henry receives ACS Utah Award. Tracy might have introduced him at the ceremony. So far only pictures (Found at 1959_ACS Utah Award to Henry Eyring in 1955-59 in BYU Head of Research)
- 1959, September Tracy and Phillip Abelson exchange congratulations and thanks towards the secrecy order being lifted and patent granted. (1959-9-14 & 1959-9-30_Abelson Congratulates Tracy on Patent 1 & 2 in 1955-59 in BYU H or R Folder)
- 1959, November ASM Technical Meeting Speaker (1959-11-3_ASM Technical Meeting Showcasing Tracy in 1955-59 in BYU H or R Folder)
- 1959, November Correspondence with jeweler. Tracy's prediction was off, as is indicated by his note. (1959-11-13_Correspondence with Jeweler 1 & 2 in 1955-59 in BYU H or R Folder)
- 1959, December Tetrahedral Press Patent issued to Tracy. Art work. (1959-12-29_Patent Granted 1, 2 & 3)
- 1960, January Parade Magazine "Life After Death" question & response. (1960-1-7 & 1960-1-19_Parade Magazine Life After Death Article in 1960-65 in BYU H of R Folder)(1960-8-12_Parade Magazine Life After Death Article3 in 1960-65 in BYU H of R Folder)(1960-8-29_Parade Magazine Life After Death Article4 in 1960-65 in BYU H of R Folder)
- 1960 "Belt + High-Pressure, High-Temperature Apparatus" finally released for publication. (*Tracy's Account of Diamond Discovery*)
- 1960, April Tracy elected president of Utah Academy of Sciences, Arts and Letters. Tracy served for one year in this position. (1960-4-17_Logan Herald Journal in 1960-65 in BYU H of R Folder)
- 1960, May Receives Payment of \$411.85 from Engineering Supervision Company. This Is 1st Press Sale** (See page 22-23 of HTH Consulting Book in Consulting Folder)
- 1960 Membership Certificate of Phi Kappa Phi, BYU (Awards Folder)
- 1960 BYU Chemistry Department Picture (1960_BYU Chemistry Department in 1960-65 in BYU H of R Folder)
- 1960-75 Dean Barnett Tracy got some huge donations from the Army for his work with x-ray tetrahedral presses. Dean Barnett originally approached Tracy about it. (Dean Barnett's Interview, minutes 3:08-26:58 & 43:09-49:47) X-ray press was an important development in equipment. (Leo Merrill, 44:23)

- 1960, June Army Ordinance Project. (1960-6-28_BYU Universe Clip, 1960-6-28_SL Tribune Army Study Clip & 1960-7-3_Provo Herald Army Study Clip in 1960-65 in BYU H of R Folder)
- 1960, September Examples of receipts and statements for Tracy's consulting. (1960-9-22_General Chemical Consulting1 and Pennsalt Consulting2 in 1960-65 Folder in Consulting Folder)
- 1960 Member of Phi Kappa Phi (1960_Membership Certificate of Phi Kappa Phi at BYU in 1960-65 in BYU H of R Folder)
- 1961 Tracy held patents in other countries. (Examples are 1961_Austria Patent1 & 2 in 1960-65 folder in Consulting folder and 1977_Japanese Patent in 1976-80 folder in Consulting folder)
- 1961 Member of American Chemical Society by 1961, as evidenced by a membership card.

3P Co Started

- 1961 Begin *Provo Pressure Products Co. (3P Co.)* with sons Tracy & David. (Part II – Since the beginning) David's PPP note. (1960_David's PPP Note 1 & 2 in Provo Pressure Products)
- 1961 Timp Club Program (1961_Timpanogas Club Program 1 & 2 in 1960-65 in BYU H of R Folder)
- 1961 Ends term as President of the Utah Academy of Sciences, Arts & Letters. Certificate of his service located in Awards.
- 1962 Article mentions Tracy and Dean Barnett developed first high-pressure x-ray diffraction apparatus in 1962. (1974 BYU Today clip2 in 1971-75 in BYU H of R Folder)
- 1962 European Trip. Main purpose was to present paper on "New Developments in Super High Pressures" at the Conference Internationale Des Arts Chimiques. He saw several of his tetrahedral anvil high pressure apparatuses in use in London. (1962_Report on European Trip 1, 2, 3 & 4 in 1960-65 in BYU H of R Folder)
- 1963, January Correspondence with GE employee A.J. Nerad. Addresses progress of work. (1963-1-1_Correspondence with Tony Nerad 1 & 2 in 1960-65 in BYU H of R Folder)
- 1963, January Donald sets Tracy up to speak at the Ogden Tabernacle. (1963-1-19_Correspondence with Donald for Tabernacle talk in 1960-65 in BYU H of R Folder)
- 1963 The Modern Chemist Movie (1963-0-0_The Modern Chemist Brochure in 1960-65 in BYU H of R Folder)
- 1963, February Tracy goes back to Ogden and gives presentation at Tabernacle. This was organized by his brother Donald. (1963-2-28_Ogden Tabernacle Talk Organized by Donald in 1960-65 folder in Consulting folder)
- 1963 USU professor directs his pupils question to Tracy. (1963_4-12 & 4-16_Question and reply to USU professor 1, 2 & 3 in 1960-65 in BYU H of R Folder)

