1 IN THE UNITED STATES DISTRICT COURT

2 FOR THE DISTRICT OF ARIZONA

3 Case No. MC13-08002-PCT-DGC

4
VIDEOTAPED DEPOSITION OF WILLIAM L. CHENOWETH
5 VOLUME I
January 15, 2014
6

7 In the Matter of Petition of

8 EL PASO NATURAL GAS COMPANY, L.L.C., a Delaware
Limited Liability Corporation,
9 2 North Nevada Avenue
Colorado Springs, Colorado 80903
10
to Perpetuate Testimony of
11
WILLIAM L. CHENOWETH
12

13

14 APPEARANCES:

15 GREENBERG TRAURIG, LLP
By John Voorhees, Esq.
16 Christopher J. Neumann, Esq.
1200 17th Street
17 Suite 2400
Denver, Colorado 80202
18 Appearing on behalf of El Paso
Natural Gas Company
19
U.S. DEPARTMENT OF JUSTICE
20 Environment & Natural Resources Division
By Katherine M. Kane, Esq.
21 ENRD Mailroom, Room 2121
601 D Street, N.W.
22 Washington, D.C. 20004
Appearing on behalf of the United
23 States

24

25

1 APPEARANCES:

2 U.S. DEPARTMENT OF JUSTICE
Environment & Natural Resources Division
3 By Jeffrey K. Sands, Esq.
601 D Street, N.W.
4 ENRD Mailroom
Washington, D.C. 20004
5 Appearing on behalf of the United
States
6
U.S. DEPARTMENT OF JUSTICE
7 Environment & Natural Resources Division
By Robert H. Foster, Esq.
8 999 18th Street
Suite 370
9 Denver, Colorado 80202
Appearing on behalf of the United
10 States

11 U.S. DEPARTMENT OF JUSTICE
Environment & Natural Resources Division
12 By Maureen Rudolph, Esq.
601 D Street, N.W.
13 Room 3136
Washington, D.C. 20004
14 Appearing on behalf of the United
States
15
NAVAJO NATION DEPARTMENT OF JUSTICE
16 By David Taylor, Esq.
P.O. Box 2010
17 Window Rock, Arizona 86515
Appearing on behalf of the Navajo
18 Nation

19 U.S. DEPARTMENT OF ENERGY
Deputy Assistant General Counsel for
20 Environment GC-51
By Steve Miller, Esq.
21 1000 Independence Avenue, S.W.
Washington, D.C. 20585
22 Appearing on behalf of the United
States Department of Energy
23 (via speakerphone)

24

25

1 APPEARANCES:

2 U.S. DEPARTMENT OF ENERGY
Office of the General Counsel (GC-31)
3 By Bettina Mumme, Esq.
FORS, Room 6H-074
4 1000 Independence Ave, S.W.
Washington, DC 20585
5 Appearing on behalf of the United
States Department of Energy
6 (via speakerphone)

7 U.S. ENVIRONMENTAL PROTECTION AGENCY
Section Chief
8 By Marie Rongone, Esq.
75 Hawthorne St., ORC-3
9 San Francisco, California 94105
Appearing on behalf of the United
10 States Environmental Protection
Agency
11 (via speakerphone)

12

13

14

15 Also Present: John E. Elmer, Stoller
Tracy Plessinger
16 John Dunn, Videographer

17

18

19

20

21

22

23

24

25

1 Pursuant to Notice and the Federal Rules
2 of Civil Procedure, the videotaped deposition of
3 WILLIAM L. CHENOWETH, VOLUME I, called by El Paso Natural
4 Gas Company, was taken on Wednesday, January 15, 2014,
5 commencing at 9:10 a.m., at 225 Main Street, Grand
6 Junction, Colorado, before Candice F. Flowers,
7 Certified Shorthand Reporter and Notary Public
8 within and for the State of Colorado.
9
10
11
12
13 INDEX
14 VIDEOTAPED DEPOSITION OF WILLIAM L. CHENOWETH VOLUME I

15 EXAMINATION BY:	PAGE
16 Mr. Voorhees	17
17 Mr. Neumann	--
18 Ms. Kane	--
19 Mr. Sands	--
20 Mr. Foster	--
21 Ms. Rudolph	--
22 Mr. Taylor	--
23 Mr. Miller	--
24 Ms. Mumme	--
25 Ms. Rongone	--

EXHIBITS		INITIAL REFERENCE
Exhibit 1	Curriculum Vitae of William L. Chenoweth	22
Exhibit 2	Timeline of William L. Chenoweth's association with the Government's Uranium Program	50
Exhibit 3	William L. Chenoweth - Projects Since Retiring from The Department of Energy	50
Exhibit 4	Press Release entitled "U.S. Atomic Energy Commission Announces Program to Stimulate Production of Domestic Uranium"	53
Exhibit 5	AEC Press Releases	54
Exhibit 6	Letter from the Federal Security Agency dated March 27, 1980, with attached report entitled "Survey of Uranium Mines of Navajo Reservation," Henry Doyle	65
Exhibit 7	Domestic Uranium Program Circular 6 Certification Files	66
Exhibit 8	"Technical Memorandum #11 - Bulldozing Rim, Chilchinbeto Area," J.W. Chester, dated May 7, 1952	71
Exhibit 9	"Non-Core Dry Hole Drilling at Cove Mesa, Arizona," Raymond J. Garcia, dated June 16, 1952	73
Exhibit 10	"Exploration of Drilling Techniques on the CO Plateau," John P. Kellogg, dated November 12, 1952	76
Exhibit 11	Address by W. Spencer Hutchinson, Jr. entitled "Growth of the Uranium Industry and Factors Relating to Production in a New Area," dated May 29, 1954	77

EXHIBIT		INITIAL REFERENCE
Exhibit 12	Address by Quenton L. Brewer entitled "Public and Private Activities in the Uranium Industry on the Colorado Plateau," dated June 9, 1954	89
Exhibit 13	Article: "How to Get Into Milling," dated September 1954	93
Exhibit 14	Quitclaim Deed; Babbitt Bros. Lands, Inc. to C O Bar Livestock, dated December 27, 1954	95
Exhibit 15	Mining Lease dated February 1, 1955	96
Exhibit 16	Quitclaim Deed; Babbitt Bros. Lands, Inc. to C O Bar Livestock, dated February 15, 1955	97
Exhibit 17	"Geologic Studies and Diamond Drilling In the East Carrizo Area, Apache County, Arizona, and San Juan County, New Mexico, Contract No. At(30-1)-1260," John A. Masters, et al., dated May 1955	97
Exhibit 18	Lease between C O Bar Livestock Company and A&B Mining Corporation, dated June 3, 1955	101
Exhibit 19	"Reconnaissance of the Cameron Area Coconino County, Arizona," David N. Hinckley, dated June 1955	101
Exhibit 20	"AEC Announces New Uranium Procurement Program and Extension of Initial Production Bonus," dated May 24, 1956	105
Exhibit 21	"Drilling and Geologic Studies in the Northwest Carrizo Area, Apache County, Arizona," William L. Chenoweth, et al., dated December 1956	107

EXHIBITS		INITIAL REFERENCE
Exhibit 22	"Prospecting for Uranium," U.S. AEC and U.S. Geological Survey, dated January 1957	111
Exhibit 23	"Open Pit Methods and Costs at Cameron, Arizona," Mark K. Shipman, dated February 7, 1957	113
Exhibit 24	Remarks entitled "Exploration, Resources, and Production of Uranium," Don R. Hill, Maurice V. Hansen, dated March 14, 1957	114
Exhibit 25	Application No. B-1679: Certification of the Huskon Nos. 11 and 26, Little Colorado Mining District, Coconino County, Arizona, U.S. AEC, dated December 5, 1957	115
Exhibit 26	"AEC Plans Limited Expansion of Domestic Uranium Procurement," U.S. AEC, dated April 2, 1958	118
Exhibit 27	AEC Release No. 220, dated November 24, 1958	118
Exhibit 28	"Guidebook to Uranium Deposits of Western United States," 1959	120
Exhibit 29	AEC-PED-1: "Mine Operation Data Report," dated January 1, 1959 (Little Colorado section only)	124
Exhibit 30	"Recurring Visits to Certified Properties" reports: Section No. 9, dated 1959	127
Exhibit 31	"Diamond and Wagon Drilling on Cove and East Mesas, Apache County, Arizona, William L. Chenoweth, et al., dated November 1959	129
Exhibit 32	"Recurring Visits to Certified Properties" reports: Section No. 9, dated 1960	131

EXHIBITS	INITIAL REFERENCE
Exhibit 32.1 Memorandum by T.W. Young entitled "Examination of the San Mateo Mine," dated December 2, 1960	134
Exhibit 33 Remarks by Jesse C. Johnson entitled "The Development of the Uranium Industry and The Future Outlook," dated May 12, 1961	135
Exhibit 34 Remarks by Jesse C. Johnson entitled "The Outlook for Uranium," dated March 17, 1962	137
Exhibit 35 "Some Notes on the Uranium Production History and Ore Deposits, Churchrock and Hogback Areas, McKinley County, New Mexico," dated June 11, 1964	137
Exhibit 36 "The Discovery and Development of Uranium in the Grants Mineral Belt," UNEDITED, Ray J. Holmquist, dated June 1970	141
Exhibit 37 "Preliminary Reconnaissance for Uranium in Coconino County, Arizona, 1951 to 1955," dated June 1970	145
Exhibit 38 "Environmental Statement - Leasing of AEC Controlled Uranium Bearing Lands," U.S. AEC, dated September 1972	149
Exhibit 39 Various pages from "The Extractive Metallurgy of Uranium," Robert C. Merritt, dated 1971	152
Exhibit 40 Ore Production Reports	154
Exhibit 41 "Radioactive Occurrences and Uranium Production in Arizona," Robert B. Scarborough, dated March 1981	157

EXHIBITS		INITIAL REFERENCE
Exhibit 42	"Summary History of Domestic Uranium Procurement Under U.S. Atomic Energy Commission Contracts - Final Report," Holger Albrethsen and Frank E. McGinley, dated October 1982	166
Exhibit 43	"Uranium Geology and Production History of the Sanostee Area, San Juan County, New Mexico," William L. Chenoweth, dated January 1985	171
Exhibit 44	"Early Vanadium-Uranium Mining In Monument Valley, Apache and Navajo Counties, Arizona, and San Juan County, Utah," William L. Chenoweth, 1985	172
Exhibit 45	"Historical Review of Uranium-Vanadium Production in the Northern and Western Carrizo Mountains, Apache County, Arizona," William L. Chenoweth, et al., dated June 1985	174
Exhibit 46	"Raw Materials Activities of the Manhattan Project in New Mexico," William L. Chenoweth, dated September 1985	176
Exhibit 47	A Summary History of the Activities of the Grand Junction Office of the AEC, ERDA, and DOE, Al Albrethsen, et al., dated September 1986	178
Exhibit 48	"Historical Survey of the Grand Junction Projects Office Facility - Hazardous (Non-Radioactive) Wastes," Frank E. McGinley, dated February 27, 1987	180
Exhibit 49	"Uranium Procurement and Geologic Investigations of the Manhattan Project in Arizona," William L. Chenoweth, dated January 1988	181

EXHIBITS	INITIAL REFERENCE
Exhibit 50 "The Geology and Production History of the Uranium-Vanadium Deposits in the Lukachukai Mountains, Apache County Arizona," William L. Chenoweth, dated September 1988	182
Exhibit 51 "The Access Road Program of the U.S. Atomic Energy Commission in Arizona," William L. Chenoweth, dated June 1989	184
Exhibit 52 "Final Remedial Investigation/ Feasibility Study-Environmental Assessment for the U.S. Department of Energy Grand Junction (Colorado) Project Office Facility," U.S. Department of Energy, dated July 1989	185
Exhibit 53 "The Geology and Production History of Uranium Deposits in the Salt Wash Member of the Morrison Formation, Near Rough Rock, Apache County, Arizona," William L. Chenoweth, dated August 1989	187
Exhibit 54 "The Geology and Production History of the Uranium-Vanadium Deposits in Monument Valley, San Juan County, Utah," William L. Chenoweth, dated November 1990	189
Exhibit 55 The Geology, Leasing and Production History of the King Tutt Point Uranium-Vanadium Mines, San Juan County, New Mexico, William L. Chenoweth, et al., dated April 1993	190
Exhibit 56 "Recollection of Early Uranium Mining in the Carrizo Mountains, Apache County, Arizona and San Juan County, New Mexico," William L. Chenoweth, dated May 24, 1993	192

EXHIBITS		INITIAL REFERENCE
Exhibit 57	"The Geology and Production History of the Uranium Ore Deposits in the Cameron Area, Coconino County, Arizona," William L. Chenoweth, dated August 1993	195
Exhibit 58	"Historical Review of Carnotite Mining and Processing in Southwestern Colorado," William L. Chenoweth, dated December 1993	197
Exhibit 59	Affidavit of William Chenoweth, dated April 1995	198
Exhibit 60	"The Geology and Production History of the Tract 11 and Tract 17 Uranium Mines, Navajo County, Arizona," William L. Chenoweth, dated February 1996	200
Exhibit 61	Affidavit of William Chenoweth, dated September 18, 1996	202
Exhibit 62	Section from "Linking Legacies," dated January 1997	202
Exhibit 63	"The Geology, Leasing and Production History of the Uranium-Vanadium Mines on North Star Mesa, Apache County, Arizona and San Juan County, New Mexico," William L. Chenoweth, dated January 1999	204
Exhibit 64	"The Geology, Leasing and Production History of the Martin Uranium-Vanadium Mine, Apache County, Arizona," William L. Chenoweth, dated March 1999	205
Exhibit 65	"Draft Report Regarding the Cameron Mining District Activities and Practices," William L. Chenoweth, dated April 1998	205
Exhibit 66	Handwritten notes, dated January 1999	207

EXHIBITS	INITIAL REFERENCE
Exhibit 67 Affidavit of William Chenoweth, dated April 17, 2000	210
Exhibit 68 Affidavit of William Chenoweth, dated July 20, 2000	210
Exhibit 69 "The Geology, Exploration, and Production History of the Begay No. 1 Incline Uranium-Vanadium Mine, San Juan County, New Mexico," William L. Chenoweth, dated September 2002	212
Exhibit 70 "The Geology, Leasing, and Production History of the Rattlesnake No. 1/Shorty No. 1 Uranium-Vanadium Mine, Apache County, Arizona," William L. Chenoweth, dated July 1993	214
Exhibit 71 "The Geology and Production History of the Moonlight Uranium-Vanadium Mine, Navajo County, Arizona," William L. Chenoweth, dated July 2003	215
Exhibit 72 Declaration of William Chenoweth, dated July 12, 2007	216
Exhibit 73 "Summary of Uranium Ore Purchased by the Shattuck Chemical Company, Denver, Colorado - 1948-1951," William L. Chenoweth, dated September 2007	217
Exhibit 74 Navajo Indians were hired to assist the U.S. Atomic Energy Commission in locating uranium deposits, William L. Chenoweth, dated September 2011	218
Exhibit 75 "Summary of the Uranium-Vanadium Ore Production 1947- 1969, Monument Valley District, Apache and Navajo Counties, Arizona," William L. Chenoweth, dated October 2011	220

EXHIBITS	INITIAL REFERENCE
Exhibit 76 "The Geology, Exploration and Production History Of the Uranium-Vanadium Mines on Cove Mesa, Apache County, Arizona," William L. Chenoweth, dated February 2012	221
Exhibit 77 Letter dated November 21, 2013 from Navajo Nation Department of Justice to Robert G. Dreher, attaching report entitled "Summary and Chronology of the Domestic Uranium Program," Neilsen B. O'Rear, dated May 1966	223
Exhibit 78 Map of the Navajo Indian Reservation Uranium Mining and Milling	228
Exhibit 79 Map of the Grand Junction Operations Office	230
Exhibit 80 Map of Mine Locations: Cameron area, Coconino County, Arizona	232
Exhibit 81 Various materials, including notes and newspaper articles	233
Exhibit 82 Various summaries and reports prepared by William Chenoweth	246
Exhibit 83 AEC Statement of Uranium Concentrate Purchase Commitments and Prices for U3O8 Under 27 Domestic Milling Contracts	253
Exhibit 84 Table 5: "Details of uranium-vanadium production of the mines in the Cameron area, Coconino County, Arizona"	254
Exhibit 85 "The Uranium Deposits of Northeastern Arizona," William L. Chenoweth	255
Exhibit 86 Report by E.J. Carlson for Arrowhead Uranium Co., Inc.	256

EXHIBITS		INITIAL REFERENCE
Exhibit 87	Handwritten notes reflecting AEC's involvement in mining and milling	259
Exhibit 88	Various notes and lists regarding mining inspectors and contractors	263
Exhibit 89	"Summary of Mineral Leasing Program at the DOE Office in Grand Junction"	267
Exhibit 90	"Uranium Deposits in the Painted Desert, Coconino and Navajo Counties, Arizona," William L. Chenoweth	270
Exhibit 91	Index of photographs entitled "Working on the Navajo Indian Reservation in the 1950's; Mines, Miners Scenery, Navajo People."	271
Exhibit 92	Index of photographs entitled "Uranium Mining."	272
Exhibit 93	Various materials, including handwritten notes regarding Ore Transporters	272
Exhibit 94	Photographs	274
Exhibit 95	Aerial photographs of the Cameron Mines	277
Exhibit 96	PowerPoint presentation - Legacy Presentation	278
Exhibit 97	PowerPoint presentation - Navajo Reservation	279
Exhibit 98	Records pertaining various RAMCO mines	280
Exhibit 99	Records pertaining various Huskon mines	282
Exhibit 100	Mitchell H. Kline - Biographical Sketch	286

EXHIBITS	INITIAL REFERENCE
Exhibit 101 Map: "Geology of the Cameron Area, Little Colorado Mining District, Coconino County, Arizona"	287
Exhibit 122 Map	243

1 P R O C E E D I N G S
2 - - -
3 (Exhibits 1 through 121 were marked.)
4 VIDEOGRAPHER: This is the video
5 operator speaking. This is John Dennis Dunn with
6 Professional Video Services. Today's date is
7 January the 15th of 2014. The time is approximately
8 9:10. We are located at 225 Main Street in Grand
9 Junction, Colorado to take the videotaped deposition
10 of Mr. William Chenoweth in the matter of El Paso
11 Natural Gas versus Chenoweth. This is filed in the
12 United States District Court for the District of
13 Arizona. It's a special case.
14 Would the counsels please state their
15 appearances.
16 MR. VORHEES: We'll start with me.
17 John Vorhees on behalf of El Paso Natural Gas.
18 MR. NEUMANN: Chris Neumann on behalf
19 of El Paso Natural Gas.
20 MS. KANE: Katherine Kane on behalf
21 of the U.S. Department of Justice on behalf of the
22 United States.
23 MR. SANDS: Jeffrey Sands with the
24 Department of Justice.
25 MR. TAYLOR: David Taylor with the

1 Navajo Nation Department of Justice.
2 MR. FOSTER: Robert Foster, U.S.
3 Department of Justice for the United States.
4 MS. RUDOLPH: Maureen Rudolph with
5 the U.S. Department of Justice for the United
6 States.
7 VIDEOGRAPHER: Do the folks on the
8 phone want to say...
9 MS. KANE: Bettina, can you hear us?
10 MS. MUMME: Bettina Mumme, Department
11 of Energy, General Counsel's Office.
12 VIDEOGRAPHER: Would the court
13 reporter please swear in the deponent.
14 WILLIAM L. CHENOWETH,
15 being first duly sworn in the above cause, was
16 examined and testified as follows:
17 EXAMINATION
18 BY MR. VORHEES:
19 Q Good morning, Mr. Chenoweth. Again, my
20 name is John Vorhees, and I'm going to begin the
21 questioning this morning.
22 First of all, I can speak at this one time
23 on behalf of everyone in the room to thank you for
24 coming to this deposition today and participating
25 with us. We really appreciate that. And we are

1 going to do everything we can to make this as
2 comfortable as possible for you because we have
3 scheduled the deposition to occur for the next three
4 days. It's going to be lengthy, and I want you to
5 be certainly comfortable in responding to my
6 questions and also everyone's question that they ask
7 during the deposition.
8 Our videographer just mentioned the case
9 matter, and I want to clarify that for just a
10 minute. This is not a case of El Paso Natural Gas
11 versus Mr. Chenoweth. It's just a special
12 proceeding in which we are taking your deposition to
13 preserve your testimony, and that's why we're all
14 gathered here today, to go over a fairly lengthy
15 period of time, which I'm sure you will and everyone
16 will concede as we begin here. And so this is a
17 proceeding in which we are going to be asking you a
18 number of questions about your career with the
19 Atomic Energy Commission and subsequent --
20 subsequent work that you did.
21 A Okay.
22 Q And -- and before I start my questions, I
23 just want to go over a few pretty minor details.
24 Can you hear me okay?
25 A Okay.

1 Q Okay. Yeah, you have to respond to my
2 questions with a yes or no or an answer. Feel free
3 to elaborate on your answers for us this morning
4 because, quite frankly, we are going to be asking
5 questions about the history, if you will, about the
6 Atomic Energy Program. And as a result, you know,
7 any question that I have, if you have any problem
8 with it, obviously, you can tell me you have got a
9 problem with it and ask me to clarify, which I will
10 certainly do.
11 Now, there is no proceeding right now
12 between us and our -- the lawyers who have just
13 identified themselves. We are here -- literally,
14 this is an opportunity for all of us to obtain
15 information from you, and so this will be a
16 deposition in which attorneys can object if they
17 want to. And they can object to any one of my
18 questions or Mr. Neumann's questions. He's going to
19 follow me. And what we have here is an opportunity
20 for the lawyers to participate both by asking
21 questions and by objecting if they wish to do so.
22 And we just signed a stipulation -- thank
23 you, Mr. Taylor -- that has been prepared by the
24 Navajo Nation that is also participating in the
25 deposition, and, actually, I'm going to read

1 Paragraph 7 into the record so we can just have an
2 agreement at the outset about this.
3 But the parties further agree to limit
4 objections during the deposition to those objections
5 normally raised in depositions, such as objections
6 to form, nature, or clarity of a question;
7 objections to the basis of or a lack of foundation
8 for a question; objections to hearsay and relevance;
9 objections to questions not reasonably calculated to
10 lead to admissible evidence; and objections to
11 questions asking for legal conclusions and questions
12 that invoke privilege. So with that in mind, those
13 are all the kinds of questions that lawyers tend to
14 make at depositions.
15 I guess the first question I have for you
16 is, Mr. Chenoweth, do you understand all of what I
17 just stated?
18 A I do.
19 Q Okay. Good. Have you been deposed
20 before?
21 A Yes.
22 Q Good. Okay. Well, then, this is familiar
23 territory. And what we'll do today is we will take
24 breaks when any -- when anybody wants a break, just
25 signal to our videographer and our court reporter

1 and we can certainly take a break. We are going to
2 be changing the tape every 60 minutes.
3 And we have a prodigious amount of
4 material to get through, so I'm going to -- I'm
5 going to do my very best to expedite the review of
6 approximately 120 exhibits, and -- I know. And it's
7 going to be quite an interesting exercise for us,
8 Mr. Chenoweth. So, again, I really appreciate your
9 participation in the deposition in answering my
10 questions.
11 A Okay.
12 Q And then following me, after we get
13 through the exhibits, then Mr. Neumann is going to
14 follow up with additional questions from us. And
15 then we'll have participation by other lawyers with
16 the Department of Energy, Department of -- EPA,
17 represented today by Department of Justice lawyers.
18 And they will ask additional questions, and perhaps
19 Mr. Taylor will as well from the Navajo Nation. We
20 may have one or two other people that join us during
21 the three days. Hopefully, we'll get done in a
22 timely fashion.
23 So I have placed in front of you the first
24 of three binders of exhibits, and I'd like you to
25 open that up now. There's a list of the exhibits

1 right up front, and then our first exhibit -- that
2 list, by the way, just will inform us -- and it's
3 been made available to counsel. But it's the list
4 of our exhibits, and that may be a handy way of
5 referring back to exhibits that we've already
6 covered as we proceed with the deposition.
7 A Okay.
8 Q Okay. And so if we turn to Exhibit No. 1,
9 this is the logical place to start, we believe, and
10 we begin with your rÃ©sumÃ©.
11 Do you see that?
12 A Yes.
13 Q Okay. Let me begin by asking you, sir:
14 Where were you born?
15 A Wichita, Kansas, September 16, 1928.
16 Q Okay. And could you give us just a
17 summary of your education, please.
18 A Well, I started out at University of
19 Wichita as a pre-vet major, but I didn't want to be
20 inside. I wanted to get outside and look around, so
21 I switched to geology and I got a bachelor's degree
22 in geology in 19 -- oh, it's right here probably --
23 1951.
24 But, also, my family -- my mother had
25 grown up on a ranch in Carlsbad, and so one time we

1 were going out -- I think in 19 -- sometime we went
2 out to see if she could find any old grave stones
3 and things like that. And I saw all these nice, big
4 red rocks and everything in New Mexico and said,
5 well, this is really the place to study geology, not
6 Kansas.
7 And, anyway, I ended up going to summer
8 field camp in New Mexico Bureau of Mines in the Zuni
9 Mountains one summer and -- before I graduated from
10 WU, and then I got a scholarship to go to University
11 of New Mexico to take a graduate program, and I
12 ended up getting a degree there, a master's degree
13 in geology in 1953.
14 Q I see. And would you give us just a brief
15 description of your work experience prior to 1952.
16 I know that that's the year that you joined the
17 Atomic Energy --
18 A Yeah. Well, that was -- while I was a
19 graduate student in University of New Mexico, there
20 had been uranium discoveries already made out in
21 Grants in 1951, and the AEC set up a field office in
22 Grants, I think, shortly after Paddy Martinez made
23 his big discovery and Anaconda made their
24 discoveries.
25 And, anyway, they came over to the

1 university and said they were looking for a student
2 because they wanted to study the geology on the east
3 side of Mt. Taylor where Anaconda had made their big
4 discovery, which became the Jackpile Mine. And I
5 didn't have a thesis picked out or anything, and so
6 I accepted that job in the summer of 1952 working
7 for the AEC prime contractor, Walker-Lybarger
8 Construction Company. And I got, I think, an L
9 clearance or something like that.
10 And, anyway, I was given a Jeep and a
11 Geiger counter and field equipment, and we went out
12 and measured sections and made a study of the
13 Morrison Formation in that area on the Laguna Acoma
14 and Canoncito Navajo lands. And --
15 Q Okay. Now, Mr. Chenoweth, when -- and
16 thank you for...
17 VIDEOGRAPHER: Hold on one second
18 here. The time is approximately 9:22, and we're off
19 the record.
20 (Off the record.)
21 VIDEOGRAPHER: The time is now 9:24,
22 and we are on the record.
23 A In doing my master's thesis, the AEC had
24 to go to different pueblos, like the Laguna, L-U --
25 L-A-G-U-N-A, and Acoma, A-C-O-M-A, and get

1 permission from the governor to let me go out and do
2 this work. And then they went to the -- the United
3 Pueblo Agency and got permission for me to work on
4 the Canoncito, C-A-N-O-N-C-I-T-O, Navajo
5 Reservation. That's a small Navajo group on the
6 east side of Mt. Taylor.
7 Q Okay. So, in essence --
8 A I made my thesis out there and got
9 graduated in the summer of 1953, and the AEC said,
10 Oh, you know, we put you through graduate school.
11 You ought to consider coming to work for us. And I
12 said, Okay. And they said, Well, you can stay in
13 Grants and be in the Grants field office or you can
14 go up to Shiprock and work on a drilling project and
15 report to the Grand Junction office. As long as
16 you're in the field, not in Grand Junction, you get
17 $6 a day per diem, and we call that a hazard pay for
18 working at a remote location. And I said, Well,
19 that sounds good.
20 So I accepted a job with the AEC and got
21 my Q clearance, went up there and started working on
22 a drilling project on the -- in the Lukachukai
23 Mountains, L-U-K-A-C-H-U-K-A-I, Mountains and worked
24 on that a while. And then they transferred me over
25 to the Cove Mesa camp, worked on that for a while.