1963, April, May Sells press to France Atomic Energy Commission (1963-4-30_ and 1963-5-10_French Press 1 & 2 in 1960-65 in Consulting)

1963, May Inquiry from London Firm shows depth of Tracy's popularity. (1963-5-17_London Company seeking consulting time in 1960-65 in BYU H of R Folder)

1963, June Tracy finds a company he likes. (1963-6-5_Appreciation to McCartney Man. in 1960-65 in BYU H of R Folder)

1963, October Companies and colleges sought Tracy's recommendation for employees. (1963-10-21_Vanderbilt asking Tracy for Recommendation in 1960-65 in BYU H of R Folder)

1963, December Finds Timpanogas satisfying and recommends it to another. (1963-12-5_Sends welcome letter out for Timpanogas Club in 1960-65 in BYU H of R Folder)

1963, December In response to Henry Eyring nominating him for membership in National Academy of Science, Tracy puts together this summary of his accomplishments. This is good. (1963-12-11_Tracy's Accomplishments 1, 2 & 3 in 1960-65 in BYU H of R Folder)

1964 By 1964 Tracy's daily rate was \$450. (1964-1-31_Tracy's fee now 450 a day in 1960-65 in BYU H of R Folder)

1964 Tracy was Member Speaker of Timpanogas Club. (1964_Timpanogas Club Notice of Meeting in 1960-65 in BYU H of R Folder)

1964, May Tracy special guest speaker at USU. (1964-5-15_USU Society of the Sigma XI Speaker 1 & 2 in 1960-65 in BYU H of R Folder)

1964 Good sample letters from inventors out there that would run their ideas by Tracy. Some of them were off the wall, like this Laser/Radio Frequency Plasma Torch. Let's don't use names. (Crazy Inventors out there Folder in 1960-65 in BYU H of R Folder)

1964 Goes to S. Africa to testify for GE in their case vs. DeBeers. Never testified; out of court agreement was made. (Part II – Since the beginning) DeBeers was using Belt, which GE own rights to.

1965, January Visiting Scientist Program; Utah Academy of Sciences, Arts and Letters. (1965-1-10 & 1-19_Visting Scientist Program 1 & 2 in 1960-65 in BYU H of R Folder)

1965, May Guide Means for High Pressure Press Patent. (1965-5-11_Guide Means for High Pressure Press Patent 1, 2, 3 & 4 in 1960-65 in BYU H of R Folder)

1965 Receives James E Talmage Scientific Achievement Award (James E. Talmage Scientific Achievement Award Folder in Biographies)

1965 (1965_By President Ben Lewis for Talmage Award 1 & 2 in 1960-65 in BYU H of R Folder)

Press design and construction takes over as principle focus of HTH Consulting.

- 1965 Consulting & Lecturing Business of *HTH Consulting Scientist & Engineer* ends. Press design & construction becomes principle business. This company continues as a proprietorship until 1972, when it was incorporated under the name of H. Tracy Hall, Inc. (Part II – Since the Beginning).
- 1965, September Tracy welcomes Leo Merrill back to help at HP Data Center. (1965-9-8_Leo back on in 1960-65 in BYU H of R Folder) Leo had studied the Russian language and so was useful in reading the HP-HT literature from that country. (Leo Merrill, 1:23-4:57) Leo Merrill is founder of Merrill-Basset Cell (Leo Merrill, 18:51-24:13) Leo contemplates why Tracy may have invited him back to BYU to work in the HP Data Center. (Leo Merrill, 35:48-38:57) Leo manages htracyhall.org website.

HP Data Center Established at BYU

- 1965, October National Bureau of Standards establishes High Pressure Data Center at BYU. Tracy explains what the center will do in its first year. (1965-10-26_High Pressure Lab Announced at BYU in 1960-65 in BYU H of R Folder) High Pressure data center continued today at www.htracyhall.org (david 11-3, 18:39) Leo Merrill talks about HP Data Center. (Leo Merrill, 9:49-14:35)
- 1965 Tracy recruited Leo Merrill to come back to BYU and work in the High Pressure Data Center. Summarize Leo Merrill's history. (Leo Merrill, 7:11-9:49) Leo met Tracy about 13 years earlier when Tracy was the Sunday School Superintendent of the Albany/Hudson district. They did not establish a lasting friendship at that point. (Leo Merrill, 28:30) Tracy also use to visit Leo's father at Lake Champlain. (Leo Merrill, 30:50) Leo was involved in the work in 1962 or 63 where their ytterbium measurement got on the front page of Science. (Leo Merrill, 38:57-40:49)
- 1965, Nov & Dec ACS Utah Distinguished Service Award. (1965-12-9_Clippings in 1960-65 in BYU H of R Folder)(1965-11-25_Clip in 1960-65 in BYU H of R Folder)
- 1965 Sells and delivers press to Rice University (1965_Rice U. Press Sale Folder in Consulting Folder)
- 1965, December National Association of Manufacturers gives Tracy *Modern Pioneers in Creative Industry* award. (1965-12-2_Provo Herald Clip in 1960-65 in BYU H of R Folder)
- 1965, December Summary of High Pressure Data Center work. (1965-12-7_Tracy's HP Lab Report in 1960-65 in BYU H of R Folder)
- 1966 A Scientist Looks At Miracles of Jesus article in The Instructor. (1966_Scientist Looks at Miracle of Jesus 1 & 2 in 1966-70 in BYU H of R Folder)
- 1966, March Tracy is "Guest of Week" and gives 6th grade class advice. (1966-3-7_Tracy's elementary days and most important part of school in 1966-70 in BYU H of R Folder)

MPPR Established (In '70 the name of the company was changed to Megadiamond Corporation when the "Megadiamond" was introduced)

- 1966, January Duane Horton & Bill Pope approach Tracy about starting a new company. *Mega Pressure Products and Research Corporation (MPPR)* is formed on April 6, 1966. Named Megadiamond around 1971-2 with invention of the "Megadiamond."
-Starts MPPR with Bill Pope and Duane Horton. (The Joint Oral History Project, page 16) Tracy writes in 1979 that the three founders agreed that Mega would not engage in the designing, construction, or sale of high pressure-high temperature equipment. (1979-1-19_MegaDiamond separate from HTH Co. in 1976-80 in Consulting)
-Pictures of MPPR/Megadiamond building. (1966_Pictures of MPPR-Megadiamond Building in Megadiamond)
-Picture of founders breaking ground. (1966-8-1_Founders of MPPR Co Bill Pope, Tracy Hall, Duane Horton Breaking Ground in Megadiamond)
-First MPPR minutes indicate that Bill and Duane first approached Tracy about starting a business on January 31 of 1966. (1966-3-1_First Megadiamond Minutes in Megadiamond)
-At the same time, these men had already been rejected a nice new building by BYU. Part of their reason from going external to BYU is because they didn't get too much support from BYU.-David
-Also reference (David's interview on 9-4) word document.
Short history of Bill Pope. (Bill Pope's Interview, 1:20-4:00) Short history of Duane Horton. Bill's account of starting Megadiamond: (Bill Pope's Interview, 4:00-6:23)
- 1966 Picture of Tracy in his office (1966_Director of Research-BYU in his office, room C-327 ASB with Tetrahedral Press Model in 1966-70 in BYU H of R Folder)
- 1966 See U of Utah's sale summary on this folder. Sold a press to U of U in 1966 for a profit of \$12,261.75. (1966_UofU Cubic Press Expenditures & Revenue in 1966-70 in BYU H of R Folder)
- 1966, October Correspondence between 4th grade class and Tracy. Tracy's advice is good for us today. (1966-10-14_Elementary Note, Tracy's Advice1, 2 & 3 in 1966-70 in BYU H of R Folder)
- 1966, November Tracy was a scientific editor for awhile for Inorganic Chemistry and maybe other publications. (1966-11-21_Editor Seeks Tracy's Opinion in 1966-70 in BYU H of R Folder) Tracy's name is on top of inorganic chemistry's letter head. (Inorganic Chemistry in in 1960-65 folder in Consulting folder)

- 1966 Tracy called as witness for GE in South Africa hearings. Note home. (1966_GE sues DeBeers for diamond synthesis infringement folder in 1966-70 folder in Consulting)
- 1967 McCartney brochures show Tracy's presses. Tracy has a note of approval on the back of a page of this brochure. (1967_McCartney Press Brochures folder in Consulting)
- 1967, February 300-Ton Tetrahedral Press drawing from McCartney Mfg. Co. (1967-2-1_300 Ton Tetrahedral Press in 1966-70 in BYU H of R Folder)