1 And in December, they -- we were through with that
2 drilling project and we moved over to the northwest
3 Carrizo Mountains -- that's C-A-R-R-I-Z-O
4 Mountains -- and worked on drilling projects and
5 mine-mapping projects there for about three and a
6 half years.
7 Q Okay. Well --
8 MR. VORHEES: Yeah, someone just
9 joined us?
10 MR. NEUMANN: By phone.
11 MR. MILLER: It's Steve Miller from
12 DOE calling.
13 MR. VORHEES: Thank you, Mr. Miller.
14 Appreciate that. And for the record, when that
15 little sound goes off, I'll ask who -- who just
16 joined us.
17 Q (By Mr. Vorhees) Mr. Chenoweth, thank you
18 so much for that -- that introduction. And our
19 questions now are going to be focused on your rÃ©sumÃ©
20 here.
21 A Oh, my God.
22 Q And what I will do is I'll just -- I'll
23 just ask a question pertaining to your rÃ©sumÃ© and
24 then we'll just focus on that portion of your
25 rÃ©sumÃ©, and then we will get back to more detailed

1 questions with regard to your work for the Atomic
2 Energy Commission. And we'll refer to that today as
3 AEC; is that okay?
4 A Uh-huh.
5 Q All right. Okay. So now we have -- your
6 master's degree was awarded to you in 1953, and you
7 have informed us that you began your work even
8 before you got that degree; is that correct?
9 A That's correct. Yeah, I was hired as a
10 geologic aide, was my title with Walker-Lybarger
11 and...
12 Q You might want to spell that for us too,
13 Mr. Chenoweth.
14 A It's a double name. Walker, W-A-L-K-E-R,
15 L-Y-B-A-R-G-A-R, Lybarger Construction Company.
16 They were the prime contractor -- when the AEC
17 started up in 1947 here, they were the ones that
18 built the buildings down at the site, they supplied
19 the field camps, they were -- they did all of the...
20 VIDEOGRAPHER: The time is
21 approximately 9:27, and we're off the record.
22 (Off the record.)
23 VIDEOGRAPHER: The time is now 9:29,
24 and we're on the record.
25 A Okay. Well, besides doing the fieldwork

1 in the summer, during the winter of '52-'53, I used
2 to go out to the Grants office every weekend
3 because they would work -- I think they worked 11
4 days and got three days off -- and pick up things to
5 do, like colored map, do drafting, things like that.
6 Anyway, they kept me busy right up to the time I got
7 my degree, and so I was real familiar with what was
8 going on in the Grants area.
9 But going back to Shiprock, while I was
10 still working for Walker-Lybarger, in the summer of
11 '52, they needed somebody to go up to the Oak
12 Springs drilling camp on the reservation and fill in
13 for one of the geologists that was on spring break
14 or something. So I got involved in an AEC drilling
15 project the summer of '52, briefly during spring
16 break, and knew what living in a field camp was like
17 and what the drilling projects were and all that.
18 So that was sort of an introduction of what I ended
19 up doing with the AEC after I graduated.
20 Q (By Mr. Vorhees) How many geologists were
21 working with you at that time?
22 A Working for...
23 Q Working with you for the Atomic Energy
24 Commission.
25 A Oh, I think the drilling project in the

1 Lukachukais was -- I think I worked with three, and
2 then over on Cove Mesa, two, and then in northwest
3 Carrizos, there were three of us.
4 Q Okay. Now I'm going to --
5 A There was always a project geologist, but
6 I was a newcomer. I was just a regular field
7 geologist.
8 Q Okay. Now, I'm going to ask you some --
9 just some basic introductory questions,
10 Mr. Chenoweth, and -- because we started off talking
11 about the AEC, but let's just -- let's just go back
12 a few years to before you were working for the AEC.
13 Are you familiar with the Manhattan
14 Project?
15 A Oh, yes, I am. But that occurred after --
16 while I was still with the DOE, there was a lawsuit
17 involving the Navajo Nation and the Department of --
18 DOE, which took over the AEC, about being paid for
19 the uranium that was mined and recovered from the
20 vanadium ore during the war by the Manhattan
21 Project.
22 So I really got indoctrinated in what the
23 Manhattan Project was doing here --
24 Q Okay.
25 A -- in Western Colorado. And then

1 eventually, the army officer that came in to set it
2 up here directly became the first manager of the AEC
3 office. And at an AEC reunion one time, he gave an
4 oral history, which was fascinating, about what was
5 going on here in Grand Junction and Uravan and
6 Durango during the Manhattan Project.
7 Q Okay. And who was that?
8 A Second Lieutenant Philip Leahy.
9 Q Okay. Well, we are certainly going to ask
10 questions about your work after you worked for the
11 Atomic Energy Commission and also about the
12 histories that you have written, so we are going to
13 get to that. But we wanted to just cover a couple
14 of preliminary matters before we start in with the
15 rest of the exhibits here.
16 Would you describe -- can you describe for
17 us your work at the AEC between 1953, which is, I
18 think, where we just left off, and 1983. And I just
19 want you to, at this point, just give us a -- just a
20 summary of what you did during that period of time.
21 Then we are going to go back and we're going to --
22 we're going to ask more specific questions, but I
23 would like to have just a brief summary of that.
24 A Okay. Well, I worked on drilling projects
25 out in the northwest Carrizo. They were called the

1 Rattlesnake Project because of the big mine out
2 there called the Rattlesnake Mine. And that was not
3 named because of a reptile but because the
4 uranium-vanadium ore was kind of blotchy and the
5 Navajo said it looked like the design on the back of
6 a rattlesnake.
7 So that was the Rattlesnake Project out
8 there. I worked on those drilling projects until
9 the summer of '55. Then I got transferred into town
10 to live in a real house and not a field camp and --
11 Q Which town was that, by the way?
12 A Huh?
13 Q Which town was --
14 A Farmington, New Mexico.
15 Q Farmington. Okay.
16 A And that was real good because my wife got
17 pregnant then and she didn't like living in a field
18 camp.
19 Q Okay.
20 A And, anyway, then they sent me off to work
21 on -- making reconnaissance of the Jicarilla Apache
22 Reservation.
23 Q You better spell that for our court
24 reporter.
25 A I can't spell it.

1 Q Okay.
2 A It's a well-known Apache reservation in
3 North Central New Mexico.
4 Q Okay.
5 A And then they sent me up -- over to work
6 on the Zia Reservation down by -- close to San
7 Ysidro, New Mexico -- and I can't spell it -- and
8 then worked on the Ute Mountain Reservation around
9 Cortez. This was all reconnaissance work, because
10 the different pueblos and tribes were interested in
11 getting a feel for what they were -- what their --
12 if their reservations had any promising -- promising
13 for uranium. And then -- and let's see...
14 Q We're still in the mid-'50s, right?
15 A Yes, this is -- we're still in the
16 mid-'50s.
17 Then I got sent down to -- where did I --
18 I got sent down to Grants to help log drill core in
19 the latter part of '56, I think it was. No. That's
20 not right. No.
21 I came back to the reservation in '56 and
22 started -- we had a project to map the mines in the
23 Lukachukais to determine the ore occurrences and all
24 that and also around the Carrizos. So we worked on
25 a mine-mapping project one summer, and that was the

1 summer of '56.

2 Then they needed somebody down in Grants

3 to log some core in '57. I went down there and

4 lived in a field camp for a few months. And then in

5 '57, they transferred me over to Flagstaff, Arizona

6 to set up an office there. And they -- I was to be

7 the geologist in charge of a three-man office, and

8 we were to cover all of Arizona, except Monument

9 Valley, to monitor the industry activities and all

10 that.

11 And then in 1958, November 24th, 1958, the

12 AEC announced that beginning in 1962, the AEC would

13 only buy concentrate -- that's yellowcake -- that

14 had been derived from uranium ores found prior to

15 November 24th, 1958. And that was really a date I

16 will always remember because we always thought our

17 field people were going to get laid off. Instead,

18 we had to go contact all the companies and find out

19 from the companies how much ore had been discovered

20 prior to November 24, 1958, and that took our

21 Flagstaff office about three years to do that for

22 the Arizona mines.

23 And then -- anyway, I think in 1961 I got

24 transferred to Grants. They closed the Flagstaff

25 office and I got transferred to Grants, but I still

1 worked in Arizona. I'd go back every month to see
2 what was going on at the mines and all that. And
3 then in 1960 --
4 Q Mr. Chenoweth, can I interrupt for just a
5 second?
6 When you say you were going back to see
7 what was going on at the mines, would that be --
8 A That would be -- that was the industry
9 liaison program.
10 Q Was that monitoring --
11 A Monitoring the industry, what new
12 discoveries had been made, what the production
13 capability -- AEC had -- the Grand Junction office
14 had a program called production capability, and that
15 was to see, you know, if the industry was -- after
16 this -- after the November 24th announcement, the
17 mines had to be put on allocations and all that and
18 the industry really slowed down. And so they were
19 monitoring the industry to see if it was still a
20 viable industry.
21 Q Okay. Let me -- let me stop you there.
22 So, again, we are just summarizing work
23 experience here and I appreciate the level of detail
24 with regard to your response to the question. But
25 let's just -- let's just keep it in a summary

1 fashion.
2 A Okay.
3 Q And then because we're going to -- then
4 we're going to start through our exhibits and we'll
5 have an opportunity to go into more detail.
6 A Okay. Well, in 1964, I got transferred to
7 Grand Junction and spent maybe two years doing
8 mine -- studying the mine -- the uranium deposits in
9 Wyoming and South Dakota. And then I was brought
10 back here and I think that's when I got -- let's
11 see. I have to look at my rÃ©sumÃ© here.
12 Yeah, in 1970, after working in Wyoming
13 and South Dakota, I became the branch chief, chief
14 of the geologic branch of the Grand Junction office,
15 and that meant I didn't do much fieldwork anymore.
16 But I was in charge of the field -- the geologists
17 that were in the field, and that might have been
18 about 20 men at the time.
19 And then in 1974, I got -- they took that
20 job away from me and became staff geologist, which I
21 did a lot of work for the division director, and we
22 were called the resource -- Resource Division. And
23 I worked on his staff for a while. And then I
24 became branch chief again in 1981, and in October of
25 1983, my job had moved to Washington D.C. and I took

1 early retirement.

2 Q In 1983?

3 A October 1, 1983.

4 Q Well, we are looking at your rÃ©sumÃ© and

5 there's a whole section now from 1983 to the

6 present, because although you say you have taken

7 early retirement, it doesn't appear to any one of us

8 in the room that you actually ever retired.

9 A I retired from the federal service.

10 Q Yeah, there you go.

11 And so -- so we want to cover that period

12 of time in some detail, but let's go back to your

13 rÃ©sumÃ© for just a moment.

14 It's got your professional affiliations.

15 I'm still referring to Exhibit No. 1, and it also

16 has some reference to you being the Chairman of the

17 Nuclear Minerals Committee of the Energy Minerals

18 Division.

19 A That's not up to date --

20 Q Okay.

21 A -- because I resigned that job in probably

22 '85.

23 Q Okay.

24 A Anyway, this is an old -- this is an old

25 rÃ©sumÃ© you probably found in my stuff at my house.

1 Q Yeah, well...
2 A And, anyway, no, I haven't been -- I
3 haven't been associated with the Nuclear Minerals
4 Committee and AAPG since probably '85, '86.
5 Q Okay. Well, and then --
6 A Everything else looks okay.
7 Q Good. Okay. Because that's what I wanted
8 to find out: Those professional affiliations are
9 all accurate.
10 A And as that, I used to have to write an
11 annual report to the AAPG and the Energy Minerals
12 Division about the status of the industry. And I
13 was getting farther and farther away from it, so I
14 resigned and I think Warren Finch of the USGS took
15 the job over.
16 Q Well, I see here that on Page 1, you've
17 also been a research associate for the New Mexico
18 Bureau of Mines and Mineral Resources; is that
19 correct?
20 A Yeah. That's an honorary title they gave
21 me so that -- so I can work for them as a pro bono.
22 Q Okay. Well, we've seen many of your
23 reports for New Mexico and Arizona. Okay.
24 And then looking over on Page 2,
25 obviously, your -- you have professional licenses.

1 A Yeah, I had to get that when I was
2 involved in a lawsuit in Wyoming.
3 Q Okay. Well, I'm going to ask about your
4 prior deposition or depositions, but let's keep
5 going. So you've got a license in Wyoming as a
6 registered professional geologist.
7 Do you have any other licenses?
8 A No.
9 Q Okay. And then there's a section on
10 awards.
11 A Okay.
12 Q And education and, of course,
13 publications. And this is all accurate?
14 A Yep.
15 Q Okay.
16 A No. I got -- I got -- no, it's on here.
17 The one I got from the radiation -- when -- the RECA
18 program and Department of Justice, it's on here.
19 The first -- that's the last one at the very top.
20 Q Okay.
21 A Certificate of appreciation for helping
22 them out from our database for the RECA program.
23 Q All right. Now, on Page 3, there is a
24 chronology of association with government's uranium
25 program.

1 A Yeah. That's what I was just going over
2 briefly for you.
3 Q Right, and we appreciate that.
4 And when you say "government's uranium
5 program," can you -- can you just describe that for
6 us.
7 A Well, the AEC took over for the Manhattan
8 District to get uranium to build atomic weapons, and
9 they needed uranium as fast as they could and as
10 much as they could. And so they had all these
11 various programs they developed to encourage
12 prospectors to look and all that. And eventually
13 they found so much they had to cut back on how much
14 uranium the government would buy. And then our work
15 with the AEC became more of a monitoring program, a
16 liaison program, to keep the Congress informed what
17 was going on in the industry. Was it still viable.
18 Q Okay. So that is -- thank you. That's
19 responsive to my question about the uranium program.
20 And, again, we are going to get into more detail as
21 we go through the exhibits.
22 But this is -- Page 3 is accurate, I take
23 it, in terms of the chronology that you just
24 discussed with us.
25 A Oh, yeah. That's more accurate than what

1 I was giving verbally.
2 Q Well, that's okay. It's certainly well
3 summarized here.
4 And -- and so let's go over to Page 4,
5 and, again, the chronology continues. And now we
6 are going to get to your work since retiring from
7 the Department of Energy, and this would be 1983 to
8 present.
9 A Yeah.
10 Q And, again, just a summary, Mr. Chenoweth,
11 but can you tell us all basically what you have been
12 doing since 1983 to the present in terms of your
13 consulting.
14 A Oh, I think about -- let's see. I retired
15 in October of '83. I think about in the spring of
16 '84, a DOE contractor back in Beltway, Washington,
17 contacted me if I could be a consultant to them on
18 working with the energy information part
19 administration of the DOE, designing forms.
20 Since the liaison had all shrunk from
21 being out here where the industry was back to D.C.,
22 they were going to -- they were going to keep track
23 with the industry with forms and things like that.
24 And they had me help design some forms to send out
25 to the industry to keep track of what was -- what

1 was being found and drilling statistics and all
2 that. And I worked on that for about, oh, several
3 months.
4 And then DOE was asked to make an
5 evaluation of the Mt. Taylor Mine down in Grants,
6 and they wanted me to go along as a geologic
7 consultant along with mining engineers and all this.
8 And then beginning in -- I can't remember
9 the date, but probably '84, sometime in '84, the
10 contractor down there at the compound, Bendix, they
11 were getting ready to ship all of the geologic
12 material to the USGS and to the National Archives,
13 and they asked me if I wanted to come back and help
14 them inventory this. And I said, Yeah, I don't have
15 anything else to do, and I know -- I know what
16 those -- how to describe these records and things.
17 So I went back and worked for Bendix maybe for a
18 year, sending stuff to the USGS and the National
19 Archives.
20 And then since that time, I have gone back
21 many times and worked for the various contractors
22 when they needed things -- stuff in the -- material
23 that they still had there on the compound, they were
24 sending to National Archives. They wanted me to
25 describe it so future researchers could use it and

1 all that, so...
2 Q Well --
3 A I have been working down there off and
4 on --
5 Q Ever since --
6 A And I still have a little contract with
7 them down there working on abandoned mines.
8 Q Okay. So that's what we are really
9 getting to here. So from 1983 to the present,
10 you've continued to provide your expertise to
11 federal agencies like the Department of Energy.
12 A Yeah. Yeah, right. And I have been --
13 it's not that much geology but being able to
14 describe things that were done during the AEC
15 program that they were sending to the National
16 Archives describing them, so, you know, what this
17 means and how we chose researchers to use this
18 material.
19 Q Okay. And along those lines, you have
20 also prepared a number of studies of the uranium
21 mining over the years, correct?
22 A Yeah. This is because of my connection
23 with the New Mexico Bureau of Mines -- that's the
24 state geologist term down there -- and the Arizona
25 Geological Survey. We had contracts with them to

1 prepare booklets or reports on everything they --
2 everything they could put together about uranium in
3 New Mexico, everything you could put together about
4 uranium in Arizona.
5 And so they got a lot of material for that
6 report going through our files out there under their
7 contract, and then they -- then they said -- New
8 Mexico, in particular, they said, Well, we've got
9 this data, we've got some funds here. Why don't
10 we -- can you write up a report on some of these
11 areas we need more information on.
12 And then both these states surveys had
13 gone around to the industry -- mainly VCA, Vanadium
14 Corporation of America -- and collected maps of the
15 mines they were -- mostly mines on the reservation,
16 Navajo Reservation, that they were going to burn --
17 they were closing their field office in Naturita,
18 and so they were very welcome to give mine maps and
19 noncompany confidential data to the state surveys,
20 and so they did this.
21 And then the state survey said, Well,
22 we've got these maps and things and you have the
23 knowledge of where the reports are on these. We'll
24 find some funds for you to start writing these
25 reports for us if you have got time.

1 Q Okay.
2 A We can't pay you, but we can pay for the
3 word processing and the drafting.
4 Q Okay. So --
5 A I said, I'll take it up.
6 Q So -- and thank you for that, because
7 we're all impressed -- I'm going to speak again for
8 the whole group -- in terms of how many studies you
9 have prepared, not only since 1983 to the present,
10 but also prior to that, which we have -- we are
11 going to go over in our -- in our exhibits here.
12 But just a general question now: You have
13 provided your expertise to these state agencies, the
14 federal government, and also private companies.
15 A Yeah, there have been a few -- few
16 engineering firms and consulting firms that I've
17 worked for.
18 Q Okay.
19 A And law firms.
20 Q Law firms too. Well -- and so that is
21 summarized, to some extent, in Exhibit 1 and in
22 subsequent exhibits.
23 Let me ask you, sir: In addition to
24 consulting, you indicate on Page 4 of Exhibit 1 that
25 you've also served as an expert witness.

1 A Uh-huh.
2 Q Can you briefly describe when you have
3 served as an expert witness previously.
4 A One of these -- the biggest one was this
5 lawsuit -- this lawsuit in Albuquerque, I think, in
6 1980 -- it's referenced in one of my reports --
7 where the Navajo Nation wanted to be paid for the
8 uranium that was secretly recovered in the Manhattan
9 Project from vanadium ore being mined in Monument
10 Valley and in the Carrizo Mountains. And also
11 they -- they had all kinds of other claims in that
12 lawsuit. So I gave a deposition on how they can --
13 how they can calculate the amount of uranium that
14 was in those vanadium ores by looking at the
15 production from those very mines under the AEC
16 program. And so I gave a deposition to that.
17 Q Were you still employed by the Department
18 of Energy at that time?
19 A Yes. I was loaned to the Department of
20 Justice by the DOE, and they paid all my travel and
21 all that --
22 Q Okay.
23 A -- but my salary still came from DOE.
24 Q And do you recall that you were qualified
25 as an expert in that litigation?

1 A Yeah, because it all involved mines that I
2 had studied with the AEC on the Navajo Nation.
3 Q Okay. And, clearly, one of the
4 continuing, shall we say, examples of your expertise
5 is your ability to obtain information pertaining to
6 the weight of different ores and minerals that have
7 been mined --
8 A Uh-huh.
9 Q -- throughout these reports. And you were
10 using that expertise --
11 A Yes.
12 Q -- I understand, as an expert.
13 A Or knowing where to get the data. Yeah, I
14 was using that, but I -- not that I'm a
15 mineralogist. I used somebody else's research on
16 that, but I always gave reference to who identified
17 these minerals and all that.
18 Q Now, have you also testified on other
19 occasions as an expert?
20 A Oh, in Nez Tsosie --
21 Q Now, you're going to have to spell that
22 one for our court reporter.
23 A N-E-Z, T-S-O-S-I-E. It's two words. It's
24 a Navajo family. I -- you probably know more about
25 it than I do, if you're looking over the record. It

1 wasn't really a deposition, was it? It was just a
2 report they used in evidence?
3 Q Well, we have that here, actually. So --
4 A Oh, you have it. You know more about it
5 than I do --
6 Q We'll --
7 A -- El Paso.
8 Q Well, we'll look at that, but do you
9 recall testifying in that proceeding?
10 A Not in the court. I think it was just
11 writing a report that was used.
12 Q Okay. Now, in terms of other actual
13 testimonies like we are doing today --
14 A Oh --
15 Q -- in a deposition or --
16 A There was a lawsuit in Wyoming about the
17 viability of this one mine up in the Pryor
18 Mountains, which was -- and I wrote a report about
19 that.
20 Q And did you testify in --
21 A No, I didn't testify. I just wrote a
22 report and I had had it notarized and all that and
23 sent it to the law firm.
24 Q Okay. All right. And then have you --
25 have you testified on any other occasion besides

1 that --

2 A I can't think of any. Let's see. No.

3 No, that -- no, I don't think, no.

4 Q Okay. Well, we have --

5 A Oh, yeah. There was another lawsuit

6 against VCA in Monument Valley.

7 Q That's the Vanadium Corporation of

8 America.

9 A America. Yeah. And the Moonlight Mine

10 and all that, and I had wrote a report about that,

11 but I didn't test --

12 Q Okay.

13 A Just wrote a report for the law firm.

14 Q Well, now, again, as I have mentioned

15 previously, we do have some of your reports that

16 we'll refer to as we go along here. So we're -- I

17 guess we're differentiating between actual testimony

18 in a court proceeding or in a deposition and

19 providing reports.

20 And the reports that you provided in

21 litigation would also qualify as an exercise of your

22 expertise, right?

23 A That's true.

24 Q Okay. So with that in mind, the last

25 reference to the Vanadium Corporation of America

1 lawsuit, can you tell us a little more about that?
2 Where was that actually located?
3 A It was in Monument Valley. It had to do
4 with the Moonlight Mine in Navajo County, Arizona,
5 which was not a VCA mine. It was mined by
6 Industrial Uranium Corporation, but the Navajo
7 family thought it was VCA and they were suing VCA
8 for damages. And VCA said, No, that's not our mine.
9 And so they wanted somebody that had
10 visited this mine and had written a report on it to
11 say this mine was operated by Industrial Minerals
12 Company. I'm sorry. And that -- you can go to the
13 Utah Mine Inspector report -- no, the Utah mine --
14 the Arizona Mine Inspector reports had VCA down as
15 an error. That was the whole basis of this lawsuit.
16 The lawyers for this Navajo family has got this mine
17 inspector report and said, No, VCA was mining this
18 mine in 1964. And in my report, I said, No,
19 Industrial Uranium Company was mining it. And I
20 have been there and I had to test --
21 Q Okay.
22 A And I wrote a report. I didn't have to
23 testify.
24 Q And we have your report on the Moonlight
25 Mine, so --

1 A I think I wrote a report for the Arizona
2 survey on the Moonlight Mine as a result of this
3 lawsuit.
4 Q Okay. Well, that may be the report we
5 have in our --
6 A Yeah, that's it.
7 Q -- exhibits. Okay.
8 A Because that was --
9 Q Do you recall when that might have been?
10 A It was right after the Nez Tsosie lawsuit.
11 Q Okay. So post-1995?
12 A Yeah.
13 Q Okay. All right. Well, let's go to --
14 let's go to Exhibit No. 2 just briefly.
15 A Exhibit No. 2.
16 Q Yeah. We're -- and, again, we just added
17 this as Exhibit No. 2 for, you know, simple
18 reference to the chronology of your work, at least
19 from 1952 to 1974. And that's accurate?
20 A Yes, this is. Uh-huh.
21 Q Okay. And then let's go to Exhibit No. 3.
22 A Oh.
23 Q And that is a document entitled: Projects
24 Since Retiring from the Department of Energy.
25 A Uh-huh.