Resigns from Director of Research at BYU

- 1967, May Tracy released from position of Director of Research at BYU. Academic Vice President Earl C. Crocket sends good note. (1967-5-1_Released as Director of Research note from Academic VP in 1966-70 in BYU H of R Folder)
- 1968 Gary Peterson met Tracy when he took a chemistry class from him in this year. Asked about diamonds and Tracy cancelled the test to talk about them.. (Gary Peterson, 00:00-3:00) Describes what Tracy was like as a teacher. (Gary Peterson, 3:00-4:55) Tracy was approachable and easy to talk to. (Gary Peterson, 18:07-19:12) Gary returns from mission in 1971 and begins to work at Megadiamond.
- 1968, August Some of Tracy's Scientist friends: Lane A. Compton, Dr M. Duane Horton. (Research Journals 900 dpi/1968-4-16_1978-4-18/scan-page44-45.jpg)
- 1968, October Tracy writes a short article for BYU Education Week. Put this in book. (1968-10-3 & 1969_Education Week Speaker 1 & 2 in 1966-70 in BYU H of R Folder)
- 1968 Tracy designed presses and then sold to Mega. (1968_HTH by 1200 Ton Cubic Press he designed for MPPR(Mega) Corp in 1966-70 in Consulting)
- 1968 Begins in earnest to develop PCD product good enough to sell. (See notes in 1968_Developing PCD Products folder in 1966-70 in BYU H of R Folder)
- 1969 Tracy gives suitable PCD product idea to Mega. Mega was the only company selling this product at this time. (Part II – Since the Beginning)
- 1969 BYU Letter of Appointment shows Tracy earned \$18,200 in 1969-70 (1969-70_BYU Letter of Appointment in 1966-70 in BYU H of R Folder)
- 1969 Army/BYU Grant Agreement (1969_Army-BYU Grant Agreement in 1966-70 in BYU H of R Folder)
- 1969 News goes out that Tracy will receive Chemical Pioneer Award in 1970. (1970_Chemical Pioneer Award Folder in 1966-70 in BYU H of R Folder)

- 1969, July Tracy gives stock to children. (1969-7-28_Tracy gives stock to children in Megadiamond)
- 1970 American Institute of Chemists Life Fellow Award

Receives Chemical Pioneer Award

- 1970 Tracy receives Chemical Pioneer Award and his address (1970_Chemical Pioneer Award folder in 1966-70 in BYU H of R Folder)
- 1970, September Megadiamond produces worlds' largest manufactured diamond. Picture: (1970-9-24_World's Largest Manufactured Diamond 1 & 2 in 1966-70 in Megadiamond Folder) Newspaper article: (1970-9-24_Deseret News Artificial Diamond Clip1 & 2 and 1970-9-24_Provo Herald Diamond Clip 1 & 2 in Megadiamond)(1971_GemologicalDigest1 & 2 in Megadiamond) The Megadiamond was announced on 9/24/70, Tracy and Ida-Rose's anniversary.
- 1970, December Tracy spoke at WSU Family Honors Lecture Program (1970-12-10_Cortez Family Honor Lecture Program Speaker 1 & 2 1966-70 in BYU H of R Folder)
- 1970 Patent sale agreement between Tracy and Megadiamond for his patent: "Method for Sintering Diamond Particles." Page 2 outlines the fee and royalty. (1970_Patent Sales Agreement1, 2, 3 & 4 in Megadiamond)
- 1971 See this summary of MEGADIAMOND written in 1971. (1971-10-0_Introducing the Megadiamond in Megadiamond)

Receives Honorary Doctorate from BYU

- 1971 Tracy receives Honorary Doctorate from BYU (1971_BYU Honorary Doctorate Folder in 1971-75 in BYU H of R Folder)
- 1971 (Image) April 17, 1971
- 1971 Receives "Outstanding Manhood Award." (1971_Outstanding Manhood Award, BYU Daily Universe in 1971-75 in BYU H of R Folder)
- 1971 Gary Peterson gets job at Megadiamond. His bishop was Bill Pope. He describes the amount of people who worked there, that the building was down a dirt road by the river...different businesses in same building, such as DBT and Megadiamond....(Gary Peterson, 4:55-8:34)
- 1971, March Tracy elected to Newcomen Society membership. (1971-0-0_Membership in Newcomen Society in 1971-75 in BYU H of R Folder)
- 1971 Megadiamond presents Governor Calvin Rumpston a 5-carat Megadiamond on the 75th anniversary of Utah statehood. (1971_5 Carat Megadiamond presented to Governor Rampton-75 years Utah Statehood in Megadiamond)

- 1971 Send Professor Mii a Book of Mormon. He's a missionary. (1971_Nagoya U – Japan Trip1 & 2 and 1971_Postcard from Japan in 1971-75 in Consulting)
- 1971, September Tracy introduces Henry Eyring at BYU Forum Assembly. (1971-9-10_Introducing Henry Eyring1 in 1971-75 in BYU H of R Folder)
- 1972 Megadiamond Industries formed. Led by the Jollis brothers. They distributed Megadiamond.
- 1972, February Los Angeles Times Clip (1972-2-1_Los Angeles Times Clip in 1971-75 in BYU H of R Folder)(same story, but more readable, is at 1972-4-2_Times-Union Clip in Megadiamond)

Receives ACS Award for Creative Invention

- 1972 ACS Award for Creative Invention (1972 Creative Invention Award Folder in 1971-75 in BYU H of R Folder)
- 1973, January High Pressure Summary (1973-1-23_HP Studies, Given to Church Administrators in 1971-75 in BYU H of R Folder)
- 1973, June Tracy estimates the synthetic diamond market for Megadiamond at at least 140 million/year. (1973-6-27_San Francisco Examiner in Megadiamond) In 2008 Polycrystalline market is at 500 million. (David 11-3, 28:15)
- 1973, August This is a schedule of distributions and other items for H. Tracy Hall, Inc. The shares listed were gifts to family members. Tracy went this way for awhile but eventually brought it all back in so that the company was owned by only him. This kind of shows how this company evolved. (1973-8-31_HTH Inc Schedule of Distributions in 1971-75 in Consulting)
- 1973, October Receives medal with GE team. (1973-10-2_AMS Team Award in 1971-75 in BYU H of R Folder)
- 1974 Tracy gives 3 lectures. (1974_Utah Academy Arts, Science & Letters 1, 2, 3, & 4 in 1971-75 in BYU H of R Folder)
- 1974 Good summary of Tracy's work. (1974_BYU Today News Clip 1 & 2 in 1971-75 in BYU H of R Folder)
- 1974, March Good picture of Megadiamond founders. (1974-3-0_Bill Pope, Tracy Hall, Duane Horton in Megadiamond)
- 1974, July Delivered a press to Canada. (1974-7-0_HTH & Fred Childs in front of Dan & Sherlene's in 1971-75 in Consulting)
- 1974, July 20-year BYU research history. (1974-7-30_Research at BYU '55-'74 1, 2 & 3 in 1971-75 in BYU H of R Folder)
- 1975 Delivers press to India.
- 1975 Tracy created a graph that outlined his salary at BYU (1975_Salary-'55-'75 in 1971-75 in BYU H of R Folder)
- 1975, July Tracy resigns from all positions held at Megadiamond, DBT & Dion. (1975-7-28_Tracy resigns from Megadiamond in Megadiamond) Tracy is tired of the business, the quarrelling amongst Duane and Bill. (david 11-3, 43:23-45:23) Tracy was never angry. (david 11-3, 35:32-37:13 and also in Bill's interview)

- 1975, September Tracy and Lewis reach Dion stock agreement. (1975-9-23_Tracy & Lewis Pope Stock agreement1 in Megadiamond) Tracy selling stock to Louis because Tracy was losing interest. (David 11-3, 31:16)
- 1975, September Weber State College gives Tracy Distinguished Alumni Award. (1975-9-23_Weber State Distinguished Alumni Award1 & 1975-0-0_Weber State Distinguished Alumni Award 1 & 2 in 1971-75 in BYU H of R Folder)
- 1976, July The Chemist Write up (1976-7-0_The Chemist in 1976-80 in BYU H of R Folder)
- 1977 APS International Prize for New Materials Team Award (1977_APS Prize for New Materials Folder in 1976-80 in BYU H of R Folder)
- 1977, May Letter of Appointment shows Tracy will earn \$30,900 the coming year. (1977-5-23_Salary in 1976-80 in BYU H of R Folder)
- 1977, September **Tracy decides to retire.** This didn't happen though. (1977-9-20 in 1976-80 in BYU H of R Folder)
- 1977 David and Tracy royalties correspondence.
- 1978, March **Tracy cancels request for early retirement.** He takes a leave of absence in 1978-79 school year. No salary, but has benefits. (1978-3-30_Cancels Early Retirement from BYU in 1976-80 in BYU H of R Folder)
- 1978 Diamond grit market becomes saturated. Megadiamond directs its focus towards developing PCD for drill/oil bits. Advancements made enabled Megadiamond to sell itself to Smith in 1981. (Gary Peterson, 22:20-25:22)
- 1978 Tracy completely forgets about receiving the Maeser Research Award because he was tending to his duties as a bishop. (1978_Maeser Research Award in 1976-80 in BYU H of R Folder)
- 1978 Bill Pope's account of David coming in and "stirring things up." (Bill Pope's Interview, 6:23-10:03, 17:24-20:17)
- 1978 Megadiamond merges with Supercut. (1978_Megadiamond Merger with Super Cut in Megadiamond) (Bill Pope's Interview, 14:26-17:24)
All the companies, including DBT and Dion, were merged into Megadiamond corporation in 77 or 78.
- 1979 Tracy & Ida-Rose buy a combined 62,500 shares of Megadiamond for \$1 apiece. (1979_HTH & Ida-Rose purchase.....in Megadiamond)