1 Q I take it you prepared this?
2 A Yeah. This was something I prepared for
3 one of the law firms -- wait. No. I forget who I
4 prepared this for. It was to show my expertise -- I
5 forget exactly who it was prepared for.
6 Q Okay.
7 A They said, Well, briefly summarize what
8 you have done since you left the DOE. And, well, I
9 said, How brief do you want to be?
10 Q Okay. Well, this is good. This is a --
11 this is a nice outline, and I recognize another
12 federal agency here that is the United States Forest
13 Service.
14 A Yeah.
15 Q And it indicates that you did work on
16 abandoned uranium mines in the M-A -- now I'm going
17 to spell this for you -- the Manti, M-A-N-T-I,
18 hypen, and then the second word is LaSal, capital L,
19 small A, capital S-A-L, National Forest.
20 Would you just briefly describe what that
21 job --
22 A Oh, yeah. There were a lot of abandoned
23 uranium mines in there, and the Forest Service was
24 getting interested in finding out, you know, where
25 they were and how much -- how big production they

1 were. So they got permission with DOE for me to
2 come down and look at the records to compile some
3 just basic production information and location
4 information on these mines in the national forest
5 over around Moab. I think there was only maybe a
6 dozen mines.
7 Q Okay.
8 A But it was in cooperation -- the Forest
9 Service went to DOE, and DOE says, Well, you can do
10 this for the Forest Service and -- I forget who paid
11 me. Maybe DOE did. Anyway, I don't remember who.
12 But I did get reimbursed for this, but it wasn't
13 by -- it could have been by the Forest Service.
14 Q Okay.
15 A But it was a very short project and just
16 give them the basic information about the mines and
17 who the controller of the mines were, or maybe we
18 couldn't give that to them. I can't remember,
19 but...
20 Q Okay. Well, in any event, this Exhibit
21 No. 3 summarizes projects that you had worked on
22 following your retirement from the Department of
23 Energy, at least up to a certain point. We are
24 going to have more questions about your work as a
25 consultant to federal agencies and to private

1 companies since then.

2 But in any event, this is an accurate list

3 of your work at least up to that point in time?

4 A Oh, yes.

5 Q Good. Okay. Well, now let's turn to

6 Exhibit No 4. Now -- now, we have -- we have some

7 documents here in our exhibits that are -- predate

8 your work for the Atomic Energy Commission, and --

9 and I know you weren't involved in the preparation

10 of this document.

11 But have you seen this before?

12 A Yes.

13 Q Okay. Would you -- would you just briefly

14 describe what this document is.

15 A Let me see. Oh, this is the April 11,

16 1948 document. That is the first -- that's when the

17 AEC announced a program and what they'd pay. I

18 think this is the -- is this -- yeah. They are

19 going to have a guaranteed ten-year minimum price

20 for domestic ore, uranium ores, and then they're

21 going to pay a 10,000-dollar bonus for discovery of

22 new high-grade uranium deposits.

23 That's -- this was all -- this is Circular

24 1 and this is Circular 2. And these are -- they put

25 things in the FOIA register called Domestic Uranium

1 Program, and Circular 1 guaranteed the price for ten
2 years like this press release says. Circular 2 was
3 a high-grade uranium bonus. Twenty tons at 20
4 percent you could get a 60,000 -- 10,000-dollar
5 bonus. And so this is really the first announcement
6 they put out about their purchasing program.
7 Q And, Mr. Chenoweth, you have already
8 described to us briefly what the Atomic Energy
9 Commission's mission was at this point. I have got
10 questions about this that are more detailed, but --
11 but this is a public pronouncement?
12 A Yeah.
13 Q And --
14 A And I'm sure the follow-up to this
15 appeared in the Federal Register.
16 Q Right. We are going to -- we're going to
17 go from this document to Document No. 5.
18 A 5.
19 Q And I'm going to just briefly describe
20 Document No. 5 because --
21 A I don't think I have ever seen this.
22 Maybe I have.
23 Q Excuse me? No. 5?
24 A What is the date of it?
25 Q Well, I want to tell you how we obtained

1 this. Now, you will recall that El Paso made a
2 document request to you, and Mr. Neumann and
3 Mr. Schnee came out to pick up documents from your
4 house. And you have many documents in your house?
5 A Yes, I do.
6 Q Which -- and that may be the
7 understatement of the day. But in any event, one of
8 the -- one of the folders that Mr. Neumann and
9 Mr. Schnee were able to --
10 A Probably the AEC press release documents.
11 Q Yeah, this is --
12 A There are all these old, old things that I
13 just saved because of some of these lawsuits, they
14 want background for.
15 Q Right.
16 A And I can't remember all of them.
17 Q And we thought, just to be as efficient as
18 possible today and to keep the questioning going on
19 in a fairly rapid pace, that we would just use all
20 of these documents that you gave us in this file as
21 one exhibit, okay?
22 A I see you've got the circulars in here.
23 Q We do. And we have -- we have placed it
24 in chronological order so that it would convenience
25 you with regard to just describing briefly what we

1 have in Exhibit No. 5.

2 And if I might just ask an introductory

3 question about this. Obviously, the United States

4 government was -- was interested in promoting the

5 Atomic Energy Program through the use of media. And

6 you've referenced circulars.

7 A Uh-huh.

8 Q The Atomic Energy Commission issued

9 circulars to alert the industry and public

10 concerning what they were interested in?

11 A Yeah, by putting it in the Federal

12 Register, but then they put out these kind of press

13 releases for the general public because who wants

14 to -- who gets to read the Federal Register?

15 Q Right. No, I'm going to get to that.

16 There are -- there are press releases, there are

17 circulars, and I take it there are also speeches

18 that were made.

19 A Oh, yeah.

20 Q And we have those speeches here. But just

21 so we can -- I know we've covered a number of these

22 areas of the government's dissemination of

23 information.

24 But will you describe to us just briefly:

25 What is a circular?

1 A It's -- I really don't know. They are
2 called Domestic Uranium Program Circular. That's
3 the heading you'll find in the Federal Register.
4 But it's really -- it's a guarantee of what the
5 government promised to do -- will do if you meet
6 these conditions.
7 Like Circular 5 revised, that was the
8 bible of what set up the price of uranium, the
9 vanadium payments, the six cents a ton-mile haulage
10 for the first 100 miles and all that. And the
11 Circular 6 was the bonus program. If you found a
12 new discovery, you could get up to $35,000 for a new
13 discovery.
14 Q So the circulars, as I take it from your
15 answer, would be examples of the government
16 providing incentives --
17 A Oh, absolutely.
18 Q -- to industry and to others.
19 A By putting it in the Federal Register, it
20 made it a legal document, I guess.
21 Q Okay.
22 A I don't know.
23 Q And so thank you for giving us those
24 circulars because I think they're all here in this
25 exhibit.

1 A There's eight of them.
2 Q Yeah, and we're going to -- again, we are
3 going to go through -- as we go through the
4 exhibits, we'll certainly review the circulars, but
5 the circulars are in here. And then I have got just
6 one or -- one or two questions about the press
7 releases, and then we're going to take a break for
8 our videographer.
9 The press releases were issued by the
10 Atomic Energy Commission as well?
11 A What were?
12 Q The press releases. Press releases.
13 A Releases?
14 Q Yeah, like a -- like a public statement.
15 A Oh, press releases.
16 Q Press releases.
17 A Oh, yes. They sent them out to newspapers
18 all over the country.
19 Q And you collected them as well?
20 A Only certain ones.
21 Q Okay.
22 A Like the famous November 24th one, and
23 then when they revised that to -- but instead --
24 that they would take historical production from the
25 small mines instead of having it already drilled out

1 and things like that, but --
2 Q Okay.
3 A -- they are still issuing them today, I
4 think.
5 Q Right. And so one of them -- just my
6 final question on this is: These documents that we
7 have received from you in Exhibit 5 are all
8 government documents -- and let us know if, of
9 course, we are right on that; we believe we're
10 right -- that you had collected since when you
11 were --
12 A It's not a complete set because the
13 complete set is in the National Archives. Most of
14 these deal with this area that I worked -- like in
15 reference when a mine station opened, when a mill
16 opened up and all that for some of these reports I
17 wrote. Like I see one here, when did the Tuba City
18 Mill start --
19 Q Right.
20 A -- operating and things like that.
21 Q And we are going to ask you certainly
22 about Tuba City. Okay.
23 MR. VORHEES: Well, then, why don't
24 we -- why don't we take a break for us to change
25 tape here, and thank you. We're finished with Phase

1 1.

2 VIDEOGRAPHER: The time is

3 approximately 10:09. This is the end of Tape No. 1

4 in the deposition of William Chenoweth. We are

5 going off the record to change tapes.

6 (Recess taken.)

7 VIDEOGRAPHER: We are on the record.

8 This is the beginning of Tape No. 2 in the

9 deposition of William Chenoweth. The time is

10 approximately 10:18.

11 Q (By Mr. Vorhees) Thank you, Mr. Chenoweth.

12 We are back from our break and, again, we appreciate

13 the opportunity to take a break when the

14 videographer changes his tape. So we'll -- doing

15 that once an hour will be hopefully convenient for

16 everybody, but just let us know if you need a break.

17 A Sure.

18 Q All right. So we were looking at Exhibit

19 5, and I have just a couple of questions about

20 Exhibit 5 and then we will move on to the next

21 exhibit.

22 But in any event, we were talking about

23 circulars, and I see here that the Atomic Energy

24 Commission also issued statements. Like, for

25 example, the first -- the first page of Exhibit 5 is

1 the AEC statement of uranium concentrate purchase.
2 Do you see that?
3 A Yeah.
4 Q And I take it that -- again, this is just
5 part of the public dissemination of information from
6 the Atomic Energy Commission.
7 A Yes.
8 Q Okay. And then -- and after we get
9 through that document, I see that Circular No. 1 is
10 the next document in Exhibit 5, and it's the
11 ten-year guaranteed minimum price.
12 A Right.
13 Q And that looks like it was published in
14 the Federal Register, doesn't it? Am I correct
15 about that?
16 A Uh-huh.
17 Q Okay. And then as we just move along --
18 I'm going to do this very quickly, but there's
19 Circular No. 3 that follows.
20 A 2.
21 Q Oh, I'm sorry. Did I go over 2? Yes, 2.
22 Exactly. Circular No. 2 is the bonus for the
23 discovery and production of high-grade domestic
24 uranium ore. That's -- that's in Exhibit No. 5.
25 A Yeah.

1 Q And then No. 3, the following --
2 A Circular 2 was only collected once by a
3 company out of Lisbon Valley.
4 Q Which valley?
5 A Lisbon Valley, Utah. It was not Charlie
6 Steen's mine but another mine down there.
7 Q Okay. And then Circular 3 is -- is the
8 guaranteed three-year minimum price.
9 A Yeah.
10 Q Okay. And then right after that is, of
11 course, the document we were looking at earlier, the
12 announcement of these incentives; is that correct?
13 A Uh-huh.
14 Q And I want to now go over to Page 78 of
15 this exhibit. And, Mr. Chenoweth, if you -- if you
16 look at the bottom lower hand -- left-hand part of
17 the page there, it will show you that it's Exhibit
18 No. 5, and then we have page numbers that are --
19 A Yeah.
20 Q Got that? So if you go over all the way
21 to -- to -- actually, I want to refer you to Page 80
22 of this exhibit.
23 A Go back?
24 Q No. Actually, it's Exhibit 5, Page 80.
25 A 80. Excuse me.

1 Q I'm sorry I didn't make that clear. Yeah,
2 80. And we are going to be spending some time with
3 this particular subject matter, and here we have --
4 A Oh, yeah.
5 Q -- an announcement. Do you see that on
6 Exhibit 5, Page 80, which is: Uranium mill to be
7 built in Tuba City, Arizona.
8 A Right.
9 Q Do you see that?
10 A Oh, yeah.
11 Q Okay. And I take it that that's a press
12 release by the AEC.
13 A Yeah. They began numbering at No. 1 and
14 this is No. 126, so they continue this number right
15 up through -- through '83. And I don't know what
16 they do now, but...
17 Q Okay. All right. Let's then look at one
18 more page here, which is Page 184 of this exhibit.
19 A 184.
20 Q Okay. I just want to just pause for a
21 moment on Page 184.
22 A Okay.
23 Q It's entitled: Appendix Atomic Energy --
24 A I found it.
25 Q -- Commission. You got that?

1 A Uh-huh.
2 Q And the title of this is: Statement on
3 uranium supply policies and related activities. I'm
4 not going to ask you to read this whole document,
5 but I would like to ask you: Was it the policy of
6 the Atomic Energy Commission to release information
7 pertaining to its policies, directives, initiatives,
8 and incentives?
9 A I really can't answer that because I
10 wasn't even the management type. You know, this
11 would be something the management type would answer.
12 Q Okay.
13 A I don't even remember seeing this
14 document.
15 Q Okay.
16 A But I know they wanted to keep the public
17 information and the Congress informed on what was
18 going on with all this money they were spending.
19 Q And in so doing, they disseminated
20 information?
21 A Oh, yeah. They always wanted to keep --
22 anything that wasn't company confidential or
23 proprietary -- production information I know was
24 proprietary. They very rarely in the early days
25 would say, Well, this year we produced -- we bought

1 so many pounds of uranium or anything like that.
2 But this looks like just a statement to sort of
3 summarize the program after a while.
4 Q Okay. And I take it this is a government
5 document.
6 A Huh?
7 Q This is a document from the AEC.
8 A Oh, yeah.
9 Q Okay. All right. Well, let's go -- let's
10 move on to No. 6 then.
11 A Oh.
12 Q Exhibit No. 6 is a document that, again,
13 if I could just briefly describe this. It's dated
14 March 27th and I believe this is 1950 from the
15 Federal Security Agency, Public Health Service. We
16 obtained this from you.
17 Have you seen this before?
18 A Yeah. This is a document that -- as part
19 of the Radiation Exposure Compensation Act, the
20 hearings they had and all this, this is something I
21 got from that part of the justice department. Their
22 researchers or somebody got this and they showed it
23 to me because it had the radiation readings in these
24 old -- a lot of these old mines I knew about.
25 Q Okay.

1 A This is -- I'm sure this came from the
2 RECA program. That's Radiation Exposure
3 Compensation Act, department -- in the civil
4 division of the justice department.
5 Q Okay.
6 A Their -- some of their researchers got
7 this probably from the Public Health Service.
8 Q Okay. Well, let's move on, then. That's
9 fine. I appreciate that.
10 Let's go to Exhibit No. 7.
11 A Okay.
12 Q And I think you have already referred to
13 Circular No. 6, but let's just take a quick look at
14 this document. It's entitled: Domestic Uranium
15 Program, Circular 6. And if I recall correctly,
16 part of your job at AEC was working on projects that
17 were commenced pursuant to Circular 6.
18 A Yeah, because part of the Circular 6, a
19 producing mine had to be inspected, I think, every
20 three months or something. I did a lot of that.
21 And we would write a -- I called it a recurring
22 visit report. In fact, I actually -- in the Cameron
23 area, I was examining engineer on three or four
24 Circular 6 projects.
25 Q Okay.

1 A None of the El Paso ones. They were --
2 these were small, independent miners. I can't
3 remember the name of the company. Domino Mining
4 Company and maybe Mesa and Uranca and things like
5 that. Anyway...
6 Q Okay. And so you were -- you were working
7 pursuant to Circular 6.
8 A That was part of our job, is to make field
9 examinations to see if the claim corners were up and
10 all that, as well as making a periodic visit to see
11 what the mines were doing.
12 Q Okay. And this was during the 1950s,
13 correct?
14 A Yeah, the Circular 6 program expired in
15 '62, maybe.
16 Q Well, it looks like that's noted here on
17 Exhibit No. 7, Circular 6. Is this your
18 handwriting?
19 A It says extended to -- no, it ended in
20 1960.
21 Q Yeah, I see that.
22 Is this your handwriting at the bottom of
23 the page?
24 A No.
25 Q Okay.

1 MR. SANDS: John, you may want to
2 clarify what page you're on.
3 MS. KANE: Which page you're on.
4 MR. VORHEES: I'm on Page 1 of
5 Exhibit No. 7. Thank you.
6 Q (By Mr. Vorhees) Do you want to -- let's
7 take a look at that Exhibit 7 again, bottom of the
8 page there.
9 A Oh, yeah. Oh, yeah, this -- this is -- I
10 was thinking -- I think when -- when I was working
11 for Terra Spectra, a contractor of the Corps of
12 Engineers on the big Navajo Atlas Program, I said,
13 Well, the best data on the history of these mines is
14 in the Circular 6 files. Well, what is Circular 6?
15 And this is something I said to Terra Spectra in Las
16 Vegas. I remember that now.
17 Q Okay. So this is --
18 A Eventually I explained to them why I
19 thought it was important to acquire the Circular 6
20 certification files because of all this historic
21 data in them.
22 Q Okay. So --
23 A But that's my writing, yes.
24 Q Okay. This is your writing. Good. Okay.
25 Well, then when you refer to the Circular

1 6 files, do you know where they're located?
2 A They are all in the National Archives,
3 Rocky Mountain Region in Broomfield, Colorado. I
4 think they were -- if I remember right -- since I
5 have looked at them so many times and ordered so
6 many of them, I think there's something like 1,200
7 properties were certified under the bonus program,
8 Circular 6.
9 Q And part of your job was to do the actual
10 certification?
11 A I certified maybe two or three in the
12 Cameron area and visited -- maybe visited dozens of
13 them all over northern Arizona, all over Arizona,
14 because they were probably certified down in Gila
15 County, so...
16 Q And when you say "certified," what exactly
17 did you do to certify --
18 A I wrote the report. We went out, went
19 with the operator, he showed me the claim corners
20 and a claim map, and all these documents he had
21 about -- from the Navajo Mining Department, Navajo
22 Tribal Mining Department, Window Rock, assignment of
23 the mining permit. A mining -- an individual Navajo
24 could stake a claim and get a mining permit to mine
25 on that, but he could assign that to an individual.

1 And this all had to be approved by the tribal
2 council as well as the Bureau of Indian Affairs.
3 And on the reservation, you know, if you
4 didn't have -- they had to show you the mining
5 permit and the assignment of the mining permit.
6 You'd copy this all down and put it in your report.
7 And then you had to show proof that he shipped ore
8 to a mill or buying station, so this all went into a
9 certification report.
10 Q Okay. And I'm going to ask you about
11 buying stations and mills. That's coming right up,
12 but the -- this document is --
13 A Oh, here. Yeah, 1,281 certified
14 properties.
15 Q Okay.
16 A And the government paid out a total of $17
17 million on this. I don't know where I got those
18 numbers, probably -- probably out of the O'Rear
19 report, because that sounds like stuff he had.
20 Q We have that, the O'Rear report, and we'll
21 be getting to that later on. Okay.
22 What's that -- do you see that number
23 NRG...
24 A That's National Record Group. If you went
25 to the archives and you said, I want to look at the

1 AEC certification for it, you would have to say,
2 They are under National Record Group 434. '99 is
3 the year they were sent there, and it's record group
4 207, so...
5 Q And that's the archive in Broomfield,
6 Colorado?
7 A Yeah, it moved off the Federal Center out
8 to Broomfield.
9 Q To Broomfield. Okay. All right. Good.
10 And -- and look, here is Circular 6
11 attached to this exhibit. You recognize that?
12 A Uh-huh.
13 Q Okay. Let's go to Exhibit No. 8. Again,
14 this is a document that we received from your --
15 from your archives, if I can characterize it.
16 Have you seen this before?
17 A Yeah. Yeah, when I wrote a report for
18 Arizona Geological Survey on the mines in the
19 Chilchinbeto area -- capital C-H-I-N -- no, excuse
20 me. Capital C, then H-I-L-C-H-I-N-B-E-T-O. That's
21 the area that we called around the north end of
22 Black Mesa. Anyway, the Chilchinbeto area.
23 I would write a report for the Arizona
24 Geological Survey on it, or maybe this is when I
25 certified that property. Anyway, somehow I remember

1 getting this out of the AEC files in Grand Junction
2 about what they had done previously over there on
3 those claims.
4 Q Okay. Now, again, just for everybody's
5 edification, I'm going through all the exhibits --
6 and thank you, Mr. Chenoweth, for that description
7 of that document. And then Mr. Neumann is going to
8 ask you some very specific questions about some of
9 these exhibits. So we are not going to go over
10 them -- we're not going to duplicate our efforts
11 here, just so everybody knows that.
12 MR. VORHEES: Oh, did someone join on
13 the phone?
14 MS. RONGONE: Hi. Yes, hi. This is
15 Marie Rongone at EPA. I'm sorry to be late, and I
16 just want to let people know that I will be jumping
17 on and off during the day, so I won't interrupt the
18 deposition when I jump off.
19 MR. VORHEES: Okay. And, Marie, when
20 that little bell goes off when you jump back on,
21 just say, Hi, it's Marie, and we'll all welcome you.
22 We wish you were here.
23 MS. RONGONE: Okay. I just didn't
24 want to interrupt you while you were speaking.
25 MR. VORHEES: Okay. Fine. That's

1 right.
2 Q (By Mr. Vorhees) Okay. So -- so now we
3 are on Exhibit No. 9, and, again, a document that is
4 historic. It's got your --
5 A That's my copy I had.
6 Q Yeah, look at this. This is a designation
7 that you had this copy. That's your home address,
8 is it not?
9 A Yeah, right. Somebody borrowed that from
10 me, so I stuck my sticker on so they'd send it back
11 to me.
12 Q Okay. Good. And this one is entitled:
13 Non-core Dry Hole Drilling at Cove Mesa, Arizona.
14 A Uh-huh.
15 Q It's got Confidential Security Information
16 on it labeled on the front. What does that
17 designation mean?
18 A Oh, it had -- it had -- I think it had
19 some ore reserve data and some cost data. Anyway,
20 it was -- since this was dated in '53 -- I mean '52,
21 at that time it was just called security
22 information. That's kind of a holdover from the old
23 Manhattan days, because they didn't hardly ever use
24 that anymore. It used to be just proprietary data,
25 and then it was canceled sometime. I forget. It

1 doesn't show when it was canceled, but it's been --
2 it's been -- I think there's a stamp goes across
3 here that says classification canceled.
4 Q Okay. Well --
5 A Because I referred to this document in a
6 report I wrote on Cove Mesa, and it had all been
7 declassified by the time -- by the time -- by this
8 time.
9 Q Great. And so we appreciate that. We'd
10 like you to direct your attention to Page 17 of this
11 report.
12 A Okay. Oh, yeah.
13 Q And --
14 A This gave the cost data that I see on Page
15 11. It gives all this government -- how the
16 government spent their money on that. That might be
17 one reason it was classified.
18 Q Okay. But at some point in time, it was
19 declassified?
20 A Oh, yeah.
21 Q Okay. And you used this --
22 A What page did you ask me to look at?
23 Q Oh, Page 17.
24 A Oh, yeah. Okay.
25 Q Got it? Now, there's a -- there's a

1 statement here under the recommendations section.
2 The middle paragraph, I'm going to read it into the
3 record. Quote, The lack of geological investigation
4 on the Colorado Plateau makes it necessary that the
5 Atomic Energy Commission make these studies.
6 Did I read that correctly?
7 A That's what it says.
8 Q Okay. And will you comment for us on
9 that? What is -- what is that recommendation?
10 A I don't know. I really don't know what --
11 Ray Garcia, I knew him. And I have no idea what he
12 wrote that for, because -- because the Colorado
13 Plateau had been investigated since the beginning
14 of -- since the 19-teens or even -- even the early
15 surveys -- the Hayden Survey in 1881, they did
16 geologic investigations of the Colorado Plateau. I
17 really don't know what he means.
18 Q Okay. Well, in any event, is it true that
19 the Atomic Energy Commission was making -- was doing
20 studies?
21 A Oh, yeah. They were -- he might be
22 meaning that they're studying the Morrison Formation
23 in more detail than it's ever been studied before.
24 That's the only conclusion I can make.
25 Q Okay. Well, let's then now go over to

1 Exhibit No. 10.

2 A I really don't know.

3 Q And I should state for the record that

4 number -- I'm sorry.

5 Just go back for a moment. Exhibit No. 9

6 is June 16, 1952, and this is Exhibit No. 10

7 entitled: Exploration Drilling Techniques on the

8 Colorado Plateau by Mr. Kellogg, John P. Kellogg,

9 dated November 12, 1952.

10 Have you seen this document before?

11 A Oh, yes.

12 Q Okay. And could you just briefly describe

13 what this is.

14 A He -- this was released by Oak Ridge, so

15 this was really a public, well made -- in all the

16 libraries and everything around the country because

17 it was released by the Technical Information Center.

18 It wasn't just open-filed. And it looks like he's

19 describing core drilling and then air drilling.

20 He's just describing different techniques, I guess,

21 so people would know what he thought the best types

22 of drilling were.

23 Q And he was with the Atomic Energy

24 Commission?

25 A He was -- he was a geologist with the AEC.

1 Q Okay. Did you happen to know him?
2 A Briefly. He left and went in his own
3 consulting probably about the time I -- every year
4 they bring all the geologists, all the field people,
5 into Grand Junction for an annual meeting and all
6 that, and I think I met him at a meeting in 1953.
7 Q Okay.
8 A And then he left the Commission.
9 Q Well, let's go Exhibit No. 11, which is a
10 speech that's dated May 29, 1954 by Mr. W. Spencer
11 Hutchinson, Jr.
12 Do you see that speech?
13 A Yeah.
14 Q And do you recall Mr. Hutchinson?
15 A Well, he was assistant manager down there,
16 as it says here.
17 Q Okay.
18 A This is Sheldon Wimpfen.
19 Q And I want to direct your attention,
20 first, to Page 6 of this speech. Have you read this
21 speech before?
22 A No, I don't remember ever seeing this
23 document.
24 Q Okay.
25 A Is it -- was it from my files?

1 Q Well, it's...
2 A It doesn't look like it. I don't...
3 Q I believe this is from Broomfield.
4 A Okay. Because I don't...
5 Q And, really, I want you just to focus on
6 two paragraphs of this speech, and I want to ask you
7 some questions about the AEC organization, the
8 divisions of the AEC. I just want to ask you about
9 the different divisions of the AEC.
10 A Oh, yeah.
11 Q And they're summarized here, and perhaps
12 what I should do is just give you a moment to read
13 the first two paragraphs on Page 6 for the rest of
14 us.
15 A Exploration and mining -- yeah --
16 Q See, it starts with "The Commission's
17 office at Grand Junction."
18 A Uh-huh. We're familiar with the three
19 divisions.
20 Q Okay. Well, is the description that
21 Mr. Hutchinson is giving here accurate with regard
22 to the three divisions of the AEC?
23 A Yes.
24 Q Okay. And --
25 A At that time, in 19...