Celebrates 25-year anniversary of first synthetic diamond.

- 1979, December Megadiamond celebrates 25 year anniversary of first synthetic diamond. (1979-12-16_Provo Herald 25th Anniversary in Megadiamond)

- 1980, April After David's many inquiries, Tracy decides to rejoin Megadiamond. (1980-4-28_A Major Breakthrough 1 & 2 in 1976-80 in BYU H of R Folder)
- 1980 Tracy's first Tetrahedral press was placed in the Eyring Science center at BYU. After David found it out in the rain around 2004 he restored it and placed it in Novatek. (Images at First Tetrahedral Press_Now Stationed in Novatek folder in 1981-2008 in BYU H of R Folder) Tracy with another press in the Eyring Science Center (300-ton spacor and header press in Press Pictures)
- 1980 Patent Agent Certificate (1980_Patent Agent Certificate in 1971-75 in Consulting)
- 1980 Man of Year Award (1980_Man of Year Award Folder in 1976-80 in BYU H of R Folder)
- 1980 Produces *H. Tracy Hall Biographical Sketch*, a comprehensive summary of his work that will help this story in many ways, including: Major scientific achievements section (pages 3-4); Awards, Honors & Distinctions (pages 5-7); Publications of Tracy Hall (pages 8-13); Patents of Tracy Hall (pages 14-16); Research Grants Received (pages 17-18); Sintered Diamond (pages 19-24).
- 1980 See Megadiamond brochures. (Megadiamond Brochures in Megadiamond)

Retires from BYU

- 1981, April Tracy retires. (1981-4-3_BYU Retirement Invite & 1981-4-3_The Herald Clip in 1981-2008 in BYU H of R Folder)
- 1981, October Estimate of Assets (1981_Estimate of assets in investments)
- 1981, December Dr. Henry Eyring Died while Tracy & Ida-Rose Were in the MTC. (Research Journals 900 dpi/ 1978-4-22_1999-11-24/scan-page108-109.jpg)
- 1982, March Tracy wasn't quite happy with his role at Megadiamond, or Duane and others wanted him to do something different. (1982-3-4 & 3-19_Tracy & Duane Megadiamond Contract Correspondence in Business Dealings in Megadiamond)

End of High Pressure Era at BYU

- 1981 When Tracy retired and went on mission, things dropped off. BYU would no longer be one of the world leaders in High Pressure-High Temperature studies. His lab got moved while he was on his mission. (Leo Merrill, 57:30-1:01:00)
- 1983, Approx. Bureau of Standards pulls funds for HP Data Center because Congress began putting more money into social-type projects. Tracy was on mission at this time. (Leo Merrill, 53:41-54:30) The High Pressure Data Center is continued today at www.htracyhall.org (david 11-3, 18:39)