1 Q In 1954.
2 A Yeah.
3 Q And with regard to that -- and thanks for
4 focusing our attention on 1954 because as we know,
5 government changes.
6 Can you just describe as of 1954, when you
7 were employed by the Atomic Energy Commission, what
8 those three divisions were and what they did.
9 A Well, there's Exploration Division that I
10 was in, and we were the ones out in the field. We
11 were drilling. We were -- like I said, we were
12 using airborne and reconnaissance around. And we
13 had field camps that just do -- go into new areas
14 and look at the geology, and we did mine-mapping and
15 things like that.
16 But the Mining Division, they administered
17 the leasing program here in Grand Junction and also
18 they would go out and check distances from mines to
19 mills to -- so the miner could get his six cents a
20 ton-mile for the first 100 miles without using some
21 circulus route to get more money. They had official
22 routes from mines to mills so everybody would get
23 the same amount and there would be no falsifying.
24 And they looked at the -- they really administered
25 the bonus program, but they would always ask for

1 some of us guys in the field to help them out when
2 it was -- when they couldn't get to the bonus
3 program to inspect them.
4 Q Now, let me -- let me stop you there for a
5 second. You mentioned that you were in the
6 Exploration Division.
7 A Yeah.
8 Q And you were doing geological
9 investigations, examinations, of favorable areas.
10 And you mentioned drilling?
11 A Yeah.
12 Q Okay. And then the division you were just
13 referring to in terms of --
14 A Mining Division.
15 Q Was the Mining Division.
16 A Mining Division, yeah.
17 Q Okay. And -- and I understand what you
18 just said about that.
19 Then will you tell us what the Processing
20 Division was.
21 A That was the fellows that went to visit
22 the mills every month. Like some of us -- well, as
23 the program -- it did change from '54 and there
24 wasn't any exploration. We were more of an industry
25 liaison. The Mining Division was -- I mean the

1 Processing Division had to do with the milling, the
2 ore-buying stations and all that, and they would
3 actually make monthly inspections to all the mills.
4 Q Okay. So this is the moment that we want
5 to describe --
6 A And they --
7 Q Hold on a second, Mr. Chenoweth.
8 A Okay.
9 Q We want to describe the system in a little
10 more detail. So the AEC has three divisions.
11 A In '54.
12 Q In '54. Exploration, mining, and
13 processing. And we have heard the term "ore-buying
14 station" used and also the term "milling" used,
15 okay? Now, we want to just pause for a moment here.
16 Will you describe for us the process by
17 which uranium would be mined, taken to the
18 ore-buying station, and then milled under the
19 program that was created by the Atomic Energy
20 Commission.
21 A Uh-huh.
22 MR. FOSTER: Are we talking about
23 1954?
24 Q (By Mr. Vorhees) And we're in 1954.
25 A Well, the miners -- miner would mine the

1 ore, and they would get it -- they would have their
2 own trucking company or a contract company haul that
3 to the nearest market. And if it was in an area
4 where there were no mills, the AEC would put in
5 ore-buying stations to encourage production, like --
6 like -- I'm trying to think of a good example.
7 Well, at Shiprock, there was no immediate
8 market for the Navajo or to VCA's mill in Durango,
9 and that would be a long haul for the independent
10 miners, like Thomas Clani or Eugene Topahotso, those
11 guys.
12 Q Okay.
13 A So the AEC would put -- put an ore-buying
14 station in in Shiprock, and that provided a market
15 for those -- for those independent miners that
16 didn't want to haul all the way to VCA in Durango.
17 And AEC would buy it, sample it, and pay the miners
18 based on Circular 5.
19 Q Okay. And my understanding is is that in
20 1954, the Atomic Energy Commission was the only
21 purchaser of uranium.
22 A That's not really true.
23 Q Why don't you tell us, then --
24 A Because if you read some of the early AEC
25 documents, you will see that Shattuck Chemical had a

1 special license in Denver, Colorado to buy
2 high-grade uranium for medical purposes.
3 Q We've got --
4 A That's a very unknown fact, but the State
5 of Utah -- you have probably seen this.
6 Q Yeah.
7 A The State of Utah heard about that, and
8 they says, Can you fill us in on this because we
9 think some of this high-grade uranium was mined in
10 Utah. And I got permission from the DOE to go down
11 and look in the records they had in the archives
12 down there. They had a lot of records on this early
13 Shattuck mineral -- Shattuck Chemical Company's
14 production, and I wrote a report for the State of
15 Utah that you probably have.
16 Q We've got it. And I'm so glad you brought
17 up Shattuck, because that is the only example that
18 we have been able to uncover of anybody but the
19 Atomic Energy Commission being a purchaser.
20 A That's what I found.
21 Q Okay. Good. Well, actually, that
22 report -- we're going to get to that report. We are
23 not going to let --
24 A -- out of their sight.
25 Q Okay. So in any event, so the AEC created

1 these ore-buying stations to facilitate the miners'
2 ability to sell their ore that they mined.
3 A Right.
4 Q Okay.
5 A Yeah.
6 Q And --
7 A Provided a nearby market in remote areas.
8 Now, in a place like Uravan, they would -- U.S.
9 Vanadium at Uravan would have their own ore-buying
10 station there, which was connected to the mill. But
11 in remote areas, the AEC established these and
12 then -- like at Shiprock when Kerr-McGee finally
13 built a mill there, the AEC sold their stockpile ore
14 from the ore-buying station to Kerr-McGee to process
15 at Shiprock.
16 Q Okay.
17 A So eventually, the ore from the ore-buying
18 stations got sold to mills, and AEC recovered a
19 little bit of their money they had in there, but not
20 much.
21 Q Okay. And let's now -- let's look at this
22 third division, which we have identified in Exhibit
23 No. 11, Page 6, as the Processing Division. Could
24 you tell us what the Processing Division did as of
25 1954?

1 A Well, eventually -- right through the
2 whole program, so 1970, they visited the mills every
3 day, but also they did -- they supported research on
4 new processes or new circuits or new -- a new way to
5 get uranium out of the rocks. And they actually
6 had -- down on the site here in Grand Junction, they
7 had a pilot plant, they called it, and that was an
8 R&D mill.
9 So if you found a new discovery like
10 Ambrosia Lake -- the Dysart discovery at Ambrosia
11 Lake, D-Y-S-A-R-T, they would take that ore, bring
12 it up here, and experiment on it the best way to
13 recover the uranium out of that ore, because that
14 was a whole new type of mineralogy. They worked out
15 the mineralogy for the carnotite-type ore way back
16 in the --
17 Q We're going to have to spell that one too,
18 Mr. Chenoweth. Let me just stop you for just a
19 moment, and let's spell that last one because --
20 A C-A -- C-A-R-N-O-T-I-T-E.
21 Q Okay.
22 A I think.
23 Q And what you're just referring to, I
24 believe, is the -- is the pilot mill that was built
25 in Grand Junction, Colorado.

1 A Yes, on the site down there.
2 Q Right. And there -- apparently there were
3 two mills. There was the small one to start with,
4 and then --
5 A Yeah.
6 Q -- and then it was --
7 A They had the small one. I forget who the
8 contractor was, and then they had the bigger one
9 that Gallagher Company operated. And then they lost
10 the contract, and National Lead of Winchester, Mass.
11 took it over.
12 Q Okay. So let's go back just for a moment
13 to the Processing Division and the work that they
14 did. Were you ever in the Processing Division?
15 A No.
16 Q So you were entirely in the Exploration
17 Division?
18 A Yeah, in exploration. But like I say, in
19 '54 -- yeah, in '54, I don't think the Exploration
20 Division had anything to do with the Mining
21 Division. It was later when -- in the late '50s
22 when I was asked to help them out on certification
23 reports.
24 Q Okay. And the mills that we're referring
25 to are mills that would take the ore and process the

1 mill into -- you mentioned this term before --
2 yellowcake?
3 A Yellowcake. That's uranium concentrate.
4 It's a chemical precipitant, and I think technically
5 a chemist would call it uranium diuranate.
6 Q Okay. Now, we're going to spell that
7 also.
8 A D-I-U-R-A-N-I-T-E, maybe.
9 Q Okay.
10 A It's a chem -- it means it has ammonia in
11 it and all that.
12 Q Okay. So the mill was built in order to
13 process the uranium ore into yellowcake.
14 A Yeah.
15 Q Okay.
16 A Those are existing mills going back to the
17 old vanadium mills. They were vanadium mills, and
18 they got converted to get uranium out. But --
19 and -- like Uravan, Durango, Monticello, Rifle, but
20 the Climax mill here in Grand Junction was the first
21 uranium mill built strictly for uranium-vanadium
22 under the AEC program.
23 Q Okay. Well, and we have got -- we've got
24 some exhibits for that.
25 A But, anyway, the mill converted, and the

1 AEC had contracts with each individual mill and the
2 price varied based on the economics. The AEC wanted
3 the mills to make some money but not a lot. So
4 they'd say, Well, okay, we've looked at your
5 books -- because the AEC hired lots of bookkeepers
6 and auditors to audit the milling contracts, and so
7 the price you paid each individual mill was based on
8 that mill's economics and so it varied from mill to
9 mill. And it wasn't just strictly $8 a pound, like
10 some mills were getting $11 a pound, some were
11 getting $9 a pound. Climax, you know, I think was
12 getting about $10 a pound. Anyway, it's all in the
13 public record of what each mill was getting, and
14 that's in the Albrethsen McGinley report that I know
15 you guys have.
16 Q Okay. And you're --
17 A And that explains -- that explains more
18 about the milling contracts than I know, about how
19 they negotiated with each company based on their
20 economics to make them a fair profit.
21 Q Okay. And you're familiar with the
22 Monticello mill?
23 A A little bit.
24 Q Okay. Do you know who ran the Monticello
25 mill?

1 A Yeah. It was run by a contractor -- the
2 same contractors that had the pilot plant here,
3 Gallagher Company out of Salt Lake and National Lead
4 out of Winchester, Mass. And that's all explained
5 in the Albrethsen McGinley report.
6 Q Okay. And we have that. We're going
7 to -- we're going to talk about that in a little
8 bit.
9 Let's go to Exhibit No. 12. If you would
10 go with me just briefly on this exhibit. This is,
11 for the record, a speech by Quenton Brewer, the
12 Deputy Director of the Exploration Division, June 9,
13 1954.
14 Did you know Mr. Brewer?
15 A Briefly. He didn't -- I knew -- I think
16 maybe I met him once, but he left early in the game.
17 Q Okay. Well, as of 1954 -- if you turn
18 with me to Page 5 of this speech, and let's just
19 look at the -- at the paragraph right in the middle
20 of the page that begins as follows: The
21 Commission's exploration program utilizes some 200
22 vehicles, 150 house trailers, 22 Caterpillars, and a
23 total of about 150 other items, among which are
24 water trucks, dump trucks, generators, water pumps,
25 air compressors, and motor graders.

1 A Right.
2 Q Now, is that -- is that describing the
3 equipment of the exploration?
4 A Yeah. That was the field camps. They had
5 field camps all over the Colorado Plateau, mainly
6 for drilling. And then drilling, you had to have a
7 bulldozer to build drill sites and all this was to
8 support the field -- all these trailers were the
9 people -- what they lived in, and vehicles, Jeeps,
10 pickup trucks, power wagons. Yeah, that...
11 Q And these are all employees of the AEC
12 that were doing this?
13 A No. We used Walker-Lybarger, see.
14 Walker-Lybarger, the contractor, they did -- they
15 ran the bulldozers, they did the power work, they
16 ran the supply trucks, they run the motor graders to
17 keep the roads clean, and they did the maintenance
18 on the trailers, and they did maintenance on all
19 this stuff. So in a field camp, there would be the
20 AEC personnel and then the Walker-Lybarger
21 personnel.
22 Q And the Walker-Lybarger personnel were
23 working as the -- and you referred to -- they were
24 the prime contractor?
25 A They were the prime contractor out here.

1 And they did not have a Q clearance. They had an L
2 clearance. And I think the surveyor -- the guys
3 that surveyed the drill holes were AEC employees,
4 but I think the rodmen, surveyors' helpers, were
5 Walker-Lybarger. There was a funny distinction
6 there, and the guys probing the drill holes were
7 Walker-Lybarger, I know. They weren't AEC. It was
8 a funny division about service personnel and
9 technical personnel.
10 Q Okay. And you're referring to these
11 security clearances. Are these security clearances
12 that are issued by the Atomic Energy Commission?
13 A Yeah. Somehow the FBI came around and
14 interviewed people. Like a friend of mine wanted to
15 join the AEC and he put me down as a reference. The
16 FBI would come around and talk to me about do you
17 know about this guy's background and all that.
18 Q Right.
19 A Is he a communist? I said, I don't know.
20 Q Do you know what the dump trucks were used
21 for?
22 A Well, I know the AEC buying stations, the
23 AEC ore-buying stations -- the miners would bring
24 their ore in to get it weighed, it'd get crushed,
25 and they'd dump it in a truck and take it to a

1 stockpiler. I think the dump trucks were probably
2 at the ore-buying stations.
3 Q And when you say they got weighed, were
4 they weighed with equipment that was owned by AEC?
5 A Yeah, they had scales at the ore-buying
6 station. They'd weigh a truck when it's full, he'd
7 dump his ore, and then they'd weigh it when it's
8 empty to get the dry -- the wet tons.
9 Q And just back to the dump trucks for a
10 second, do you recall if they had the Atomic Energy
11 Commission logo on the trucks?
12 A Probably did. Everything else did. The
13 trailers did, the Jeeps, the water trucks,
14 everything had it.
15 Q We've got --
16 A The ore-buying stations were mainly
17 operated by the contractor, Walker-Lybarger, and
18 then Lucius Pitkin took it over.
19 Q Okay. And we have some photographs of the
20 trucks, so this -- again, I don't mean this to be a
21 memory test at all. If you recall this, but do you
22 recall the color of the trucks?
23 A Pardon?
24 Q Do you recall the color of the trucks?
25 A No.

1 Q Okay.
2 A Everything else was gray. I know that our
3 Jeeps were gray, but the Caterpillars were
4 Caterpillar yellow. They didn't have any...
5 Q And the Caterpillars were bulldozers?
6 A Yeah, Caterpillar bulldozers.
7 Q Do you recall how many axles the trucks
8 had on them?
9 A Pardon?
10 Q How many axles the trucks had or tires.
11 MR. FOSTER: Any particular type of
12 truck, because there may have been -- you may want
13 to narrow it.
14 A Probably just little 6-ton trucks with
15 maybe two axles. I don't know. I know what you're
16 getting at and I can't help you.
17 Q (By Mr. Vorhees) That's okay. We're going
18 to -- we'll work on that a little bit.
19 Let's go to Exhibit No. 13. Do you recall
20 this article?
21 A No, I don't. No, I don't think I have
22 ever seen this document before.
23 Q Okay. Let's -- let's go to Exhibit No.
24 14.
25 A Oh, yeah. Go back to 13. I'm looking at

1 the wrong one. Yeah, I have seen this one. Exhibit
2 13, that's my writing at the bottom.
3 Q Okay. Well, it looks like an article
4 entitled: How to Get into Milling.
5 A Yeah. That's out of a special issue of
6 the E&MJ, which I think I had in my files, the old
7 faded issue of E&MJ that had how to -- U3O8, Roads
8 to Riches, or something like that.
9 Q Okay. And you -- you refer to the mill at
10 Shiprock, New Mexico.
11 A Yeah.
12 Q Is that a picture of it there?
13 A Yeah. That's Kerr-McGee's mill.
14 Q And you have been there?
15 A Huh?
16 Q You've actually traveled to that mill?
17 A Oh, yeah. In fact, at Shiprock, I was in
18 this field camp out in the mountains. We always
19 parked our private vehicles at the mill in the mill
20 parking lot and then drove our Jeeps and things back
21 out in the field when we would work ten days and get
22 four days off.
23 Q Okay.
24 A And Kerr-McGee was real good to watch our
25 private vehicles when we were out in the field for

1 ten days.

2 And then when I used to collect drilling

3 data on Kerr-McGee, I would go in the mill office

4 here and talk to their chief geologist, Jack Landon,

5 about what they were -- how much they were drilling

6 that month, as you've seen in my field notes.

7 Q Okay. Well, now, I'm going to ask just a

8 couple questions about the next few exhibits. I'm

9 not sure if you have actually seen these before, but

10 Exhibit No. 14 is -- is a document entitled:

11 Quitclaim Deed. And involves Babbitt Bros. Lands,

12 Inc.

13 Are you familiar with the Babbitt Bros.?

14 A Oh, yeah.

15 Q Okay. Who are they?

16 A That's a -- that's a big organization that

17 has trading posts all over the Navajo -- Northern

18 Arizona, Navajo lands. They had -- in Flagstaff, I

19 think they had the lumber company, the Ford agency,

20 the Babbitt Bros. Department Store. They were a

21 major organization in the Flagstaff area.

22 Q Okay. And I don't want to get too

23 technical about this, but my understanding is that

24 mines would require some legal documentation, such

25 as a lease.

1 A Uh-huh.
2 Q This one is a quitclaim deed.
3 A Uh-huh.
4 Q Let's go to 15. You've reviewed leases
5 like this before?
6 A A few.
7 Q Okay. And this document is entitled:
8 Mining Lease.
9 A Yeah.
10 Q Have you seen this document before,
11 Mr. Chenoweth?
12 A No.
13 Q Okay. Well, then we'll -- we're going to
14 just pass right by this one. But before we do, is
15 this document typical of the mining leases you
16 actually have seen previously?
17 A Huh?
18 Q Is this document typical of the mining
19 leases you have seen previously?
20 A Most of the mining leases I have seen have
21 been with the Bureau of Indian Affairs on Navajo
22 lands. I don't -- I very rarely ever saw -- I don't
23 think I ever saw a lease like this in anybody --
24 except in some of the certification reports. I have
25 seen leases with the Santa Fe Pacific Railroad, and

1 they are much like this.
2 Q Okay. All right. Exhibit 16 is, again,
3 identified here as a mining lease of February 1st,
4 1955. Do you see that?
5 A Uh-huh.
6 Q And I take it you have not seen this
7 document before.
8 A Yeah.
9 Q Okay. All right. Let's go to 17. Now,
10 we're looking at a document entitled: Geologic
11 Studies in Diamond Drilling in the East Carrizo,
12 C-A-R-R-I-Z-O, Area, Apache County, Arizona and San
13 Juan County, New Mexico.
14 Have you seen this document before?
15 A Very much, yes.
16 Q Okay. Why don't you tell us what this is.
17 A This is a report of the -- of the first
18 major drilling project that AEC did in -- what we
19 always called the Eastern Carrizo Mountains. And
20 it's -- it's about all of the core drilling.
21 Diamond drilling refers to core drilling. And this
22 was a report -- here was -- here was an area that
23 had lots of little mines on the rims and a big mesa
24 behind them -- not -- well, a few big mines. But
25 there were mines on the rim. VCA had a few big

1 mines and very little exploration.
2 And the AEC geologists studied this area
3 and said, Well, you know, if we're going to find --
4 we think we can really find some uranium by drilling
5 on this mesa. And it was called King Tutt Mesa from
6 the Navajo that lived there.
7 Q King Tutt with two -- two Ts.
8 A Two Ts.
9 Q Three Ts. Three Ts.
10 A Yeah.
11 Q Three Ts.
12 A T-U-T-T.
13 Q Yeah.
14 A Because that's the way it is in the Navajo
15 census record, because the USGS and I got in a big
16 argument. He said, Well, it's just one -- two Ts,
17 and I pulled out a paper I got in Window Rock. It's
18 two Ts. It's King and Despa Tutt --
19 Q Right.
20 A -- were the landowners, were grazing
21 permit owners up there.
22 Q Okay. So now this report is authored by a
23 number of gentlemen, and it's from the Exploration
24 Division. That's your division, right?
25 A Yeah.

1 Q Okay. And were these three authors -- and
2 I'm going to read the names. John Masters.
3 A Yeah.
4 Q Kenneth Hatfield, James Clinton, Robert
5 Dickson, Richard Maise, M-A-I-S-E, and Lewis
6 Roberts. And that's L-E-W-I-S Roberts. Were they
7 all your coworkers?
8 A Yes, I knew all of them.
9 Q Okay.
10 A I was working -- I was -- in '54 and
11 whenever they're -- this is '55.
12 Q This is --
13 A I was working probably up on -- in the
14 Rattlesnake area at that time and they were working
15 over there.
16 Q Okay. So these are all your coworkers?
17 A Oh, yeah.
18 Q Okay. And --
19 A In fact, Hatfield became project geologist
20 on a project later with me.
21 Q Okay.
22 A He was my boss.
23 Q And were these all people who we would
24 call your colleagues at the Exploration Division?
25 A Oh, yes. Yes.

1 Q Doing work that was similar to yours?
2 A Oh, yeah. Yeah. We all did the same kind
3 of work, drilling for uranium.
4 Q Okay. Well, that's what I was going to
5 refer to as the next question. If you turn with me
6 to the exhibit, Page 5, which is Page 6 of the
7 report, where it says "Introduction." Do you see
8 that?
9 A Yeah.
10 Q And it refers to the Exploration
11 Division's work in terms of drilling and number of
12 holes; is that correct?
13 A Yeah.
14 Q Okay.
15 A It's a summary of -- a summary of that
16 drilling contract.
17 Q And that was drilling conducted by the
18 Atomic Energy Commission?
19 A Right. The drilling -- the actual
20 drilling was under -- was a contract linked to
21 Minerals Engineering Company. See, the AEC would --
22 when they wanted to drill, they couldn't just say,
23 You're my buddy, go out and drill here. They'd have
24 to advertise a document saying we want to drill so
25 many holes in this area, you can go down and inspect

1 this area and all that, and give us a bid. And
2 Minerals Engineering apparently got the low bid on
3 this Contract 1260.
4 Q Okay. All right. Let's go to Exhibit No.
5 18.
6 A 18?
7 Q Yep. And that's, again, another lease
8 we've located.
9 A Yeah.
10 Q The parties here.
11 A Oh, A & B.
12 Q A & B. Who's A & B?
13 A They were two gentlemen out of -- if I
14 remember, out of Phoenix that had formed their own
15 mining company, and who knows what happened to them
16 after the boom.
17 Q Okay. All right. And the date of this
18 lease is June 3rd, 1955. Do you see that? I didn't
19 ask you this, but I will.
20 You haven't seen this before, have you?
21 A No.
22 Q Okay. No. 19.
23 A Oh, yeah.
24 Q Now, this report -- again, I'm directing
25 your attention to a report from the Exploration

1 Division, and it's dated June 1955, entitled:
2 Reconnaissance of the Cameron area in the
3 C-O-C-O-N-I-N-O County.
4 How do you pronounce that, Mr. Chenoweth?
5 A Coconino.
6 Q Coconino. Coconino County, Arizona, by
7 David Hinckley, H-I-N-C-K-L-E-Y.
8 Was he one of your colleagues in the --
9 A Yes.
10 Q -- Exploration Division?
11 A He was the first AEC geologist to work in
12 the Cameron area.
13 Q And did you know him?
14 A Oh, yeah.
15 Q And I take it this is his -- his report?
16 A Uh-huh.
17 Q Now, did you prepare reports similar to
18 this?
19 A Yeah, I -- yes.
20 Q Okay. And if you turn with me to -- to --
21 the exhibit page is Page 20.
22 A Page?
23 Q Page 20.
24 A 20. Okay.
25 Q Under the heading --

1 A I've got to find it.
2 Q Yeah. I'll let you -- let you get that.
3 A Oh, here we are.
4 Q Now, are you on Page 20 of the exhibit and
5 it's Page 17 of the report?
6 A Oh, yeah. Here I am. Oh, yeah.
7 Q Okay. Now, this -- I want to direct your
8 attention to this term here, "rim-stripping." Could
9 you tell us what that is.
10 A Well, this was one of the things that AEC
11 did when a new discovery was made, and probably here
12 would be an outcrop of uranium-vanadium mineral or
13 just uranium minerals and it would probably be hard
14 to see. And to get a better idea of the extent and
15 fresh appearance, if there were a lot of these in
16 one area, they'd take -- Walker -- we'd send a
17 Walker-Lybarger bulldozer operator down there and
18 he'd clean off the face. He'd just move away all
19 the loose dirt on the face so it'd be a nice, clean,
20 visible surface of what the uranium looked like.
21 Q And, again, that's the prime contractor
22 for the AEC that would do that work for the AEC.
23 A The geologist probably would recommend
24 this and he'd get approval, and they'd send the guy
25 down with a bulldozer on a flatbed to do this.

1 Q And the bulldozer would just take off the
2 top layer of dirt --
3 A Yeah. There'd be an outcrop on a hill and
4 he'd just clean that all off so you'd get a fresh
5 look at those rocks.
6 Q And you'd take a fresh look at the
7 uranium --
8 A Yeah, and then you'd sample it and all
9 that.
10 Q Okay. All right. Well, that's --
11 A This is the only reference I have ever
12 seen to the bulldozing that was done at Cameron.
13 Q Okay.
14 A I don't even know where it was.
15 Q Well, we're looking at that, and let me
16 quote for the record here. What we're referring to
17 on Page 17 of the report -- but Exhibit No. 19, Page
18 20 -- is, quote, Portions of 15 uranium outcrops
19 were stripped by a bulldozer between December 19,
20 1953 and February 3, 1954.
21 Did I read that correctly?
22 A Yeah.
23 Q And that would have been done by the prime
24 contractor?
25 A Yeah. And I think we probably had a --

1 Hinckley might have been living in a trailer in
2 Cameron there at the time. He would -- he would go
3 out and show them where to do this.
4 Q Okay. Mr. Hinckley, a member of the
5 Exploration Division.
6 A Uh-huh.
7 MR. VORHEES: Okay. Well, then, that
8 takes us through our second hour. Thanks,
9 Mr. Chenoweth. We'll change the tape.
10 VIDEOGRAPHER: The time is
11 approximately 11:15. This is the end of Tape No. 2
12 in the deposition of William Chenoweth. We are
13 going off the record to change tapes.
14 (Recess taken.)
15 VIDEOGRAPHER: The time is about
16 approximately 11:17. This is the beginning of Tape
17 No. 3 in the deposition of Mr. William Chenoweth.
18 Q (By Mr. Vorhees) So, Mr. Chenoweth, I'm
19 looking at Exhibit No. 20 in our book, and it's a
20 document from the United States Atomic Energy
21 Commission, dated May 24, 1956, entitled: AEC
22 Announces New Uranium Procurement Program and
23 Extension of the Initial Production Bonus.
24 Do you see that?
25 A Yes.