- 1984, January Duane and David reaffirm what Tracy will earn for royalties. (1984-1-16_Megadiamond Royalty Agreement 1 & 2 in Megadiamond)
- 1985 Megadiamond sold to Smith (Megadiamond to Smith Sale 1, 2, 3 & 4 in Megadiamond)
- 1985 Tracy expresses gratitude for his years at BYU (*Some of my Feelings About the BYU*)
- 1985 Raymond Seymour at U of Southern Mississippi puts together a nice summary of Tracy's work for AIC book. (1985_AIC Book folder in Biographical-Professional Summaries Section folder)
- 1985 155 million cts (63 tons) of synthetic Diamond in production
- 1986 Tracy does ACS speaking tour in Oklahoma, for the "Chisolm Trails" section. Pictures of four corners on way back. (ACS Speaking Tour-Chisholm Trail Section-in Oklahoma in 1986-2008 in Consulting)
- 1986 Letter to home talking about beautiful Japan experience and Indian Ocean experience. (*Japan*)
- 1986, October Tracy comes up with a Solar/Wind power device. (Research Journals 900 dpi/ 1978-4-22_1999-11-24/scan-page124-125.jpg)
- 1987, January Tracy thinks up a new press design while watching a play called "Trojan Women" with Ida-Rose. (Research Journals 900 dpi/1978-4-22_1999-11-24/scan-page150-151.jpg)
- 1987 Some of Tracy's comics. (Research Journals 900 dpi/1978-4-22_1999-11-24/scan-page150-151.jpg)
- 1987 Hall-Megadiamond Arbitration. (1987_Hall_Megadiamond Arbitration, 1, 2, 3, 4 & 5 in 1987-88_Hall-Megadiamond Royalties Arbitration folder in Megadiamond) (1987_Megadiamond Royalties Summaries & Arguments 1, 2, 3 & 4 in 1987-88_Hall-Megadiamond Royalties Arbitration folder in Megadiamond) (1987-12-9_Hall-Megadiamond Arbitration-Pope's Position1 & 2 in 1987-88_Hall-Megadiamond Royalties Arbitration folder in Megadiamond) (1988_Hall-Mega Arbitration 1, 2, 3, 4, 5, 6, 7 & 8 in 1987-88_Hall-Megadiamond Royalties Arbitration folder in Megadiamond)(Hall-Megadiamond Arbitration in 1987-88_Hall-Megadiamond Royalties Arbitration folder in Megadiamond)

Receives Honorary Doctorate of Humanities from WSU

- 1987 Awarded Honorary Doctorate of Humanities from WSU. (1987_Honorary Doctorate Folder in 1981-2008 in BYU H of R Folder)
- Talk on honesty at Weber State College 99th Commencement (*Honesty*)
- 1987, September Tracy shoots the breeze in a letter. Computer stuff is interesting. (1987-9-21_Wally & Smith Megadiamond 1 & 2...)

- 1987 H.P. Bovenkerk sends Tracy 5 original GE patents from '55- '60 that Tracy was the inventor on. (1955_Patent Letters in 1955-59 in BYU Head of Research)
- 1988 Nominated to Inventor's Hall of Fame. (1988_Nomination for Inventor's Hall of Fame 1, 2, 3 in 1981-2008 in BYU H of R Folder)
- 1988 In China consulting, I think. (*Thirty Days in China*)
- 1988 Tracy's Biographical sketch in Who's Who in America. (1988-0-0_Who's Who in America in 1981-2008 in BYU H of R Folder)
- David wants his parents investment story told. What we have is records of their stock orders and certificates. See 1990 and 1999 for these.
- 1990 David estimates Alzheimers started to affect his dad at least by this year. (david 11-3, 10:06)
- 1990 (1990_Novell Inc Trade Confirmation & 1990_Novell Inc Common Stock Certificate1)
- 1990 David estimates this is when Novatek became official. Tracy was the chairperson of Novatek until he died. Novatek built on what Tracy did. David says that Novatek is the continuation of HTH Consulting, etc...(David 11-3, 11:10-15:54)
- 1992 Tracy donates back to BYU and Chemistry department. (1992_Donation to BYU in 1981-2008 in BYU H of R Folder)
- 1992, September Strong's "First Diamond" examined, and proved to be natural.(Research Journals 900 dpi/1978-4-22_1999-11-24/scan-page210-211.jpg)
- 1993, June Tracy nominated for National Medal of Science (1993-6-12_National Medal of Science Nomination 1 & 2 in 1981-2008 in BYU H of R Folder)
- 1993, October Tracy first writes about "Hall's Trees" Hall's Trees include: blue spruce, austrian pine, scotch pine, alberta spruce, ponderosa pine, Arborvitae, etc...
- 1994, June Awarded Governor's Medal for...(1994-6-1_Governor's Medal for Science & Technology 1 & 2 in 1981-2008 in BYU H of R Folder)
- 1996 BYU Homecoming Fall (Image) (Located in BYU Head of Res. – BYU Homecoming – BYU Homecoming)
- 1996 Featured speaker at 50th Anniversary of the Industrial Diamond Association of America (1996_50th Anniversary of IDA of America – Featured Speaker in 1981-2008 in BYU H of R Folder)
- 1997 Nominated for Charles Stark Draper Prize. Does not win. Letters of recommendation give some good compliments to Tracy's work. (1997_Draper Prize High Pressure Apparatus Packet in 1981-2008 in BYU H of R Folder)
- 1997 Receives 50-Year Membership certificate from ACS (1997_50 years ACS Certificate in 1986-2008 in Consulting)