1 Q Okay. And you have referred to the
2 bonuses before that were offered by the AEC.
3 Apparently this is an extension of that bonus
4 program?
5 A I think so, yeah, because -- I don't -- I
6 don't think this would be the Circular 6 bonus
7 program. I think this would be the initial -- I
8 don't know what they're referring to. The initial
9 production bonus for uranium. I'm pretty sure the
10 Circular 6 ended in '61 or '62. This is -- anyway,
11 it extended the basic price of uranium, I know that.
12 This is the old...
13 Q Okay. So this is...
14 A I don't think I have ever seen this. I
15 know they put out a press release extending the
16 purchase program from -- from -- on into the '60s,
17 from '62 -- yeah, after -- beginning in 1962, the
18 old Circular 5 didn't apply anymore. The mills
19 could pay the uranium miners what they thought was
20 a -- I forget the wording they used, but a qualified
21 price or something. And the AEC wasn't paying the
22 mills anymore -- they had to negotiate the price for
23 the concentrate. Everything changed in 1962, and
24 this is going to extend it on through '66.
25 Q Okay.

1 A This new program.
2 Q The --
3 A This is all explained, more than I can
4 remember recalling, in the Albrethsen McGinley
5 report, about the stretch-out program is what this
6 is talking about.
7 Q Okay. Then let's defer to --
8 A Because I don't know much about it.
9 Q Okay. Fine. That's -- actually, that's a
10 good idea. Let's go to the next exhibit, because
11 there are subsequent exhibits here that explain this
12 in more detail in terms of what the history was of
13 the purchasing by the AEC for uranium.
14 So let's go to this next exhibit. It's
15 No. 21, and this is entitled: Drilling and Geologic
16 Studies in the Northwest Carrizo Area, Apache
17 County, Arizona. And this study has three authors,
18 one of which is you.
19 A Yeah.
20 Q Do you recall this study?
21 A Yes.
22 Q Now, this is, I believe, the first study
23 that we've come across here where you are a
24 coauthor.
25 A No. I wrote one about my drilling work on

1 Cove Mesa before I wrote this one.
2 Q Okay. But I think this is the first one
3 in our book. Am I right? Have we covered a Cove
4 Mesa -- okay.
5 Well, in any event, what I want you to do
6 is: When we're encountering these studies from now
7 on -- and we'll do Cove Mesa. We'll make certain
8 that we do that. But I'd like you to -- just for --
9 for the video, will you please designate on the map
10 behind you where this study occurred.
11 A Okay.
12 Q And I know you're going to have to unplug,
13 but we do have some colored pencils for you to use.
14 MR. VORHEES: And we're just going to
15 do this, guys -- for the record, we're going to do
16 this briefly. All we really want to do here is have
17 Mr. Chenoweth identify in the vicinity on the map of
18 the studies that he's done and using one of these
19 colored pencils.
20 THE DEPONENT: I'm pushing the wrong
21 button here.
22 MR. FOSTER: Do you intend to mark on
23 the map?
24 MR. VORHEES: Yeah. At the end,
25 we'll mark the map.

1 MR. FOSTER: Okay. So it will become
2 part of the record?
3 MR. VORHEES: Yeah. And literally,
4 guys, just off the record here. This is it. I
5 mean, we're going to go really quickly --
6 VIDEOGRAPHER: No. We're still on
7 the record.
8 MR. VORHEES: Oh, we are still on.
9 THE DEPONENT: Do you want me to put
10 a No. 1 or something by it?
11 MR. VORHEES: No, just put a -- well,
12 should we do that?
13 MR. NEUMANN: Yeah.
14 MR. VORHEES: Yeah, okay. No. 1.
15 THE DEPONENT: Okay. This would be
16 the Northwest Carrizo area.
17 MR. VORHEES: Put a No. 1 there.
18 THE DEPONENT: Okay.
19 MR. VORHEES: Okay, good. Okay,
20 great.
21 VIDEOGRAPHER: It's 11:29. We are
22 going off the record.
23 (Off the record.)
24 VIDEOGRAPHER: It's 11:29, and we're
25 on the record.

1 Q (By Mr. Vorhees) Okay. Mr. Chenoweth,
2 thank you for identifying the study you did in
3 December 1956 on the map with the designation No. 1.
4 And will you just briefly describe what this study
5 was.
6 A Well, this is our summary of all the
7 drilling -- of the four drilling projects that were
8 done out in that area and where they were and the
9 spacing and all that. But the main drilling
10 besides -- like Figure 4 in this report. That shows
11 the drilling behind the various mines. But the main
12 drilling was done in the sand plains in the north.
13 You have this anticline there, the Toh Atin
14 anticline, T-O-H, capital A-T-I-N. The Toh Atin
15 anticline, and the rocks dip to the north under a
16 big sand plain out there. And we thought there
17 would be uranium out there under the sand.
18 So mainly the drilling was out in the sand
19 flat. And there was some core drilling done first
20 where we took the cores to figure out the salt wash,
21 how thick the salt wash -- the host rock was and so
22 forth. And then we went back with non-core drilling
23 to fill in. And the drilling out there lasted
24 approximately, oh, I think from '53 through '55. It
25 was quite -- well, like I said, four different

1 projects, and they're all summarized here.
2 And then we took and tried to make some
3 geologic studies from the drilling out here under
4 the sand. And we figured there was a certain
5 sand-shale ratio, sandstone-to-shale ratio, out
6 there was better for uranium. And we actually found
7 three little -- we found three areas that were later
8 mined out -- no, wait. We found two areas that were
9 later mined out there under the sand plain.
10 Q Okay, great. Well --
11 A And let's see. Yeah, that's...
12 Q That's quite a -- that's quite a good
13 summary of the report. And, again, we're going
14 to -- what we are going to do is we're just going to
15 designate each report and as an exhibit and we'll
16 put the number up on the map.
17 And so I'm going to move to the next
18 exhibit, No. 22.
19 A Oh.
20 Q The exhibit entitled: Prospecting for
21 Uranium. And have you seen this before?
22 A Oh, yeah.
23 Q Okay.
24 A And this is -- this is the revised version
25 in '57. I think the first issue of this was in '51,

1 and that's where it has a paragraph about Shattuck
2 Chemical has a special license. By the time it was
3 reprinted in '57, Shattuck Chemical is not mentioned
4 in this version.
5 Q Okay. And will you just describe what
6 this is.
7 A It was a little book I think they sold for
8 75 cents -- yeah, here it is, 75 cents -- for all
9 these prospectors that were coming out here in the
10 West to look for uranium and make a million dollars,
11 like Charlie Steen.
12 Q Right. Okay.
13 A So it was really -- it really gave you the
14 basic information you needed to know about uranium
15 with pictures of uranium minerals and all this in
16 here.
17 Q Now, this is --
18 A It was a best seller, they tell me.
19 Q Mr. Steen is the -- is the subject of a
20 documentary entitled "Atomic Stampede." Have you
21 seen that documentary?
22 A Which?
23 Q Mr. Charlie Steen. Steen, S-T-E-E-N.
24 A Oh, yeah. I know -- I knew Charlie Steen.
25 Q And apparently he was one of the people

1 that was the subject of a documentary called "Atomic
2 Stampede."
3 A In my opinion, he did more to stimulate
4 prospecting out here in the West than all the AEC
5 announcements and bonuses did, because he made the
6 news all over the world. A down-and-out petroleum
7 geologist found this huge unoxidized deposit in an
8 area that wasn't thought to be very good and made
9 millions of dollars and -- but he was a publicity
10 hound.
11 Q Ah, okay. And -- and so this document in
12 prospecting for uranium was published by the Atomic
13 Energy Commission for individuals who were
14 interested in prospecting for uranium, like
15 Mr. Steen.
16 A Uh-huh.
17 Q Okay. And it was generally made available
18 to the public for 75 cents?
19 A Yeah, they can order it. I think even
20 bookstores around the country carried it, but you
21 didn't have to go to the superintendent of documents
22 or anything like that.
23 Q Okay.
24 A I don't think. I don't know.
25 Q Well, let's go to No. 23, and --

1 A Oh. This is a very -- I knew Mark
2 Shipman. This is a very good summary of a talk --
3 he gave a talk at this convention, and it's a very
4 good summary of Cameron.
5 Q Okay. Did you go to this convention?
6 A No.
7 Q And who was Mr. Shipman?
8 A He was a mining -- he was a mining
9 engineer. He was associated, I think, with Utah
10 Southern Oil, or does he say in here? He had some
11 connection with one of the small operators in
12 Cameron, I know.
13 Q Okay. And this document is entitled:
14 Open Pit Methods and Costs at Cameron, Arizona.
15 A Uh-huh.
16 Q Have you seen this before?
17 A Oh, yeah. I refer -- I think I referred
18 to this in my Cameron report.
19 Q Okay.
20 A He gives some good information in here
21 about early days.
22 Q Okay. Well, let's go to No. 24 entitled:
23 Exploration, Resources, and Production of Uranium.
24 It appears to be a speech by Mr. Robert
25 D. --

1 A Nininger.
2 Q Nininger, N-I-N-I-N-G-E-R. He's the
3 assistant director for exploration. Did you know
4 Mr. Nininger?
5 A Oh, yes. He was the No. 2 man in
6 Washington that we reported to.
7 Q Okay.
8 A He was an Army officer during the
9 Manhattan Project, and he could tell about his
10 experiences then in sampling the tailings of the
11 vanadium mills.
12 Q Okay. Well, now, have you ever seen this
13 speech before? I'm not going to ask you to read it.
14 A I don't think I have since it wasn't done
15 out here in the West.
16 Q But did you say that you had met
17 Mr. Nininger?
18 A Oh, he used to come out all the time, and
19 we took him on field trips around to the mines and
20 all that.
21 Q Okay.
22 A He really kept up with the industry, even
23 though he lived in D.C.
24 Q All right. Okay. Well, then, let's go to
25 No. 25, and we have here a document entitled:

1 Certification of the Huskon, H-U-S-K-O-N, Nos. 11
2 and 26.
3 A Uh-huh.
4 Q In the Little Colorado Mining District.
5 And it's -- it's prepared by two individuals.
6 A No, it's prepared by Maurice Hansen, Maury
7 Hansen.
8 Q Oh, I see.
9 A He wrote it to his boss, Don Hill.
10 Q Oh, I see. Okay.
11 And it's dated December 5, 1957. Did you
12 know Mr. Hansen?
13 A Very much.
14 Q Okay. Who was he?
15 A He was -- he was a mining engineer that
16 worked in the Mining Division.
17 Q Of the AEC.
18 A AEC. He lived here in Grand Junction.
19 Q And who's Mr. Hill?
20 A He's -- he's a mining engineer that was
21 chief of the development section. It says leasing
22 and development. He was a branch chief in the
23 Mining Division. Each division had different
24 branches. Like I -- in the Exploration Division, I
25 was in the geologic branch. And he -- they both --

1 they had these three divisions we talked about and
2 they broke them down into branches, so...
3 Q And were these gentlemen in the Grand
4 Junction office --
5 A Oh, yeah.
6 Q -- of AEC?
7 A They lived here.
8 Q Okay. And I know you are going to join
9 the office of AEC here in Grand Junction later in
10 your career.
11 A Yeah, I moved -- I worked here, but I
12 never moved to Grand Junction until 1964.
13 Q Okay. Would you just briefly mention what
14 the certification process is that they're discussing
15 in this document?
16 A This is the examination that Maury Hansen
17 made -- see, Rare Metals applied to the AEC on these
18 special forms they could get for certification, and
19 Maury Hansen made the field examination and then
20 wrote this report giving all the facts and figures
21 why it should be -- why it should be certified to
22 receive the 35,000-dollar bonus.
23 Q Okay.
24 A With a road log how to get there and this
25 and that. This is a typical certification report.

1 I wrote three or four of these.

2 Q All right. Let's go to 26. This is a

3 document that is entitled: AEC Plans Limited

4 Expansion of Domestic Uranium Procurement. And it's

5 dated April 2, 1958.

6 Do you recall this announcement?

7 A Yes. This is the first of a series of

8 announcements to cut back the government's

9 procurement of uranium.

10 Q And why is that?

11 A Well, I was told because of -- in the

12 beginning -- this is what I have been told. In the

13 beginning, the AEC told the -- they got approval

14 from the Congress. Buy all the uranium they'd find

15 because we need that uranium. Well, they found more

16 than they could buy, and Congress said, Hey, we're

17 not going to buy a pig in a poke. You've got to cut

18 down the amount of dollars you're going to spend.

19 Now, that's what I have been told.

20 Q Okay. All right. And there's an

21 announcement along those lines, dated April 2, 1958,

22 which is the subject of Exhibit No. 26.

23 A Uh-huh.

24 Q Okay. Let's go to 27.

25 A Now, this is -- yeah, this is one I'm real

1 familiar with.
2 Q Okay. Good. Well, why don't you tell us
3 about this document.
4 A This is when they really decided to
5 stop the -- to limit the uranium -- amount of
6 uranium that was being found that the government had
7 to purchase. It said that on November 24, 1958,
8 they were only going to buy concentrate, yellowcake,
9 in 195 -- beginning in 1962 that had already been
10 found by all the mining companies. And like Charlie
11 Steen -- the press release that I have someplace.
12 If you haven't found it, you can't sell it, so why
13 look for it.
14 Q Okay.
15 A And this is really when the exploration
16 started to really die off because if you hadn't --
17 if you hadn't already found this uranium, supposedly
18 you couldn't sell it in the future.
19 Q So you had to have found your uranium by
20 November 24, 1958?
21 A Yeah. And this kept us guys out in the
22 field -- we thought we were going to get laid off --
23 in business, because we had to contact -- in my
24 office in Flagstaff, we had to contact every
25 operator in Arizona, except Monument Valley -- which

1 was handled out of the Monticello office -- and find
2 out what they had and sit down with them. And I
3 remember going to a meeting in Salt Lake with Rare
4 Metals to discuss all this with some other AEC
5 people.
6 Q Okay. Do you recall when that meeting
7 occurred? Was it subsequent to this...
8 A I think it was in New House Hotel or
9 someplace like that. Rare Metals and myself and
10 some people from Grand Junction all went over there
11 to talk to them about how we could get together and
12 find out what their -- what their qualified
13 resources were.
14 Q Okay. All right. Let's look at Exhibit
15 No. 28.
16 A Oh.
17 Q This exhibit is entitled: Guidebook to
18 Uranium Deposits of Western United States. And it's
19 got a date of 1959, October of 1959.
20 Do you recognize this exhibit?
21 A Yes, I do.
22 Q Okay. Will you tell us about this.
23 A Well, the AEC used to have an exchange
24 program with foreign governments, and so we had this
25 great big field conference for uranium geologists

1 from all over the world, I think in 1959 or --
2 anyway. And they put this book out for all the
3 participants, and people -- these geologists went
4 all over the western United States looking at the
5 uranium and everybody had a section. I wrote the
6 section on Cameron and the Grand Canyon. People
7 wrote about Grants; Wyoming; Spokane, Washington and
8 all that.
9 And, eventually, people heard about this
10 report and they -- anyway, Freedom of Information,
11 this was open-filed by the Grand Junction office a
12 few years later. But this was really an internal
13 document for this field trip until it was put out as
14 a FOIA. FOIA requested it and it was put out in
15 this form. And it was given an AEC number of
16 RME-141, which meant -- all the AEC reports -- that
17 means Raw Materials Exploration report, so...
18 Q Okay.
19 A And that number was added later when it
20 was open-filed, and you probably didn't copy the
21 whole report because it's about an inch-and-a-half
22 thick.
23 Q Well, I think we were focused on Cameron.
24 A Focused on Cameron.
25 Q Yeah.

1 A I wrote that section.
2 Q Yeah. We focused on Cameron for purposes
3 of the deposition.
4 A That's very general. And here -- oh, you
5 did keep -- I see you did copy the schedule. They
6 went -- bused them all over the U.S.
7 Q We did. And my understanding is -- is it
8 correct that you were involved in the tour and that
9 you took some of these dignitaries to Cameron?
10 A Yeah. I met them, I think, in Flagstaff
11 and we went up to -- over to Grand Canyon and
12 Cameron, and then I took them up and turned them
13 over to the Monticello geologists at Kayenta,
14 Arizona.
15 Q Did you -- did you take them to Tuba City
16 Mill?
17 A No. We drove right past it.
18 Q Okay.
19 A I think we stopped and had lunch at the
20 Elephant's Feet up north of the mill.
21 Q Well, there's a photograph of that.
22 A Yeah, right. I remember that.
23 Q Okay. And you wrote the section here
24 entitled: Cameron District?
25 And let me -- let me give that to you.

1 It's Exhibit 28. 19.

2 A Page 19. Exhibit -- Page 19.

3 Q Yeah. And this is an excerpt from a much

4 longer report. Oh, there you are. Exhibit 28, Page

5 20, is the lunch at the Elephant Feet. Do you see

6 the picture?

7 A Page 19, yeah.

8 Q Yeah, 19 is the Cameron District

9 described, right, and that's your -- that's your

10 summary?

11 A Yeah, that's my summary I wrote.

12 Q And then look over on Page 20. Is that

13 your lunch at the Elephant Feet?

14 A Yeah. I think we stopped and had lunch or

15 something there and let them take pictures of all of

16 them.

17 Q All right. Okay. And then the schedule

18 is the road log, which is --

19 A I wrote -- I think I wrote it up to

20 Kayenta.

21 Q Okay.

22 A No, wait. Because we went to Grand Canyon

23 someplace along the way. Anyway...

24 Q Okay. And that -- that location you just

25 referred to, Kayenta, let's spell that one, too, for

1 our court reporter.

2 A That was where -- where the Grand Junction

3 office -- I mean the Flagstaff office jurisdiction

4 ended and the Monticello office took over, so...

5 Q And can you spell that for us? Kayenta.

6 A Kayenta.

7 Q Yeah. K-A-Y --

8 A K-A-Y-E-N-T-A.

9 Q Okay. All right.

10 A It's got the trading post and all that and

11 BIA office up there in -- just south of Monument

12 Valley.

13 Q All right. Let's go to Exhibit No. 29.

14 A Oh, yeah.

15 Q Now, this is an exhibit that's dated

16 January 1, 1959, and it's entitled: Mine Operation

17 Data Report.

18 Have you seen this document before?

19 A Very much.

20 Q What is this?

21 A Well, in 1958, all us field guys were told

22 go and inventory all the operating mines and all the

23 equipment they had. We had no idea what Grand

24 Junction was up to, but we did this. So we went out

25 and had to go to each mine, count the number of mine

1 cars, number of this. And my office there in
2 Flagstaff, we did all of Arizona except Monument
3 Valley, and we had no idea. I think they were
4 preparing for the November 24th announcement,
5 cutting it back, to see how big of industry was out
6 there. That's just my observation, because all this
7 inventory of stuff was done in the middle of 1958.
8 Q Okay.
9 A And I wrote many of these on -- myself and
10 my two other geologists, we wrote all these on
11 Cameron and I wrote the ones on the Carrizo
12 Mountains and all that, so...
13 Q So looking at this document --
14 A It was just -- it was just -- and then
15 later, industry guys heard about this, and -- and
16 they filed a FOIA that they get it out in the
17 public, but we had to go through first and delete
18 all the ore reserve information. It'll say ore
19 reserve tentatively and would white that out,
20 because that was proprietary. So you see where it
21 says "ore reserve," there's always a blank spot
22 there.
23 Q Right. I'm looking -- I'm looking at
24 that.
25 A And that was because we had gotten this

1 information from the companies and it was
2 proprietary.
3 Q So my understanding is is that you
4 prepared portions of this report?
5 A Geologists in Flagstaff did all those in
6 Arizona, except Monument Valley.
7 Q Okay.
8 A They did -- they did all the Little
9 Colorado ones.
10 Q But with specific reference to the report,
11 the information that's contained here -- for
12 example, on Page 7 of the report, Exhibit 29, Page
13 7, Little Colorado, that would have been information
14 provided by you?
15 A Yeah. I can't say which one I did, which
16 one Dan did, or which one Bill did, but we all did
17 these together.
18 Q And Dan and Bill are who?
19 A Dan Magleby and Bill Sipano, S-I -- S-I --
20 S-I-P-A-N-O. They were the other two geologists
21 assigned to the Flagstaff office.
22 Q And both working for the AEC?
23 A Yeah.
24 Q Can we help our court reporter with that
25 first --

1 A Magleby?
2 Q Yeah. How do you spell his name?
3 A I've got it written here because --
4 M-A-G -- I better look it up.
5 Q Oh, that's okay. We'll just -- we'll
6 catch that later.
7 A Magleby, Mag, M-A-G-B-L-Y or --
8 Q Okay.
9 A -- something like that. His name's on a
10 document he and I prepared together. I don't think
11 you have that.
12 Q Okay.
13 A Maybe you do.
14 Q Well, let's go to Exhibit No. 30 for our
15 next exhibit.
16 A Oh.
17 Q Okay. You have seen this before, then, I
18 guess.
19 A I wrote it.
20 Q Good. And why don't you tell us -- we are
21 going to refer to this exhibit by its title:
22 Recurring Visits to Certified Properties.
23 A See, this is -- this is when I say -- when
24 a property was certified, it had to be visited so
25 often and you had to sign down here down at the --

1 the most important thing was what was going on at
2 the mine and was there anything fraudulent in
3 collection of the bonus. You had to check yes or
4 no. And...
5 Q And on this particular one --
6 A This is -- this is a recurring visit. And
7 Tom Young was a mining engineer that lived in
8 Grants. He came over to see what was going on
9 because this upgrader thing was a big deal.
10 Q Okay. Well, we're referring to the Benson
11 upgrader.
12 A Uh-huh.
13 Q So on this document -- you authored this
14 document, correct?
15 A Yeah, and Tom -- well, he was there, so he
16 put his name on it too.
17 Q And this is your handwriting on the
18 document?
19 A This has to do with somebody that borrowed
20 it. This isn't -- I don't know what that's for.
21 That's my initials.
22 Q Yeah. Okay.
23 A Maybe this is what I sent somebody, showed
24 somebody, what a recurring visit report was, and I
25 certified probably -- eligible, receive a

1 35,000-dollar -- for a new discovery. I can't tell
2 you who that was written for.
3 Q Okay. And this is a form that was
4 produced by the AEC?
5 A Yeah.
6 Q Okay.
7 A This was -- yeah, here in Grand Junction,
8 it says "Form GJ." And by this time, the Mining
9 Division and the Exploration Division had been put
10 together in the Production Evaluation Division, so
11 PD means production evaluation.
12 Q Okay.
13 A So the two early divisions were merged
14 into the PD, Production Evaluation Division. And
15 that report you referred to back there, that PED
16 refers to that. This report on Exhibit 29, that PED
17 is Production Evaluation Division up here.
18 Q I see that.
19 A I forget to mention that.
20 Q Thank you -- thank you for mentioning
21 that. That's good.
22 Okay. Well, let's go to Exhibit No. 31.
23 A Oh, on the back page of 30-2, here is Dan
24 Magleby's name.
25 Q Oh, good. Let's spell that for the

1 record. M-A-G-L-E-B-Y. Good. Okay.
2 So now we are looking at No. 31, and this
3 is that -- I believe that Cove Mesa report that you
4 had referred to.
5 A Yeah, that was -- although it was dated
6 '59, the drilling was done in -- was done in '53.
7 Q Okay. Well, now, for the record, we're
8 referring to Exhibit 31, which is Diamond and Wagon
9 Drilling on Cove and East Mesas, Apache County. And
10 you have got three authors on this. You are one of
11 the coauthors with Mr. J. W. --
12 A Blagbrough.
13 Q B-L-A-G-B-R-O-U-G-H. And Mr. N. J.
14 Clinton. And are these gentlemen also employed by
15 the Atomic Energy Commission?
16 A They're also coworkers, geologists.
17 Q And you're all three now in the Production
18 Evaluation Division, which you just mentioned.
19 A Yes, as it says up here. I can't tell you
20 when it changed, but I think it was about 1957 it
21 changed.
22 Q Okay. Well, now we have got to go back to
23 the map, Mr. Chenoweth, and identify -- okay. We're
24 just going to take a little break here.
25 VIDEOGRAPHER: The time is -- I'm

1 already off.

2 (Off the record.)

3 VIDEOGRAPHER: The time is

4 approximately 11:55, and we are on the record.

5 Q (By Mr. Vorhees) So, Mr. Chenoweth, while

6 we were off the record, you have identified on the

7 map behind you the location of the study that you

8 did of the Diamond and Wagon drilling on Cove and

9 East Mesas.

10 A Yes. It's No. 2 on the map.

11 Q Great.

12 MR. VORHEES: Do you see No. 2 right

13 there, right under No. 1?

14 THE DEPONENT: Yes.

15 VIDEOGRAPHER: You do. I don't.

16 Okay.

17 Q (By Mr. Vorhees) Okay. So let's go to No.

18 32.

19 A This -- I'm going to say that this report

20 is a summary of -- I think all three or four Cove

21 Mesa reports is a summary for all the drilling that

22 was done up here on Cove Mesa, and we have all the

23 little orebodies showing that we found and later

24 were mined by VCA, but that's probably why it was so

25 late in getting released.

1 Q Okay.
2 A And I might mention that the AEC
3 agreements on all this work drilling we did on the
4 reservation, we sent copies of this down to the
5 Navajo Tribal Mining Department in Window Rock, and
6 what they did with it, we don't know.
7 Q Okay.
8 A They changed...
9 Q All right. Well, now, let's go to Exhibit
10 No. 32.
11 A Another one.
12 Q And it looks like another --
13 A Recurring visit.
14 Q -- recurring visit.
15 A I didn't go on that one.
16 Q It looks like we just put this in just to
17 indicate an example of another recurring visit.
18 A Yeah, they reported that they were working
19 on the upgrader and all this and that.
20 Q Now, on the second page of this exhibit, I
21 think it identifies you as the examining engineer on
22 April 27, 1960 for the final examination. Do you
23 see that on Page 2 of this exhibit?
24 A Where is this?
25 Q This is on the back of that page.

1 A That means when the bonus was all paid
2 out -- when the program ended -- when the program
3 ended, you had to go to each mine. Even though it
4 had been abandoned for years, we had to go make a
5 final examination report. That kept us busy for
6 several months of this, but it was -- yeah, I did
7 this.
8 Q And that's dated April 27, 1960?
9 A Yeah. I think the program expired in
10 March, and this -- we had to go to each mine and
11 write a final examination.
12 Q All right.
13 A To have it in the record what was -- what
14 had happened.
15 Q And will you tell us, just briefly, what
16 the final examination would entail.
17 A Pardon?
18 Q Would you tell us, just briefly, what the
19 final examination --
20 A Just to tell what the property looked
21 liked and all that, what it was left -- how it was
22 left.
23 Q Okay.
24 A I don't know why --
25 Q The condition of the property.

1 A Yeah, just made a visual inspection of the
2 property and recorded it here and...
3 Q Would you take photographs on these
4 visits?
5 A I didn't. I don't think a took single
6 photograph of the upgrade plant.
7 Q Okay.
8 MS. RONGONE: Sorry to interrupt.
9 This is Marie. I'm back on.
10 MR. VORHEES: Marie, welcome.
11 Thanks.
12 Q (By Mr. Vorhees) Okay. Let's go to
13 Exhibit No. 32.1. We had an extra one here. We
14 just --
15 A Yeah, I see that.
16 Q You see that.
17 So this is Exhibit 32.1, and it's dated
18 December 2nd, 1960. It's entitled: Examination of
19 the San Mateo Mine.
20 And, Mr. Chenoweth, do you know Mr. T. W.
21 Young?
22 A Yes, I do.
23 Q Who is Mr. Young?
24 A He was a mining engineer in the -- he was
25 in the old Mining Division, and then -- and then he

1 became -- when they formed the Grants office and
2 called it the Grants branch of the Production
3 Evaluation, he got transferred from Grand Junction
4 to Grants to be the mining engineer down -- the
5 second mining engineer down there.
6 Q Okay. And he's prepared this memorandum,
7 it appears?
8 A Yeah. It looks like he did.
9 Q And do you know what this memorandum
10 purports to...
11 A It's like a trip report. When you went
12 out to a mine and you spent any time there, they
13 always wanted you to write a trip report on what was
14 going on.
15 Q And then he's accompanied by Mr. James
16 Snyder, mine superintendent for Rare Metals. Did
17 you know Mr. Snyder?
18 A No. I knew none of the Rare Metals people
19 in Ambrosia Lake.
20 Q Okay. We've got a couple of speeches now
21 by Mr. Johnson as the next exhibits. Let's take a
22 look at Exhibit 33.
23 A Oh, yeah.
24 Q And this is just one page. I apologize,
25 but this is all we had of this speech by Mr. Jesse

1 C. Johnson, Director of the Division of Raw
2 Materials at the Atomic Energy Commission.
3 Did you ever meet Mr. Johnson?
4 A Oh, yeah. He -- he was the head of the --
5 the Grand Junction office reported to the Division
6 of Raw Materials in the AEC back at headquarters.
7 They had all these -- you know, they had all sorts
8 of divisions, you know, for -- anyway, he was the
9 head of the DRM. And he used -- he and Bob Nininger
10 used to come out all the time, and the last time I
11 saw him, he wanted to go up and see the Luka -- just
12 before Kerr-McGee sold out the Lukachukai Mountains
13 ore buys to VCA, Jesse Johnson had some interest in
14 it. He came out and I took him up there and
15 Kerr-McGee toured him around all their mines, and
16 that would have been in 195 -- 1963.
17 Q Okay.
18 A And then -- but he was a -- he was a big
19 man.
20 Q Yeah. Now, we understand that. From the
21 records we have reviewed, Mr. Johnson had a very
22 senior role in the Atomic Energy Commission. That's
23 correct?
24 A In the uranium procurement part.
25 Q Okay. And this is just a one-page

1 document here. I apologize again. We just only
2 have this one page.
3 A I have never seen.
4 Q Okay. Now, you might have seen Exhibit
5 No. 34 -- or you might not have -- dated March 17,
6 1962: Remarks of Mr. Jesse C. Johnson at a Colorado
7 Mining Association Convention in Denver, Colorado,
8 The Outlook for Uranium.
9 Have you seen that document before?
10 A No. I have seen -- yeah. I have seen
11 this document before, but I have never really
12 studied it over.
13 Q Okay.
14 A But I wasn't at the meeting.
15 Q All right. Well, that's all we need on
16 that, then.
17 35 is a document that I will state for the
18 record: Some Notes on the Uranium Production
19 History and Ore Deposits, Churchrock and Hogback
20 Areas, McKinley County, New Mexico, by Mr. Chenoweth
21 and Mr. Robert A. Laverty, L-A-V-E-R-T-Y. It's
22 dated June 11, 1964, for the record. And --
23 A And because of FOIA, it was released to
24 the open files in August 1962. That's what my
25 writing up here refers to.

1 Q Okay. And we're referring to the Freedom
2 of Information Act when you refer to FOIA, F-O-I-A.
3 Subsequently, this document was released pursuant to
4 FOIA.
5 Okay. Now, do you recall preparing this
6 report?
7 A Yes. This is a study that we did in
8 cooperation with United Nuclear on the drilling they
9 did up there in northeast Churchrock. They
10 wanted -- Mr. Laverty was an extremely good
11 mineralogist. He was the chief mineralogist down
12 there at the compound.
13 Q When you say "the compound," do you mean
14 the --
15 A AEC.
16 Q -- AEC facility.
17 A Facility in Grand Junction.
18 Q So he's an AEC employee like yourself.
19 A Yeah, he's a mineralogist. And United --
20 as I remember, United Nuclear had a bunch of cores
21 and things, and they wanted a second opinion. And
22 the people in charge agreed we could do it. So I
23 wrote some of the geology in here and he wrote the
24 mineralogy part and all that, and it's really an
25 oral history of the exploration in the northeast

1 Churchrock area.
2 Q Okay. So I guess it's time to go back to
3 the map and designate where that would be located
4 with No. 3.
5 A Yeah. We -- we never thought it would
6 reach the public, but it did because of that, and
7 there really wasn't anything confidential in it
8 because United Nuclear had gotten the results years
9 earlier. They got the results probably about in
10 '64.
11 Q Okay. Let's designate.
12 A Okay. Northeast Churchrock will be No. 3.
13 Okay.
14 Q Thank you.
15 MR. VORHEES: All right. So we're
16 still on the record?
17 VIDEOGRAPHER: Yes, sir.
18 MR. VORHEES: Okay. Good.
19 Q (By Mr. Vorhees) Mr. Chenoweth, with
20 regard to this study, is -- Churchrock and Hogback,
21 are those two separate areas?
22 A Yeah. Hogback is the topographic feature
23 just east of Gallup where the rocks are -- they're
24 arched off the Zuni uplift, Z-U-N-I, and they look
25 like a hogback, much like the hogback over in Denver

1 area. And but Churchrock is -- the rocks are all
2 pretty flat in the Churchrock area and there's a big
3 erosional feature that looks sort of like a church,
4 and that's how it got its name. So they're
5 really -- they're close together but two different
6 features. There are some mines all in the hogback,
7 but most of the mines are out here in the flats in
8 the Churchrock area.
9 Q Okay.
10 MR. TAYLOR: If you don't mind, I
11 think perhaps that should be labeled. They're
12 about -- it's my recollection that they're about 15
13 miles apart.
14 THE DEPONENT: Yeah, it's a couple
15 townships. That would be 12, 15.
16 MR. VORHEES: 12, 15 miles? Okay.
17 MR. TAYLOR: So perhaps it could be
18 marked on the map too.
19 MR. VORHEES: Okay. So --
20 THE DEPONENT: I can mark it north of
21 Gallup. That'd be easy to do, yeah.
22 Q (By Mr. Vorhees) Okay. For the hogback.
23 A Here's Gallup, so the hogback is in here.
24 That would be 4.
25 Q All right. Let's call it 4.

1 A Thank you.
2 Q That's good. All righty. Let's go to
3 Exhibit No. 36, and this is entitled: The Discovery
4 and Development of Uranium in the Grants,
5 G-R-A-N-T-S, Mineral Belt, New Mexico, by Mr. Ray J.
6 Holmquist H-O-L-M-Q-U-I-S-T. This is dated June
7 1970.
8 Now, did you know Mr. Holmquist?
9 A Very well.
10 Q Who was he? Who was Mr. Holmquist?
11 A He was a mining engineer. I forget who he
12 worked for before he came to the AEC, and he came to
13 work for the AEC in the Grants office in the early
14 '60s and later was transferred up to Grand Junction
15 probably in the late '60s.
16 But as you will see on Page 3, I sort of
17 edited this report because it had a lot of
18 proprietary -- well, it started with -- Mr. Gay was
19 the chief engineer of the Grants field office for
20 the AEC. And he would go out and visit the
21 company -- all the companies in the Grants area on a
22 periodic basis as part of this industry liaison
23 program.
24 And he would come back in, and on his
25 little calendar, he would write what he did that

1 day. Saw the Homestake Mining Company, talked to
2 so-and-so, they are doing this. And he had all
3 these -- and when he retired from the AEC, we had
4 all these calendars with all these notes on it, and
5 somebody said, You know, we ought to go through that
6 and see if we've got any valuable information. So
7 they give the job to Ray Holmquist, and he went
8 through and compiled this report from Ingles Gay's
9 calendars, as it says here.
10 Q Okay.
11 A And then Johnny Motika -- ranchers heard
12 about this report and he filed a FOIA.
13 Q Oh, okay.
14 A And I got a job -- I remember I got the
15 job to go through and delete all the cost data and
16 statements saying, So-and-so contractor was a bad
17 contractor, we had to fire him, and all that kind of
18 stuff.
19 Q Okay.
20 A You'll see there's blanks in here where I
21 had to delete that kind of stuff.
22 Q Now we see that.
23 A That was my work.
24 Q That's very helpful.
25 And so the preface then on page --

1 A Yeah, I'm really glad that they saved his
2 calendars to do this, because there was a lot of
3 valuable information I don't think is anyplace,
4 except Ingles Gay's old notes --
5 Q Okay.
6 A -- that compiled this report.
7 Q And that's -- Mr. Ingles Gay, we better
8 spell that because that's an --
9 A He's a --
10 Q -- interesting name.
11 A He was a senior mining engineer in Grants.
12 Q For AEC?
13 A Yeah, for --
14 Q Okay. It's I-N-G-L-E-S. That's his first
15 name, and his last name is Gay, G-A-Y, referred to
16 on Page 3 of the report.
17 Okay. You know, we're going to look over
18 for just a moment at Page 50 of the exhibit, which
19 would be Page 46 of the report.
20 A Page 50?
21 Q Page five-oh, 50. And just -- there's
22 a -- there's a reference -- well, there's a section
23 here on the San Mateo Mine.
24 A 50 of Exhibit 36?
25 Q Yeah, 50 of Exhibit 36.

1 A I'm looking at the real -- my page number.
2 Q Yeah.
3 A Oh, yeah.
4 Q Okay. San Mateo Mine, we haven't
5 discussed that yet. That's in -- that's in New
6 Mexico?
7 A Yeah. That's in -- that's in -- well, we
8 used to call it Valencia County, but now it's Cibola
9 County.
10 Q How do you spell that one?
11 A C-I-B-O-L-A.
12 Q Oh, Cibola. Okay.
13 And this is a reference to the San Mateo
14 Mine. Did you ever go out to that mine?
15 A No, I've never -- I've been by it many
16 times, the short time I've been at Ambrosia Lake.
17 Been by it but never visited -- been in the mine.
18 But I know that the New Mexico Bureau of Mines has
19 got a mine map of the mine workings from United
20 Nuclear, and we plotted it on a big map of the mines
21 at Ambrosia Lake we'll probably talk about later,
22 but...
23 Q Okay.
24 A But I know where it is and I know -- I
25 remember they had a big cave-in there and all that,

1 but -- after reading this.

2 Q Okay. Well, it looks like you have been

3 busy in this section --

4 A Yeah.

5 Q -- taking information out of the San

6 Mateo --

7 A Yeah, there was some derogatory comments

8 about other contractors and things in there. Had to

9 take it out, as I remember.

10 Q All right. Okay. Well, let's go to 37,

11 then, which is our --

12 A Oh.

13 Q -- which is our document that's entitled:

14 Preliminary Reconnaissance for Uranium in Coconino

15 County, Arizona, 1951 to 1955. This looks like it's

16 prepared by the Division of Raw Materials of the

17 AEC.

18 A Yeah.

19 Q And it is dated June 1970. It's got your

20 name up on the top. Is this --

21 A That's my copy.

22 Q It's your copy.

23 A I loaned it to people. I had to put my

24 name on it to get it back.

25 Q This is another one of these reports that

1 was declassified?

2 A No. This -- in the -- in the early days

3 in the Exploration Division, whenever we'd go out

4 and look at a mine or a property, we'd have to write

5 a preliminary reconnaissance report on a form. And

6 I have written hundreds of these -- not hundreds --

7 dozens of them, anyways, and they were all

8 microfiched and eventually released to the public on

9 microfiche.

10 But then somebody in the AEC said, We

11 found some more of these that never were on the

12 microfiche, so we're going to put them out in

13 booklets. And they started with the state of

14 Arizona and they ran out of money, and they only did

15 Arizona and the state of Texas -- New Mexico. So in

16 the first page in here, it says, Supersedes

17 PB-172479. That is the microfiche that has a bunch

18 of these PRRs for Arizona with Coconino County on

19 it. And these were some they found they had to put

20 out later. It was all screwed up somehow and -- so

21 this is not a complete set of the preliminary

22 reconnaissance reports for Coconino County. It's

23 some they found later.

24 Q And --

25 A And it's...

1 Q And, hence, the term "supersedes"?
2 A Yeah, it says supersedes because this has
3 got the earlier ones on it, if I remember right.
4 Q Okay.
5 A And what these are, these preliminary
6 reconnaissance reports we had to fill out every time
7 we went out and looked at a new mine or a new
8 discovery. And as I remember, most of the airborne
9 anomalies -- the AEC flew an airplane around Cameron
10 and found a lot of anomalies, which Charlie Huskon
11 had already claimed.
12 And, anyway, so when -- when the guys went
13 on the ground, they wrote a PRR about all these
14 different anomalies they found, and I see on Page
15 37-19 is Huskon No. 5. That describes what they saw
16 on September 3, 1953 -- 2. So these are -- these
17 are really -- most of these in Cameron are anomalies
18 and things that they found by the airplane, if I
19 remember right.
20 Q Okay. And the AEC had approximately ten
21 Piper Cub airplanes?
22 A Yeah, they had -- yeah, several -- several
23 of these. They flew all over the west and -- and
24 they'd publish a map every month of where they found
25 anomalies and let the prospectors go out.

1 Q Okay.
2 A That's a whole different program, I think,
3 described by O'Rear, maybe.
4 Q We're definitely getting to that, but this
5 appears to be, then, information --
6 A These have examinations of a lot of the
7 Huskon properties right after they were found.
8 Q And the examinations were occurring
9 between 1951 and 1955 by the employees of the Atomic
10 Energy Commission?
11 A Yeah. And the USGS in some -- in some --
12 not here, but down in southern Arizona in Gila
13 County, the USGS went out and looked at a lot of
14 discoveries that prospectors had found, and they're
15 in the Gila County books. Excuse me.
16 Q Okay.
17 A And it says here on Page 3 -- and the U.S
18 Geological Survey. So there might be one or two in
19 here by the USGS. It seems like they looked at some
20 over toward Coal Mine Canyon, not many in the
21 Cameron area.
22 Q Okay. Well, that completes our review of
23 the first volume of the three volumes of exhibits
24 for you, Mr. Chenoweth.
25 MR. VORHEES: We have got six minutes

1 left on this tape, and so we should -- we should
2 just jump right into Volume 2. If you'd just give
3 me a moment. Maybe we'll go off the record and
4 we'll go to Volume 2.
5 VIDEOGRAPHER: The time is now 12:15,
6 and we are off the record.
7 (Off the record.)
8 VIDEOGRAPHER: The time is
9 approximately 12:17, and we are on the record.
10 Q (By Mr. Vorhees) Mr. Chenoweth, I have
11 handed you, for identifications purposes, Volume 2
12 of our exhibits, and we want to turn to the first
13 exhibit in Volume 2, which is Exhibit No. 38.
14 This exhibit is entitled: Environmental
15 Statement, Leasing of AEC Controlled Uranium Bearing
16 Lands, Colorado, Utah, and New Mexico. It's dated
17 September 1972.
18 Do you recognize this exhibit?
19 A I'm very familiar with this.
20 Q Why don't you tell us what this exhibit
21 is.
22 A Well, when the AEC started, took over for
23 the Manhattan District, they acquired a group of
24 claims down at Slick Rock that the Manhattan
25 District had bought. So these were claims they

1 bought and they were transferred to the AEC. They
2 bought claims up in Gateway, the Manhattan District
3 did, and that was transferred to the AEC.
4 Then when the AEC started drilling
5 projects all over, they would go to BLM, have the
6 BLM issue a PLO, public land order, to withdraw that
7 land from mineral entry so they could go in and
8 drill and wouldn't have guys staking claims all
9 around the drill rigs or anything, so they withdrew
10 from mineral entry.
11 And so there were -- in the first leasing
12 program, after the AEC drilled quite a bit and found
13 uranium, they went out to the mining companies and
14 said, Hey, you're mining next door. Would you like
15 to lease our land and mine? And there was really no
16 competitive bidding. U.S. Vanadium, VCA, Climax,
17 all the big companies got government leases because
18 they were mining in the area. There was no bidding
19 or bonuses or anything paid. So that was the first
20 leasing program, and it died -- it was shut down by
21 the AEC, I think, in '62.
22 Then because of the economic downfall in
23 the West End or San Miguel, Montrose, and Mesa
24 Counties, people kept saying, Well, let's lease the
25 land again, so they had the second leasing program.

1 And this was the environmental statement that was
2 put out as -- prior to the second leasing program
3 that began in the late '70s.
4 Q And this environmental statement was
5 prepared for the United States Atomic Energy
6 Commission?
7 A Yeah, right.
8 Q Okay. And --
9 A And most of Colorado land was -- was in
10 the three county -- mainly in the Uravan area, from
11 Slick Rock up to Gateway. There was a few little
12 blocks over in Utah that had been withdrawn for
13 drilling purposes and had ore on them. And down in
14 New Mexico, there was three lands withdrawn and one
15 of them had ore on it, so...
16 Q Did you --
17 A Except for Colorado where they had the
18 three blocks of claims that the AEC still owns
19 today, most of the withdrawn lands was land that had
20 been withdrawn because they found and drilled and
21 found orebodies on.
22 Q Did you participate in the preparation of
23 this report?
24 A No.
25 Q Okay. But you have reviewed it.

1 A Oh, yeah.
2 Q Okay.
3 A And today there's a third leasing program
4 which is kind of being held up in the courts, but
5 the AEC still owns -- what is it, 45 square miles of
6 land? It's quite a bit of land down in Colorado.
7 The DOE still controls and it's all leased for
8 uranium under the third leasing program.
9 Q Okay. Let's go to Exhibit No. 39, and
10 then we're going to just take a break. Exhibit No.
11 39 is called The Extractive Metallurgy of Uranium,
12 by Robert C. Merritt, prepared under contract with
13 the United States Atomic Energy Commission, dated
14 1971.
15 Do you recognize this document?
16 A Yes. I think this was in my library that
17 you guys borrowed.
18 Q And what is this?
19 A It's a contract that Mr. Merritt prepared
20 for the AEC describing the basic ways uranium is
21 recovered out of rocks. It describes every mill in
22 detail. It takes -- every mill is a little
23 different so he describes every little mill, even
24 the ones that were -- I forget the date of this
25 report. It's...

1 Q 1971?
2 A Even the mills that were shut down, he
3 describes the processes they used, whether they used
4 acid or alkaline and how they used the extraction,
5 if they used resin exchange or ion -- ion exchange
6 or resin-in-pulp or all this.
7 Q Okay.
8 MR. VORHEES: This would be a good
9 place for our videographer to take a break.
10 VIDEOGRAPHER: The time is
11 approximately 12:24, and this is the end of Tape No.
12 3 in the deposition of William Chenoweth. We are
13 going off the record to change tapes.
14 (Lunch recess.)
15 VIDEOGRAPHER: We are on the record.
16 This is the beginning of Tape No. 4 in the
17 deposition of William Chenoweth. The time is
18 approximately 1:45.
19 Q (By Mr. Vorhees) Good afternoon,
20 Mr. Chenoweth.
21 A Good afternoon.
22 Q We're going to resume where we left off
23 with Exhibit No. 39, and we were discussing the work
24 that had been done by Mr. Robert C. Merritt with
25 regard to the extractive metallurgy of uranium.

1 And you mentioned, in describing this
2 exhibit, that Mr. Merritt had been active in
3 research of mills. And I want to direct your
4 attention to Page 13 of this exhibit, which is a
5 description of the Atomic Energy Commission's pilot
6 plant in Grand Junction, Colorado.
7 A Yeah.
8 Q Okay. And just for our purposes here
9 today, have you had a chance to look at this
10 previously, this report by Mr. Merritt?
11 A Not really.
12 Q Okay.
13 A I've thumbed through it and I remember
14 reviewing the Tuba City chapter, but that's about
15 it.
16 Q Okay. And not the -- not the Grand
17 Junction pilot plant?
18 A No, because it's written up elsewhere.
19 Q Okay. And with regard to the Tuba City
20 Mill, you have reviewed that. Is that accurately
21 described by Mr. Merritt?
22 A As much as I know about the mill, yes.
23 Q Okay. Let's turn to Exhibit No. 40, then,
24 which is an ore production report, and this one --
25 the first date on this is November 29, 1978.

1 Have you seen this report before?
2 A Oh, yes.
3 Q Okay. Would you describe this for us so
4 we have a --
5 A This is -- let's see. This first page
6 here looks like it's for calendar year 1960, and
7 it's an annual report that the AEC put out and it
8 lists mines by county and controller and the name of
9 the mine, the tons of ore, the pounds of uranium and
10 the grade, pounds of vanadium and the grade, and
11 then this right-hand column over here is tons of
12 uranium.
13 Q Okay.
14 A They converted pounds of uranium to tons
15 for some reason.
16 Q Okay.
17 A This must be my copy because these look
18 like my checkmarks here.
19 Q Okay. And so you have seen this report
20 before.
21 A Yeah.
22 Q Okay.
23 A I have a copy of it. I think this is
24 probably my copy.
25 Q All right. And this seems like it's an

1 excerpt of a longer report.
2 A Yeah, this would be -- there would be a
3 book about a quarter-inch thick of every year of the
4 whole -- the whole Western United States. This
5 being Arizona was the first page.
6 Q Okay. And would you use this report to
7 do -- to prepare your studies?
8 A Yes, because there's another report called
9 the Shoebox Report I didn't know about, which
10 simplifies all this. And I used these when you had
11 to -- when you had to -- if you had Cove Mesa, you
12 add up all these -- like here's the two -- two --
13 this controller means not the man that actually
14 mined the ore, but the person that got paid for the
15 ore, like --
16 But in this case -- well, here's
17 Kerr-McGee. They had some contractors mining Mesa 1
18 and three-quarters and Mesa 2 and a half. I know
19 that. But yet, they got paid for the ore, so that's
20 why they were listed as the controller. Some people
21 have looked at these reports and think that's the
22 people operating. We ran into this under RECA.
23 These are the people that got paid for the ore by
24 the mill or the AEC or whoever.
25 Q Okay. All right. Well, let's go over to

1 Exhibit No. 41 and...

2 A And here -- the next page is -- Page 2 is

3 New Mexico here, Ambrosia and the mines in McKinley

4 County, I see. And then Page 40-3, that's -- oh,

5 yeah. This -- for some reason, the early ore

6 production all got -- from '48 through '53 all got

7 lumped as one number. And so it will say for

8 calendar years '48 through '53. That's all the

9 production, all the mining, that was done in that

10 five-year period as one number here. And I remember

11 going through and sorting out and I have got here

12 for the Diamond No. 2 mine, that was all in '53 for

13 some reason. I don't know what -- that was when I

14 was writing the report on the Gallup area.

15 Q Okay. Well, so we are still looking at

16 Exhibit No. 40 for that --

17 A These are these annual reports of -- that

18 the AEC put out every year.