- 1997 Tracy's files a patent for "Guided High Pressure Presses." I believe this is his final patent application. (1997_Patent1 & 2 & 3 in 1986-2008 in Consulting)
- 1998, June Jim Cheney's nice note about Tracy. (1998-6-30_Cheney's plug for Tracy2 in 1981-2008 in BYU H of R Folder)
- 1999 (1999_100 Novell Inc Shares1 in investments and 1999_200 Novell Inc Shares1 in investments)

Receives Honorary Degree of Doctor of Science from U of U

- 2004 Honorary Degree of Doctor of Science, U of U (2004_UofU Honorary Doctor of Science in 1981-2008 in BYU H of R Folder)
- 2004 David found Tracy's first Tetrahedral Press out in the rain at BYU. The press had been stationed in the Eyring Science Center on campus from about 1980 to 2004. David restored it and it is now in the entrance at Novatek. (Images of display in 1981-2008 folder located in BYU Head of Research which is in Profession folder)
- 2005, May Pathfinder Award Winner at Edison Conference at U of Utah. (2005_Edison Conference Pathfinder Award in 1986-2008 in Consulting)
- 2008 Newsletter addressing Tracy's death. (2008_Coll. Of Physical & Mathematical Sciences in 1981-2008 in BYU H of R Folder)
- 2008 Industry still uses the presses Tracy designed, 54 years later. (Gary Peterson, 26:01-26:36)
- 2008 Polycrystalline diamond is a 500 million dollar market. (David 11-3, 28:15)

Miscellaneous (But still important)

Sources that cover broad aspects of Tracy's life

Date	Name	(Why is it useful?)
1948-63 period	1963_BYU's King of Diamonds	
Whole Life	FactsAboutHTH1 in HTH Factoids Folder	
1999	Petition to Editor of Des News (Summary of Tracy's accomplishments.)	

High Pressures is a good write up of Tracy's about the history of diamond, his first synthesis, and subsequent events in the diamond industry. We only transcribed Chapter 5. (High Pressures Folder, GE – Diamond Synthesis – Leave folder)

Megadiamond History

- 1985 Duane's Royalty note to GE. (1985-12-12_Megadiamond not to GE in Megadiamond)
- 1986 Duane Horton replaced as president of Megadiamond. (1985-8-19_Note from Duane Horton in Megadiamond) (1985-8-24_Research Book page 154)

1987 A scribbled list of employees at Megadiamond. (1987_Tracy's list Men Who worked at Mega in Megadiamond)

Duane sums up Megadiamond experience and moving on very accurately, according to David. Use this quote: *“Prestige was very important to Bill, and it was one of the things that was troublesome. He had his success with U.S. Synthetics. I found life getting too complicated for me, but I made a few bucks and have a simpler lifestyle. Dave wanted the freedom to create, develop, and explore different approaches to management life. He got that. Furthermore, he did it successfully. More credit to him. Tracy wanted a simpler life and the chance to pursue achieving better recognition. He got that. Louis got financial success, which was really important to him. It's one of those rare occasions where everybody came out with what they wanted and needed. I guess even Tracy Jr. He needed enough money to not be responsive to everyone. And he got that. It's not often in life that it works out that way.”* (Duane Horton, 45:45)

In one interview, as I remember, the Cogema technology sale somehow financed a company for a period of time. 10-31-08. (MegaDiamond-Cogema Technology Sale in Megadiamond)

Novatek Stuff

Picture of equipment (Novatek folder)

Tracy's business card at Novatek.

Comments on Tracy's abilities. (These don't necessarily fit an exact date, but mentioned is the person and how or when they knew Tracy)

Tracy was a fantastic designer and scientist. (Leo Merrill, 44:23-47:52) Leo worked with Tracy in 1962 or 1963, and then from 1965-1970 as the assistant director of the hp data center, then from 1973 – approx. 83. (Leo Merrill, 50:40-53:31)

Lane comments on Tracy and recognition he received. (Leo Merrill, 1:03:30-1:05:38)

Condolence Notes collected by Leo Merrill via email from various professionals. (Condolence notes in Condolence notes in Professional)

Gary Peterson summarizes that Megadiamond, the Pope's, David and everybody's business turned out pretty well and they all pursued different avenues. (Gary Peterson, 17:07-17:45)

Lane Compton talks about Tracy's love of research and some real compliments that can't really be quantified into a specific year. (Lane Compton, 52:05, 1:30:07-1:33:19, 1:42:35-1:43:40)

Duane Horton talks about Tracy's invention, and how the 1972 ACS Creative Award was an award for the invention of the apparatus that made synthesis possible. (Duane Horton, 30:48-37:20)