19 Q Okay. And so this is a continuing, what

20 we'll call, business record of the Atomic Energy

21 Commission in terms of --

22 A Yeah, this is probably -- at the time

23 this is the best record. Now I would say the

24 Shoebox Report is a better record because it has

25 everything added up by mine. This has no total by

1 mine, just every year. What is shown here is the
2 name of the mine that was reported to the ore-buying
3 station or mill, and there are -- there are aliases
4 and duplicates and all that we know about.
5 Q Now, you referred to the Shoebox Report?
6 A Yeah. That is -- somewhere along in DOE,
7 I think it was, they took all this kind of
8 information and they computerized it and it comes
9 out -- totals -- it will show a name of a mine, the
10 year, who the producer was, who the controller was
11 that year and year and year and year, and then a
12 total for the whole property. It's a lot easier to
13 use than these reports, but I didn't know about it
14 at the time.
15 Q And where are they located?
16 A The only time I -- I will have to ask
17 John. I think it was down at the DOE facility
18 today.
19 Q And that would be in...
20 A Here in Grand Junction.
21 Q In Grand Junction.
22 A I first heard about the Shoebox Report
23 when the Department of Labor was compiling data on
24 uranium mines, and they found out -- found this down
25 at the compound -- down at the facility. And,

1 anyway, they used it all and showed it to me, and
2 I'd never seen this before. I said, My gosh, if I
3 had seen that, it would have made my work for
4 Arizona and New Mexico a lot easier and also for the
5 RECA program.
6 Q How did it get its name, the Shoebox
7 Report?
8 A Because it was stored -- it was -- it's a
9 bunch of computer pages like this, and it was stored
10 in a shoebox in the archives down there.
11 Q Okay. All right. Well, that's good.
12 That will help us identify that. Well, let's now --
13 A But I have -- the labor department gave me
14 a copy of the shoebox, but I don't think I have it
15 anymore. I've given it back to somebody. I
16 think --
17 Q Okay.
18 A -- Craig is using it or something. I
19 don't know.
20 Q All right. Well, let's -- let's go to
21 Exhibit No. 41, then.
22 A 41.
23 Q And for identification purposes, this is a
24 document entitled: Radioactive Occurrences in
25 Uranium Production in Arizona, Final Report, by

1 Mr. Robert B. Scarborough -- that's
2 S-C-A-R-B-O-R-O-U-G-H -- March 1981 from the Arizona
3 Bureau of Geology.
4 Do you know Mr. Scarborough?
5 A Yes, very well.
6 Q Okay. And have you seen this report
7 before?
8 A Would you repeat it, please.
9 Q Oh, yeah. I'm sorry.
10 Have you seen this report before?
11 A Yes.
12 Q Okay.
13 A I was -- this report was a result of the
14 DOE going out to the different states surveyed,
15 mainly the four corner states and Wyoming, and
16 saying, We have some money here under the NURE
17 program. Can you compile -- take our data and
18 compile it in state surveys. And three states took
19 us up on it: Colorado, New Mexico, and Arizona.
20 And I was the project monitor on that particular
21 report, so that's how I got to know Bob Scarborough
22 very well, is working with him on preparing this
23 report.
24 Q And you are featured on Page 14 of the
25 report as the monitor, the DOE monitor, for this

1 project in the acknowledgment section.
2 A I probably am, should be.
3 Q Yeah, you should be, for certain.
4 And perhaps you could just briefly
5 describe for us what you did as the -- as the DOE
6 monitor for the project.
7 A Well, at the time, DOE said, You can come
8 up, look at our records, our production records and
9 all kinds of records, for your report, then we'd
10 have a complete report. So he came up to Grand
11 Junction about three times, copied a lot of ore --
12 copied all the ore production records for Arizona
13 through 1970. He looked at a lot of the geologic
14 data that was stored, maps and things, that were not
15 confidential.
16 Then I went out in the field with him a
17 couple times to show him where some of these mines
18 are that he couldn't locate on -- he and a partner,
19 a geologist, they were out looking at the old mines
20 and things. He needed some help around the
21 Carrizos, and I went out in the field with him, and
22 then I went over to Arizona into Monument Valley
23 with him one time. And then I had to approve the
24 final version before the Arizona Bureau could get
25 paid, so I really had firsthand information about

1 his whole report.
2 Q And so you approved the report --
3 A Yeah, I approved it for release to the
4 public.
5 Q Okay.
6 A No, to get paid.
7 Q To get paid. All right. So you approved
8 it as accurate?
9 A Yeah.
10 Q Okay. Well, I'm looking over at Page 44
11 of the report.
12 A 44. Okay.
13 Q Yeah. Let's take a look there. I mean,
14 it's just -- the section I'm interested in here is
15 entitled: Cameron-Holbrook Region.
16 A Okay. 44.
17 Q And, you know, I don't want you to have to
18 read too much of the report, given the fact that you
19 approved it already for its accuracy, but this
20 little section here is on Cameron and the Holbrook
21 region. And it's apparent that the author,
22 Mr. Scarborough, was relying on some of your
23 studies.
24 A Oh, yeah.
25 Q With Mr. --

1 A We made available to him everything we had
2 in the AEC files that wasn't proprietary.
3 Q Okay. And that's reflected in certainly
4 this section on Cameron.
5 And then if you turn with me over to
6 Page -- oh, it's Exhibit 41, Page 155.
7 A Oh, yeah. You got the whole book copied.
8 Q Well, we copied this whole report for
9 purposes of the deposition, just so we'd have the
10 whole thing here for you, Mr. Chenoweth.
11 A Page 155?
12 Q 155, yeah.
13 A Oh, yeah.
14 Q And there's information here on Cameron,
15 again, up in the upper portion of the Page 155.
16 A Yeah. This is -- for every uranium
17 property, not just the mines, but every big prospect
18 that he could find in the literature, he wrote a
19 little section like this.
20 Q And is this all derived from information
21 that was provided by the Atomic Energy Commission?
22 A Yes.
23 Q Okay.
24 A Like -- like you see down here, A & B 5
25 on -- it says down at the bottom the reference is

1 Preliminary Reconnaissance Report EDR 1145. He
2 looked through all the old preliminary
3 reconnaissance reports that were written for all of
4 the properties and prospects all over Arizona. They
5 were -- they had them in a book down there, and he
6 looked at every one of these and transcribed them
7 and they're listed in here. So besides just mines,
8 he's got uranium occurrences.
9 Q Okay. And what is a uranium occurrence?
10 A That would be -- that would be a place
11 where a prospector located some uranium, where
12 uranium occurs, let's say.
13 Q Turn with me --
14 A Uranium minerals, really, just...
15 Q Okay. Somewhere where a prospector had
16 located those minerals.
17 A Uh-huh.
18 Q Turn with me to Page 284, please.
19 A What?
20 Q 284.
21 A 284?
22 Q 284. Right.
23 A Okay. 283. 284.
24 Q And now here, I want to focus your
25 attention on Appendix B, Synopsis of History and

1 Mining Development.
2 A Uh-huh.
3 Q Just looking at this, this is a
4 description, is it not, of Arizona early history and
5 AEC involvement?
6 A No. It's really about the Colorado
7 Plateau, because Cameron was pretty late in the game
8 being discovered.
9 Q And this shows the earlier history.
10 A You're right.
11 Q Okay.
12 A And then he took every area, if I remember
13 right, and wrote a little history of it. Like at
14 the bottom of 285, he talks about the Carrizo
15 Mountains.
16 Q Right.
17 A Because he wanted to cover the whole state
18 of Arizona. And then on 287, he goes into the
19 Lukachukai Mountains.
20 Q And --
21 A So he went through the literature and
22 stuff in our library here in Grand Junction and
23 derived information to write all this historical
24 stuff.
25 Q Okay. And then if you look with me on

1 289, he's doing the history of Cameron area.
2 A Yeah.
3 Q Okay.
4 A I point -- I could point out references to
5 him to get this data. My opinion is it's one of the
6 better state summaries -- well of the three states,
7 it ranks up there with New Mexico on compiling data
8 on everything you knew about uranium in the state.
9 Q Okay.
10 A And I was a monitor on all three
11 contracts.
12 Q Okay. Well, I think that covers what we
13 want you to testify about, this Exhibit No. 41.
14 Now we go to Exhibit 42, which you
15 referred to a number of times. For the record, it's
16 the Summary History of Domestic Uranium Procurement
17 Under U.S. Atomic Energy Commission Contracts, Final
18 Report, done by two gentlemen: Holger, H-O-L-G-E-R,
19 and his last name is Albrethsen, A-L-B-R-E --
20 sorry -- A-L-B-R-E-T-H-S-E-N, Jr. and Frank
21 McGinley, M-C, capital G-I-N-L-E-Y. This is an
22 October 1982 report.
23 Have you seen this before?
24 A Yeah, this is my copy you borrowed.
25 Q Oh, yeah. Your name is up there in the

1 upper right-hand corner, and you referred to this
2 frequently in your --
3 A Yeah, the A&M report.
4 Q The A&M report.
5 Now, will you tell us who these two
6 gentlemen are.
7 A Okay. Mr. Albrethsen was the chief
8 counsel for the Atomic Energy Commission and wrote
9 mostly milling contracts with the millers, with the
10 milling companies. And he's still alive today at
11 92, but he doesn't want to go do anything. He just
12 wants to enjoy retirement, and he's in pretty good
13 health.
14 Frank McGinley was the chief -- he's a
15 metallurgical engineer, and he was chief of the
16 Processing Division for many years. And his staff
17 visited all the mills on a monthly basis and all
18 that, and he passed away about two years ago,
19 unfortunately.
20 Q So both of these gentlemen were employees
21 of the Atomic Energy Commission.
22 A And then also ERDA and then DOE.
23 Q Okay, yeah. And did I hear you correctly,
24 Mr. Albrethsen was the general counsel?
25 A Of this office.

1 Q Oh, of the Grand Junction office.
2 A Yeah. He was chief counsel, I think --
3 Q Chief counsel. Okay.
4 A And his job was -- he had a team of
5 several attorneys, but he's the one that wrote the
6 milling contracts.
7 Q Okay. Well, let's just take a look at a
8 couple of pages in this report, then. We want to
9 direct your attention to this exhibit, Page 5 of the
10 exhibit, which is Page 1 of the report. And here it
11 describes the purpose of acknowledgments with regard
12 to the report.
13 I take it that you've reviewed this entire
14 report and it's accurate?
15 A I have looked through it, especially the
16 data in the beginning. He describes the procurement
17 program and what -- how it changed and all that,
18 because I wasn't really aware of all the details of
19 the procurement program. And then he goes into mill
20 by mill, and then he has a chapter on ore-buying
21 stations and all that. So I haven't read every
22 mill -- I have not read every section on every mill,
23 just mainly Shiprock and Tuba City, some of those on
24 the reservations.
25 Q Right. Well, and he's describing history

1 here, so we are not going to hold you to affirming
2 that every word in the report is accurate, but --
3 A Now, if this is -- after this got released
4 to the public and sold, it was a best seller for
5 several years because it -- the industry -- it's the
6 best history I know of of the whole milling contract
7 process. And Frank McGinley found an error, I
8 think, on the Atlas Mill section, and in my copy he
9 penciled in the missing sentence. But you don't
10 have the Atlas section in here, but he did find an
11 error in the Atlas section after it was released to
12 the public.
13 Q And they corrected it subsequently.
14 A No. He corrected my copy and the one in
15 the library down there, but he didn't -- there was
16 no way he could correct the copies that were sold.
17 They sold hundreds of copies of this to the library
18 down there. It was a best seller.
19 Q Okay. Well, we appreciate his attention
20 to detail, and, of course, if you look over on Page
21 11, he's got a summary of those six circulars that
22 we were discussing earlier.
23 A Right. I know that.
24 Q And that's --
25 A That's the best summary I know of, a

1 concise, short summary of the...
2 Q Okay. Good. Well, that -- that -- I just
3 wanted to call your attention to that just in case
4 we had to reference a circular.
5 A It summarizes all the legal mumbo jumbo
6 out of the circulars to something you can understand
7 here.
8 Q Okay. Great.
9 There's also -- if you turn to Page 20 of
10 the exhibit, there is a two-page summary of the Rare
11 Metals Corporation of America and the El Paso
12 Natural Gas Company, Tuba City.
13 A Yes.
14 Q Okay. That's detailed in there as well.
15 Okay. That's -- we're done with 42. We might come
16 back to it to the extent that it's referred to in
17 some of your subsequent histories. I take it you
18 used this as a reference for your work.
19 A Yeah. Because, see, some of these mills
20 like Durango and Uravan and Naturita, they
21 actually -- they bought vanadium ore. They paid for
22 the vanadium in the ore because these ores were high
23 in vanadium. And excess vanadium -- and the excess
24 vanadium that the milling company couldn't sell the
25 AEC bought. And they used to have a stockpile down

1 here at the facility of all the vanadium they
2 bought, and then they had an action and they sold it
3 off to steel companies.
4 So I remember hearing the Shiprock mill
5 under Kerr-McGee never recovered vanadium. It all
6 went out in the tailings. But when VCA took the
7 mill over, they'd recovered vanadium. And I wanted
8 a reference, so I remember going to this report and
9 getting that as a reference.
10 Q Okay. Now, our next section of your
11 deposition, Mr. Chenoweth -- and this will -- we'll
12 be able to get through this fairly quickly -- is
13 approximately six to eight studies that you did, and
14 we're going to go back to the map in order to
15 designate these.
16 And we'll start with Exhibit No. 43,
17 which, for the record, is: Uranium Geology and
18 Production History of the...
19 A Sanostee.
20 Q Sanostee Area, S-A-N-O-S-T-E-E, Area, San
21 Juan County. This Exhibit No. 43 is your report?
22 A Yep.
23 Q Okay. And you have described previously
24 how you conducted your research for these reports,
25 but do you want to just bring us back up to date on

1 that as to -- as to how you did these reports.
2 A Well, this Sanostee -- the mines at
3 Sanostee are pretty interesting because it's -- it's
4 one of the few mines on the reservation, Navajo
5 Reservation, that produced after the AEC program.
6 And so we got some data from -- from both the State
7 and from the DOE down here with permission about how
8 much uranium they produced after the AEC program,
9 and that's summarized in here.
10 Q Can you mark on the map behind you where
11 the Sanostee --
12 A It's a Navajo word meaning ribbons of
13 rock.
14 Q Wonderful. Thank you.
15 A Okay. Sanostee is on the state line right
16 about here, I'd say. I'd say it's right about here.
17 That would be number...
18 Q That would be No. 5, I believe.
19 A All right.
20 Q Thank you. And we're going to go to
21 Exhibit No. 44, which is another report prepared by
22 you. I'm going to read the title for the record.
23 Exhibit 44 is: Early Vanadium-Uranium Mining in
24 Monument Valley, Apache and Navajo Counties,
25 Arizona, and San Juan County, Utah.

1 I expect that's a larger area, but is this
2 a report that you did?
3 A Yeah, this -- this is a lot of information
4 on the early vanadium mine that was released -- or
5 it came to the court in the trial about the vanadium
6 that was mined and the Navajo wanted to be paid for
7 the uranium content. And they dug up in the old
8 archives -- the BIA never throws any -- the Bureau
9 of Indian Affairs never throws anything away, and
10 they found the old royalty records and all these
11 shipments.
12 So afterwards, I was talking to the
13 Arizona people and said, Gee, if they will let you
14 use that data, that'd be fine. The attorney said,
15 Yeah, you can use the data. It's all been released
16 in the court records. So this is a record of the
17 early vanadium mining in the 1940s that was done in
18 the Monument Valley area.
19 Q Okay. So let's designate this as No. 6.
20 A And that would be an area -- see, here's
21 Monument 2. Over here about like that, that would
22 be No. 6.
23 Q Okay. Now, we don't have a date for this
24 report, but I see that it's 85-15, so we're assuming
25 that that's 1985 that the report was done. Just --

1 that's just for the record.
2 A Yeah. Open file was done in 1985.
3 Q Okay. Great. Let's go now to Exhibit No.
4 45, which is another report done by you, June 1985,
5 entitled: Historical Review of Uranium-Vanadium
6 Production in the Northern and Western Carrizo
7 Mountains, Apache County, Arizona.
8 Again, this is a report based on
9 information that you had, and do you recall
10 preparing this report?
11 A Yeah.
12 Q Okay.
13 A This report is a second version. The
14 Navajo Mining Department was always after us. We
15 had good relations -- the AEC had good relations
16 with the Tribal Mining Department down in Window
17 Rock. And they were always saying, Well, gee, you
18 know, we'd like to know how much uranium came out of
19 these different mines, where they were, and all
20 that, and we said, Sure.
21 So the management down here kind of
22 assigned me to write these reports because of my
23 time down there. So we put out an earlier version
24 called a technical memorandum, which was open-filed
25 by the DOE. And then after it came out, I noted

1 some error and got some more information, and it was
2 rewritten and open-filed by the State of Arizona.
3 So this is an update of an earlier DOE report.
4 And I can't remember the number, but it's
5 a TM number, technical memorandum, that we sent down
6 to Window Rock. And then after it came out, I found
7 some errors in it in some of the mining history. So
8 there are tables in here, tables here of all the
9 mines in that part of the Carrizo Mountains, how the
10 production was, and the years and the controllers.
11 And this was all -- all the same information was
12 open-filed by the DOE, oh, probably in '82 or
13 something.
14 Q Okay. Well, would you please designate on
15 the map as No. 7 the area that's covered by this
16 report.
17 A Okay. I think it's going to overlap one.
18 Oh, yeah.
19 Q Yeah.
20 A It's going to be -- be 7. This Carrizo
21 Mountains has got to be bigger. It's right there.
22 Q Okay. So we can put a 7 next to that.
23 A Yeah.
24 Q That was our first one, wasn't it?
25 A And then there's a similar report in New

1 Mexico, which is over here.
2 Q Okay. So that's No. 1 and No. 7 now.
3 A Yeah.
4 Q Okay.
5 A This is -- this is the Arizona part of the
6 Carrizo Mountains. There's a similar report that
7 DOE open-filed and gave to the tribe, and then it
8 got updated and it was put out by the New Mexico
9 people.
10 Q Okay. Well, let's go now to Exhibit No.
11 46, and that's a report entitled: Raw Materials
12 Activities of the Manhattan Project in New Mexico.
13 And this is September of 1985.
14 Do you recall making or preparing this
15 report?
16 A Yes. This is -- this is a result of that
17 lawsuit that released all this old information about
18 what the Manhattan District geologists did and all
19 that. And the State of New Mexico, as soon as the
20 Court said I could use this or the lawyer said I
21 could use this, they said, Write it up. We want to
22 preserve this in history.
23 So this is a historical summary of what
24 the civilian geologists employed by the Manhattan
25 District did in New Mexico. Besides studying the

1 mines in the Carrizos, they looked all over the
2 state for uranium.
3 Q Okay.
4 A And they found some uranium down in --
5 down in southern New Mexico, Silver City or -- no.
6 The White Signal Mine down in southern New Mexico
7 had some viable uranium in it.
8 Q Did you ever do a similar report for
9 Arizona?
10 A Yes. Arizona heard about this, and these
11 two state people knew each other very well. Well,
12 you're doing that for us. We'll have some money and
13 you come up and do that for us. These are all done
14 with no salary or anything, just sort of a hobby,
15 but they did the word processing and the drafting
16 and all that.
17 Q Okay. Well, I guess we can't designate
18 this up there on the map as No. 8.
19 A No, it's the whole state.
20 Q It's the whole state, so we won't do that.
21 But we're going to get to -- we're going to get to
22 the Arizona report.
23 A It's the same thing. The whole state they
24 looked at. These guys were out under disguise of
25 looking for vanadium, but they were looking for

1 uranium.

2 Q Okay.

3 A Anyplace it had been reported in the

4 literature.

5 Q All right. We are going to turn to 47

6 now, and we are going to see another summary report

7 entitled: A Summary History of the Activities of

8 the Grand Junction Office of the AEC, ERDA, and DOE.

9 And I haven't asked you this yet, but does

10 ERDA stand for the Energy Research Development

11 Administration?

12 A Yeah.

13 Q Is that a successor to the Atomic Energy

14 Commission?

15 A Well, it -- when the Congress or somebody

16 said the AEC can't be regulators and producers, or

17 something like that, and they broke the AEC into

18 ERDA and the Nuclear Regulatory Commission. And it

19 was a short-lived agency, I think maybe three years.

20 I got a certificate being a full-time employee of

21 ERDA. It was only about three years, and then we

22 became the Department of Energy.

23 Q Okay.

24 A And ERDA was abolished and they put all of

25 ERDA, I think, into Energy.

1 Q Okay. Well, I see in this report, in the
2 preface, on Page 2 of the exhibit that the three
3 authors are Mr. Albrethsen, you, and Mr. McGinley;
4 is that correct?
5 A That is correct.
6 Q Okay. And this is your history of the
7 Grand Junction office.
8 A We had a reunion -- I forget when it
9 was -- of all former federal AEC employees. There
10 are a lot retired here in Grand Junction and all
11 over Colorado. Anyway, we had a big reunion. I
12 forget how many hundreds of people came back to it,
13 and somebody said, Well, we've got to have a handout
14 what went on. So Al and Frank and myself, we sort
15 of got volunteered to write this up to pass out to
16 all the people that attended the reunion. And
17 that's the only distribution I know it had.
18 Q Okay.
19 A But it's -- and most of this is -- oh,
20 about the pilot plants and the concentrate and all
21 that, that was Frank and Al's stuff. You don't have
22 a complete -- you don't have a complete report here.
23 Q Well, we go up to Page 11.
24 A Because there was a -- we listed where all
25 the field camps were and where the offices were

1 because we were spread out all over --
2 Q Oh, I think we've got that. We've got
3 that on Pages 10 and 11 of the report. The field
4 offices --
5 A I don't see it.
6 Q Take a look.
7 A What page?
8 Q Of the exhibit Pages 10 and 11.
9 A Okay. I'll go back. Because on my copy,
10 it's in the very back of the report. I got 8, 9 --
11 oh, here it is. Oh, yeah. Yeah, this is -- this
12 just shows where we all had offices in what states
13 and all that, and then it shows the field camp areas
14 we had here on the Colorado Plateau, as well as up
15 in Wyoming.
16 Q Okay.
17 A And then -- then after this was done,
18 people would come up, Well, you left out my field
19 camp over on Elk Ridge or one at Temple Mountain,
20 and so I penciled this in on mine just to have a
21 copy of it.
22 Q Okay. To make it completely accurate.
23 Okay. Well, that's good. I'm glad that they
24 included that information.
25 Let's go to Exhibit 48, and for the

1 record, this is: Historical Survey of the Grand
2 Junction Projects Office Facility for Hazardous
3 Non-Radioactive Wastes, by Mr. McGinley, dated
4 February 27, 1987.
5 Have you seen this report before?
6 A Oh, yes. It has to do with a lot of
7 the -- a lot of the contamination done by the
8 Manhattan Project facility down there. And at the
9 time, the contractor was UNC Technical Services.
10 They were the prime contractor to the DOE then.
11 Q Okay. UNC Technical, is that United
12 Nuclear?
13 A I think it is.
14 MR. VORHEES: It is? Thanks.
15 Q (By Mr. Vorhees) Let's go over to 49, and
16 this is a report prepared by you entitled: Uranium
17 Procurement and Geologic Investigations of the
18 Manhattan Project in Arizona, January 1988.
19 This is apparently the report that you
20 just referred to?
21 A Yeah, this is a summary report like New
22 Mexico but on the Arizona side.
23 Q And this is for the whole state on the
24 Manhattan Project work that was done in Arizona?
25 A Yeah, right.

1 Q Okay. Now we go to 50, which is: The
2 Geology and Production History of Uranium-Vanadium
3 Deposits in the Lukachukai --
4 A Right.
5 Q -- L-U-K-A-C-H-U-K-A-I, Mountains in
6 Apache County, Arizona.
7 And, Mr. Chenoweth, you prepared this
8 report?
9 A Yes.
10 Q September 1988?
11 A Yeah. This is an -- this is an outgrowth
12 of -- when I was still with DOE, I prepared a map
13 for the Navajo Tribal Mining Department in the
14 Lukachukai Mountains showing all the mines and the
15 mine names and the production out here. And it was
16 sent to Window Rock and they liked it, and then it
17 was open-filed by the AEC. It's a huge map, about
18 that big. I mean open-filed by DOE.
19 And Arizona says, Gee, you have got all
20 that data on that map that's open-filed. We need a
21 text. Can you prepare a text that goes with it. I
22 said, Well, you got some word processing money?
23 They said, We can come up with a few bucks. So this
24 is a report that was written to complement the huge
25 AEC-DOE open-filed map. Now, I didn't have a copy

1 of that at my house, so you don't have a copy of it.
2 But it's a big map, and I've got the press
3 release when it was opened-filed in case somebody
4 asked. It was called DOE Preliminary Map No. 28,
5 and it was released to the public on January 18,
6 1980. And it's one of a whole series -- you might
7 want to enter this into the record. This is a whole
8 series of preliminary maps this office put out down
9 here, including five Navajo maps.
10 Q Well, I would be very pleased to look at
11 that at the break, and let's -- let's --
12 A Because I don't have copies of these maps
13 anymore, but this is an outgrowth of that map.
14 Q Well, let's go to the board, though, and
15 let's designate this as --
16 A Lukachukai?
17 Q Yeah. Here we are at the Lukachukai, and
18 this will be number --
19 A I think I already have at No. 2, haven't
20 I? What's No. 2?
21 Q So you have already got one study of
22 Lukachukai. I think I recall that, and then this
23 is --
24 A Yeah. No. 1 is Carrizo Mountains. No. 2
25 is the Lukachukais.

1 Q Okay. That would be it.
2 A Yeah.
3 Q Okay. Let's go to Exhibit No. 51, and I
4 believe this one will also be a report that we're
5 not going to go back up to the map on because it's
6 entitled: The Access Road Program of the U.S.
7 Atomic Energy Commission in Arizona, by -- authored
8 by you, June 1989.
9 And you want to tell us about this report?
10 A Well, we were talking about things that
11 AEC did to help prospectors in mining, and Arizona
12 says -- I mentioned, Well, they improved the road
13 from Shiprock out to Monument Valley and up to
14 Monument 2 Mine, the huge -- so VCA could get their
15 ore out to Durango much easier. And they said,
16 Really?
17 And so, anyway, I got permission from DOE
18 to look in the archives before the -- the material
19 before it went to the archives on the whole AEC
20 access road program and came up with this report on
21 the roads that were improved by the AEC in Arizona
22 to help to get the uranium out.
23 Q And I see that the improvements and the
24 costs are summarized on Page 6 of the --
25 A Right.

1 Q -- of the exhibit. Okay.
2 A And then I've never written another report
3 about access roads, but there's one on New Mexico,
4 one on Wyoming, and a big, thick one on Colorado,
5 because they improved roads all over the country,
6 built new bridges, things like that, to get the
7 uranium to the mills faster.
8 Q Okay. All under the direction of the
9 Atomic Energy Commission?
10 A Yeah, and in places they got state money
11 some places too, I think, but...
12 Q A state share.
13 A Uh-huh.
14 Q Okay. Let's go Exhibit 52.
15 A I've never seen this. I guess I have if
16 you copied it.
17 Q Well, now, the title of this report is:
18 The Final Remedial Investigation/Feasibility Study-
19 Environmental Assessment for the U.S. Department of
20 Energy Grand Junction Projects Office Facility, July
21 1989. And it's by Mr. McGinley, the consulting
22 engineer.
23 Again, he was a former DOE employee?
24 A Yeah, he was AEC, ERDA, DOE.
25 Q And one of your co-authors.

1 A Yeah.
2 Q But on this report -- he created this
3 report on February 27, 1987?
4 A Yeah.
5 Q And have you reviewed this report or --
6 A I have used -- I'm trying to think. I got
7 this for the Labor Department when they were doing
8 this survey of hazardous materials of all these
9 ERDA -- all these DOL sites. He did a section on
10 here of the hazardous radioactive characteristics
11 down there, and then he had a little bit of the
12 history of the site that went clear back to the
13 Manhattan District.
14 Q Okay. And, of course, as a former AEC
15 employee, you had access to records for purposes of
16 preparing this report?
17 A Yeah, right.
18 Q Okay.
19 MR. FOSTER: Can I just interrupt for
20 a quick second? And I apologize --
21 A And see in the back on Page 52-44, Frank
22 listed everybody interviewed, and I think that's why
23 I got a copy because he interviewed me.
24 Q (By Mr. Vorhees) Oh, let's see that. He
25 listed you on there?

1 A I thought he did. Maybe not.
2 Q Oh, yeah. Here you go. This is on Page
3 44 of the exhibit.
4 A Four from the bottom.
5 Q You are without question fourth from the
6 bottom.
7 A That's right. I had -- I had in my file a
8 copy of some of the early buildings down there. I
9 guess that's why I'm listed here.
10 MR. FOSTER: But who's counting.
11 MR. VORHEES: Yeah, well, now Mr.
12 Foster has a question.
13 MR. FOSTER: Yeah. I just wanted to
14 clarify that these appear to be, to me, two separate
15 documents, and I just thought the record needed to
16 be clarified, that the main report here by
17 Mr. McGinley doesn't seem to be the final RIFS.
18 MR. VORHEES: Well, I noticed that,
19 and there is an addendum to the report on Page 37.
20 It looks like it's -- that Mr. McGinley -- and thank
21 you for pointing that out. There is an addendum to
22 the report that Mr. McGinley prepared on August 14,
23 1988.
24 Q (By Mr. Vorhees) So now, Mr. Chenoweth,
25 let's turn to page -- I'm sorry -- Exhibit 53. And,

1 again, we're going back to another report by you,
2 and this one is entitled: The Geology and
3 Production History of Uranium Deposits in the Salt
4 Wash Member of the Morrison Formation Near Rough
5 Rock, Apache County, dated August 1989.
6 And it's a short report, but would you
7 please designate this on the map.
8 A Yeah. This, again, is a report -- it's an
9 outgrowth of the preliminary maps we did for the
10 tribe. This is an outgrowth of preliminary map
11 number -- anyway, the map shows the mines and gave
12 the production but no text with it. And this is map
13 number -- Preliminary Map 31, open-filed April 2nd,
14 1980. And this is a text that goes with that --
15 fills in the history of that area without -- that's
16 not shown on that map. And that's -- Rough Rock
17 area is in Apache County right on the state line --
18 or right on the county line. Let's see. There's
19 the jog. It's -- is it Apache or is it --
20 Q It's Apache County.
21 A Okay. It's not over the line, then. It's
22 right -- right probably here.
23 Q And what number are we up to now?
24 A We'd be on No. 8.
25 Q No. 8 or No. 9?

1 A No. Lukachukai was 2, so this would be 8.
2 Q All right. Well, now --
3 A This is just -- that's about the drilling
4 the AEC did and the rim-stripping they did and then
5 production of some high-grade uranium that they
6 found over there.
7 Q Okay. All right. Done by the AEC.
8 A Oh, yeah.
9 Q Okay. Now, let's go to 54, and this is a
10 report entitled: Utah Geological and Mineral
11 Survey, done by you on November -- November 1990.
12 Do you recall preparing this report?
13 A That's right.
14 Q Okay. And I guess this is a statewide
15 report.
16 A No. It's only Monument Valley.
17 Q Oh, look. There you are.
18 A It says contract number so-and-so. The
19 State of Utah used to get revenue off their state
20 school sections. They had a pool of money, and
21 every year they'd come out and say, We got some
22 extra money. Send us a proposal about some
23 mineral -- some mineral area resource or something
24 we'd be interested in in Utah and I bid on this.
25 And I got this con -- in 1990, I got awarded a

1 contract to write up about this little known area of
2 uranium in Utah.
3 And that would be included in -- that
4 would be included in No. 6 here. It would be the
5 Utah part of No. 6.
6 Q Well, shall we just kind of designate that
7 No. 9 in the Utah part with a little arrow?
8 A Yeah.
9 Q That would be fine.
10 A 9.
11 Q Okay.
12 A There's 13 mines up there in Utah, and two
13 of them are on state lands within the reservation,
14 which is very unusual.
15 Q Okay. And then the last document we have
16 in Volume 2 of our binders of exhibits is: The
17 Geology, Leasing, and Production History of the King
18 Tutt -- with two Ts -- Point Uranium-Vanadium mines,
19 San Juan County, New Mexico.
20 And this is a report you did in April of
21 1993.
22 A Right.
23 Q For the New Mexico Bureau of Mines and
24 Mineral Resources. Do you recall preparing this
25 report?

1 A Yeah. This is an outgrowth of -- when VCA
2 was closing their Naturita office, they offered the
3 states -- or at least New Mexico asked if they could
4 have them, so did Arizona -- can we get traces of
5 your mine maps to put in the archives. And VCA
6 said, Sure, if you can come down and trace them. So
7 I went down to Naturita with some tracing paper and
8 traced off the Navajo mining permits and where the
9 mines were and the shape of the mines within that.
10 And this is an outgrowth of the data New Mexico got
11 from VCA. This goes to the text with a great big
12 map that I copied from VCA.
13 Q Can we designate this up on our map as No.
14 10?
15 A 10. King Tutt Mesa is right here.
16 Q Okay. Let's put a No. 10 there.
17 A Now, VCA wouldn't give us the maps, but
18 they said if you want to trace them -- you don't
19 have the maps here. It's a big map like this
20 showing all the mines on the King Tutt Mesa.
21 Q Okay. Well, then...
22 A Oh, no. This is -- I'm wrong. This is
23 King Tutt Point. That's one of the mines. Yeah.
24 Well, it's the same area. Yeah, they give us a map,
25 probably is in here. If I remember right, I traced

1 a map off of -- of the two little mines on King Tutt
2 Point. Yeah, here it is on the back. It's in here.
3 Q Okay.
4 A That was -- this was a bigger scale map,
5 and they have reduced it down and put it on page
6 size, because it's a great big map.
7 MR. VORHEES: Okay. Well, we're done
8 with Volume 2 now and we're going to move on to
9 Volume 3. Let's just go off the record for a
10 moment. Can we do that?
11 VIDEOGRAPHER: The time is
12 approximately 2:35 and we are off the record.
13 (Off the record.)
14 VIDEOGRAPHER: The time is
15 approximately 2:37, and we are on the record.
16 Q (By Mr. Vorhees) Mr. Chenoweth, let's turn
17 now to Exhibit No. 56 and a document entitled:
18 Recollection of Early Uranium Mining in the Carrizo
19 Mountains, Apache County, Arizona and San Juan
20 County, New Mexico.
21 A That would be number -- well, it would be
22 probably No. 1 on the map.
23 Q Okay. And this is just a page and a third
24 document, but do you recall preparing this?
25 A This was -- this was written at the

1 request of Stewart Udall, who was having hearings in
2 Shiprock about the radiation the miners got and all
3 that. And he knew I had been around the Carrizos
4 because -- and he said, Well, you submit a thing I
5 can submit to those radiation hearings they're going
6 to have in Shiprock next week. And I says, Well, I
7 can't really do this, but I can -- I can copy some
8 stuff out of oral history I made years ago. He
9 said, Anything will help.
10 So this is -- this is something I
11 submitted to Stewart Udall for his Shiprock
12 radiation hearings in May of '93.
13 Q Okay. And Mr. Udall, former Secretary of
14 the Interior --
15 A Yes.
16 Q -- he obviously was quite interested in
17 this subject matter.
18 A This was pre-RECA, I believe.
19 Q The reference here is to -- on Page 2 is
20 to your oral history --
21 A Yeah.
22 Q -- that you referred to.
23 And that's at the National Mining Hall of
24 Fame and Museum at Leadville?
25 A Yeah, and there's also a copy at Fort

1 Lewis, and somebody borrowed my copy and I don't
2 have a copy in my library that you could find. But
3 I know the museum here in Grand Junction has a copy.
4 Q Okay.
5 A And it's really a recollection of working
6 on the reservation for ten years and all the fun we
7 had.
8 Q Okay.
9 A And all the interesting things that
10 happened.
11 Q All right. Well, we'll be certain to look
12 for that. And if we find it, we'll send you a copy.
13 A Oh, I can -- I can go down to the museum
14 right over here and get a copy.
15 Q Okay.
16 A But there is a copy at Fort Lewis, I know.
17 Q Oh, is that the Mesa State museum?
18 A No. This is the Mesa County museum called
19 the Museum of Western Colorado. It's a county
20 museum, and they've got a copy of the files, but my
21 copy has disappeared. I loaned it to some guy in
22 Golden that was in Telluride to write something
23 about uranium. Anyway, I have never gotten it back.
24 Q Okay.
25 A He was going -- but I knew I could get a

1 copy from the museum down here if I needed one.
2 Q All right. Well, now, our next document
3 is Exhibit No. 57, which is a report by you. And
4 now we're going to go back to Arizona for a moment.
5 It's the Geology and Production History of the
6 Uranium Ore Deposits in the Cameron Area, Coconino
7 County, Arizona.
8 And you are already at the board. No. 11,
9 is that the number we're at?
10 A Yeah, this would be 11.
11 Q Okay. Now, this is a report done by you
12 in August of 1993?
13 A Uh-huh. And it's an outgrowth of a
14 preliminary map, No. 20, which was prepared by -- we
15 were AEC then. My location map, Cameron uranium
16 area, Coconino County, by Chenoweth and Magleby, and
17 it was opened-filed to the public in September 12,
18 1972. And, again, working with the people down at
19 Window Rock, they said, We'd like to see a text to
20 go with this and Arizona said, We would too. And
21 so, anyway, this was sort of partly funded by -- was
22 funded by the Arizona Geological Survey, and they
23 said this will really update Scarborough's work.
24 Q And, Mr. Chenoweth, I should have asked
25 you this question earlier, but you referred to these

1 maps. What's the information in the maps that -- or
2 what's the information that's depicted in these maps
3 that you're referring to?
4 A What's...
5 Q Oh, what is the information that is
6 depicted in the maps that --
7 A Oh, the map that was open-filed. It's a
8 map of the geology of the Cameron area. It has all
9 cross-picks with the names of the mines listed in
10 the margin. No production date. Just a mine
11 location map. Like it says here, mine location map.
12 Q I think we have one of those and we'll
13 show it to you --
14 A Scarborough -- Scarborough took my map and
15 amended it. My map was very simple. No, that's --
16 that's Cameron Mining Company's map.
17 Q Okay. Well, we'll have an illustration of
18 the map that you're referring to.
19 In any event, the maps were prepared to
20 assist in the recordkeeping of the information?
21 A Yeah. Maps -- all these preliminary maps
22 put out by the AEC people all over the country
23 really were to show people, the state people and
24 other people, where the mines were.
25 Q Okay. And then this will be our last

1 exhibit before we take our break, Mr. Chenoweth, but
2 let's go to 58, and it's --
3 A Oh. Yeah.
4 Q Well, this is a report that was prepared
5 by you in December of 1993.
6 A 58?
7 Q Excuse me? 58, right. And I'm looking at
8 Page 2 of the -- Page 2 of the exhibit, which is
9 entitled: Historical Review of Carnotite Mining.
10 A Oh, yeah, now I know. Yeah, this -- this
11 is -- I worked for the BLM a couple summers to have
12 something to do and get outdoors. And we went
13 around and inventoried all the trash and junk in all
14 the abandoned mines on BLM lands in the
15 Gateway-Uravan area. And I kept telling them, Well,
16 this is so-and-so and so-and-so.
17 And so they came up with some extra money
18 and said, Will you write us a historical report, and
19 so I did. And that first page explains what
20 happened to it, because I said I -- the BLM funded
21 it. It's their report. They can do whatever they
22 want to do with it. Well, they made it public, and
23 so...
24 Q Okay.
25 A And then Mesa -- Mesa State wanted a copy

1 for their library, and the librarian said, Well, I
2 need some historical work on where this report came
3 from. That's what this first page is.
4 Q I got you. Well, then, let's just wrap up
5 with this exhibit. If you would identify on the map
6 No. 11? 12?
7 A You mean what this report covers?
8 Q Yeah, Southwestern Colorado.
9 A It's a big area, but I can put a big...
10 Q Why don't we put a 12 up there for that.
11 A Since BLM is organized by state, it has
12 nothing to do with Utah and the other states.
13 Q Okay. And then we'll stop there.
14 A Okay. Then it would be Colorado. Okay.
15 This would be 12.
16 Q Okay. And then we'll pick up with Exhibit
17 No. 59 after our break.
18 VIDEOGRAPHER: The time is
19 approximately 3:45. This is the end of Tape No. 4
20 in the deposition of William Chenoweth. We are
21 going off the record to change tapes. Excuse me.
22 2:45.
23 (Recess taken.)
24 VIDEOGRAPHER: We are on the record.
25 This is the beginning of Tape No. 5 in the

1 deposition of William Chenoweth. The time is
2 approximately 3:00.
3 Q (By Mr. Vorhees) Good afternoon,
4 Mr. Chenoweth. We're going to resume now with our
5 Volume 3 of deposition exhibits, and I'm looking at
6 Exhibit No. 59, which, for the record, is an
7 Affidavit of William Chenoweth. And I have got just
8 a couple of questions about this.
9 It appears that this affidavit was
10 prepared for the United States District Court for
11 the District of New Mexico litigation between
12 Kerr-McGee Corporation and some individuals. Do you
13 recall this affidavit? Do you have a moment to take
14 a look --
15 A I don't really recall it, but I think this
16 has to do with a Navajo lady whose husband worked in
17 the mill and he died, and she thought it was from --
18 no, she got sick and she thought from washing his
19 dirty clothes. Is this it?
20 Q Well, this is --
21 A That's the only thing I did for the
22 Shiprock mill, I think.
23 Q This is, without question, personal injury
24 litigation, and this affidavit was prepared in
25 connection with that, we believe.

1 A What law firm was this?
2 Q Yes...
3 A A Santa Fe law firm? I don't really -- I
4 kind of remember this, but it's...
5 Q Do you recall the Lewis and Roca law firm?
6 A Oh, that's a Phoenix law firm.
7 Q Okay.
8 A Yeah, I remember it now. Yeah, now I
9 remember it now.
10 Q Okay. Well, in any event, what we wanted
11 to do just was refresh your recollection, if you
12 hadn't seen this in a while.
13 A I don't remember seeing this piece of
14 paper, but I remember the case now.
15 Q Okay.
16 A Tom Gilbert was the attorney.
17 Q Tom Gilbert?
18 A Yeah, I'm pretty sure that was him.
19 Q Okay. Let's go to the next exhibit, No.
20 60, which is entitled: The Geology and Production
21 History of the Tract 11 and Tract 17 Uranium Mines
22 in Navajo County, Arizona.
23 Again, prepared by you, February 1996,
24 Exhibit 60. Do you recall this --
25 A Yes.

1 Q -- site?
2 And will you tell us about this.
3 A Yeah, this are two mines way out in the
4 west part of Monument Valley. I never worked there,
5 but I flew over them one time in a plane chartered
6 by DO -- DOJ. And after flying over them and seeing
7 them, oh, well, they're interesting mines way out
8 there in nowhere.
9 Q Okay. And you did a study of these two
10 tract --
11 A Mainly from the literature. Like I said,
12 I never worked on the ground, but I flew over them.
13 Q And this is the study, Exhibit No. 60?
14 A Uh-huh.
15 Q Could you designate those Navajo County,
16 Arizona mines. I guess it's -- what are we up to?
17 Number --
18 MR. FOSTER: 13.
19 Q (By Mr. Vorhees) 13.
20 A What number will it be?
21 Q Looks like we're at 13.
22 A Let's see. Where was 12? Uh-oh, we've
23 got two 11s up there. Cameron is -- Cameron should
24 be 12, isn't it?
25 MR. SANDS: 12 is up in Colorado.

1 MR. FOSTER: 12 is Western Colorado.
2 A Uravan is 11, so --
3 Q (By Mr. Vorhees) Yeah, 11 was...
4 A That's 12.
5 So Tract 18, they were way down over in
6 here. That would be 13.
7 Q Okay. Now, I apologize for jumping around
8 a little bit, but the next exhibit is another
9 affidavit, and this one is signed by you.
10 A Yeah, I know this. I remember.
11 Q And let's just take a quick look at this
12 and see if you can recall this. This is dated
13 September 18, 1996.
14 A Uh-huh. Yes, this is -- I think this has
15 to do with Nez Tsosie, doesn't it? '96.
16 Q This appears to be related to the Tuba
17 City and the Rare Metals Corporation of America.
18 A Uh-huh.
19 Q Do you recollect this affidavit?
20 A Yeah, yeah. Yeah, I remember this.
21 Q Okay. Let's go to 62. Just briefly on
22 62 --
23 A Oh, yeah.
24 Q This document is a report entitled:
25 Linking Legacies, dated January 1997, and it's a

1 Department of Energy report from the Office of
2 Environmental Management, and we know that -- that
3 there's an inscription to you on Page 5 of the
4 report.
5 Have you seen this report before?
6 A Yeah.
7 Q And I suppose --
8 A When this was published, they sent a box
9 of these out to the site here at Grand Junction
10 and -- maybe this isn't the one.
11 Q Well --
12 A This was -- this was a photographer, a
13 DOE -- a contract photographer at the DOE who took
14 most of these pictures in here, and he was out here
15 at Grand Junction and visiting us and he gave me
16 this copy with this inscription here.
17 Q Okay.
18 A It was -- even though I really had nothing
19 to do with it. But it does talk about sites like
20 Weldon Spring and other sites that I had always
21 heard about, you know.
22 Q Okay.
23 A This was -- this was a gift from this
24 photographer that had a bunch with him when he came
25 out here and visited Grand Junction, and somehow he

1 had one to give away.
2 Q Okay. Well, then, let's go to Exhibit 63,
3 which we're now back to additional reports by you.
4 This one is entitled: The Geology, Leasing, and
5 Production History of the Uranium-Vanadium Mines on
6 North Star Mesa, Apache County, Arizona and San Juan
7 County, New Mexico.
8 And we're going to designate these as No.
9 14.
10 A It's up -- it's up there.
11 Q Okay. And, Mr. Chenoweth, you recall
12 preparing this study for the Arizona Geological
13 Survey?
14 A This is the result of Vanadium Corporation
15 of America giving mine maps of their mines up there.
16 Q Okay.
17 VIDEOGRAPHER: Can he show us that
18 again.
19 Q (By Mr. Vorhees) Yeah, do you want to show
20 us where No. 14 --
21 A It strides the -- it strides the state
22 line just 16 miles south of the Four Corners right
23 here.
24 Q Okay. Thank you. That's perfect.
25 A Because -- I know that because the claims

1 are all tied to a brass cap on Mile Post 16.
2 Q Okay. Good. Okay. And we -- we need to
3 move to 64, Exhibit No. 64, which is, for the
4 record: The Geology, Leasing, and Production
5 History of the Martin Uranium-Vanadium Mine in
6 Apache County, Arizona, a report by you dated March
7 1999.
8 A Uh-huh.
9 Q This one will be designated No. 15, and do
10 you recall preparing this report?
11 A This was a mine on the AEC lease that the
12 AEC inherited from the Manhattan District, and I
13 think VCA mined it and they gave us a mine map and
14 this is the text that goes with that mine map.
15 So -- and it's right -- well, we're going to have
16 too many numbers here.
17 Q That's okay. If we're in the general
18 vicinity --
19 A I'd say -- what number is this?
20 Q This is No. 15.
21 A It's in the Western Carrizos.
22 Q Okay. All right. Now, let's go to No.
23 65.
24 A That's Cameron again, isn't it?
25 Q Yes, it is.

1 A Oh, that's the report for...
2 Q Now, this -- this one -- this one is a
3 report entitled: Draft Report Regarding the Cameron
4 Mining District Activities and Practices, prepared
5 by you, April 1998.
6 Do you recall preparing this report?
7 A Yeah. This -- this -- I remember I took
8 text from other different report, but the main thing
9 is in the back here, I went to my field notes and
10 all that, and I wrote a paragraph or so on each
11 individual Huskon mine and all the Rare Metals
12 mines, the Huskons and the Ramcos. And I see that's
13 here in the back of the report, yeah.
14 Q Okay. Well --
15 A That's the only place you will find this
16 information.
17 Q Okay. Well, what we'll do here is I'm
18 going to pass over this report because my colleague
19 is going to ask you some questions about this when
20 he gets his chance to ask some questions. So we'll
21 just -- we'll just come back to Exhibit No. 65 at
22 that time.
23 MS. KANE: Before we move on, can I
24 just ask one quick question?
25 MR. VORHEES: Sure.

1 MS. KANE: Mr. Chenoweth, do you know
2 the current name of -- do you know the current name
3 of O'Conner Cavanagh Anderson --
4 THE DEPONENT: No. After I got
5 through with that, I lost track of those people.
6 No. One of their attorneys called me recently to do
7 some work for them. I said I couldn't do it. Troy
8 Fogert? Troy somebody.
9 MR. VORHEES: Yeah, we know that
10 name.
11 THE DEPONENT: He was with that firm
12 and then he left and went to Bryan Cave, and he's at
13 Bryan Cave now and I said I can't do any work for
14 you.
15 MR. VORHEES: Okay.
16 MS. KANE: Thank you. Sorry.
17 MR. VORHEES: That's okay.
18 THE DEPONENT: I don't know about
19 that firm. I think Dick Wood's retired probably.
20 MR. VORHEES: Yeah, we can go off the
21 record on that later and give you an update on that.
22 MS. KANE: Thank you. I appreciate
23 it.
24 Q (By Mr. Vorhees) Let's go to 66.
25 A Okay. What is this?

1 Q Well, that's what we were going to ask
2 you. Looks like 66 is in your handwriting and --
3 A It's my handwriting and this is about
4 licensing, I guess. When somebody -- about the P
5 numbers. You had to get a license from AEC
6 headquarters in Washington to move uranium -- to
7 move uranium out of the ground anywhere. And it was
8 called a P number for prospecting. And all miners
9 had to have a P number before they could sell ore to
10 anybody. In fact, it was illegal to even move a
11 shovelful in the rock out on the ground because you
12 moved it artificially. And they had to have a P
13 number, and you had -- and they wouldn't accept ore,
14 as it says, in ore-buying stations.
15 This, I think, was written to somebody --
16 is there a date to this?
17 Q Well, it appears up in the fax line up at
18 the top of page --
19 A But no date on it.
20 Q Yeah, it looks like it was January 24,
21 1999. It was faxed.
22 A It might have been -- I think -- I kind of
23 think it was written to the RECA people when they
24 were asking what a source material was, the license
25 was, and that was to get a P number. And then I --

1 and then going to mine safety, who did all that.
2 This could have been written, I think, to the RECA
3 people about the regulations and -- but then it
4 mentions Tuba City, though. I honestly can't
5 remember what this was written for.
6 Q Okay. But this is, in any event, your
7 handwriting, based on --
8 A My handwriting.
9 Q -- on your knowledge?
10 A And I remember explaining the P number to
11 people, because I remember under RECA, this widow
12 wrote in and gave her husband's P number and said
13 that's where he mined, which would be correct, but
14 there's no record of -- ERDA or somebody threw all
15 those P numbers away, or NRC did, and they started
16 reissuing new numbers. And so we could not trace
17 where this P number -- what mine this P number was
18 related to. That's what made me think of RECA, but
19 I don't think that was it. It's too involved for
20 RECA.
21 Q Okay. Well --
22 A It's my writing.
23 Q Okay.
24 A Let's see. I just can't recall who I
25 wrote this for.

1 Q Okay. Let's go to Exhibit No. 67, and,
2 again, this is another affidavit.
3 A Oh, yeah.
4 Q This is signed by you.
5 A Yeah.
6 Q And if you wouldn't mind, just take a
7 brief moment to look at this affidavit.
8 A This is the one I was referring to earlier
9 about the Moonlight Mine.
10 Q There was litigation about the Moonlight
11 Mine.
12 A Yeah, who operated it.
13 Q Okay.
14 A Yeah, I remember this very well.
15 Q Okay. And that's your signature?
16 A That's my signature.
17 Q April 17, 2000.
18 A Yeah.
19 Q Okay. And another one, as long as we're
20 in the subject matter of affidavits. Here's one,
21 Exhibit No. 68. This is in Arizona and, again,
22 Mr. Chenoweth, just take a moment to take a look at
23 this affidavit signed by you on July the 20th, 2000.
24 (Interruption in proceedings.)
25 Q (By Mr. Vorhees) Okay. So just take your

1 time, Mr. Chenoweth, on this No. 68. See if you
2 recall this affidavit.
3 A Written in Phoenix. I'm wondering if this
4 has to do with Nez Tsosie.
5 Q Well, we're in Arizona.
6 A It says Maricopa County. That's Phoenix,
7 Arizona.
8 Q Yeah. And certainly --
9 A And the only two -- two law firms I worked
10 for is O'Connor and then Lewis and Roca, and that
11 was -- that was Moonlight, and the other one was
12 Cameron. So I really can't recall who is this for,
13 but...
14 Q I guess our question is: Is the
15 information in here accurate?
16 A It probably is, because it looks like it's
17 taken from my Cameron report.
18 Q And it's signed by you in front of a
19 notary.
20 A Yeah.
21 Q Okay.
22 A And I talk about the artesian water at
23 the -- is this written -- yeah. This talks about
24 the two mines up there that were full of water: The
25 Yazzie 312 and the Jack Daniels. And that had to do

1 with Nez Tsosie so...
2 Q Okay.
3 A That's just a guess. I can't be sure.
4 Q Okay. Well, that's all right. That's --
5 the document's properly authenticated. Let's go to
6 Exhibit No. 69.
7 A Uh-huh.
8 Q Which appears to be a study prepared by
9 you, dated September 2002, entitled: The Geology,
10 Exploration, and Production History of the Begay,
11 B-E-G-A-Y, No. 1 Incline Uranium-Vanadium Mine in
12 San Juan County, New Mexico.
13 Do you recall preparing this report?
14 A Yeah. This -- this is a report I started
15 to do for the New Mexico Bureau of Mines, but they
16 said, no, they didn't have any more funding and they
17 weren't interested anymore in my reports. And my
18 good friend Melvin Yazzie says, If they don't want
19 it, we want it. So it was sent down to Shiprock to
20 Melvin Yazzie because he was reclaiming those mines
21 there. And that's why I put down there -- because
22 New Mexico didn't want anything to do with it
23 because of policy and the new state geologist or
24 something.
25 And I prepared another six reports which

1 were never accepted by the State, so I -- and we
2 sent them down to Shiprock. I sent them down to
3 Shiprock because they wanted them. Let's see. This
4 is Navajo Abandoned Mine Lands Reclamation Project,
5 Report No. 6, so I remember this one real well.
6 This was the last one I did for the people in
7 Shiprock.
8 Q Okay. Well, let's put this one up on the
9 map.
10 A Well --
11 Q Can you do that?
12 A Well, it's going to be so crowded around
13 number -- I circled No. 10 as being the Carrizo
14 Mountains. Well, I can put a little mark out
15 there --
16 Q Yeah, can we put a little mark and maybe
17 an arrow to the number --
18 A Yeah, so it would be in here.
19 Q Yeah.
20 A What was the number?
21 MR. VORHEES: Are we up to 15, you
22 guys?
23 MR. SANDS: 16. I believe it's 16.
24 Q (By Mr. Vorhees) 16. 16.
25 A I don't see 15. Yeah, I see 15, so this

1 is 16.

2 Q Okay. Yeah. Now, Exhibit No. 70 is: The

3 Geology, Leasing, and Production History of the

4 Rattlesnake No. 1/Shorty, S-H-O-R-T-Y, No. 1

5 Uranium-Vanadium Mine in Apache County, Arizona.

6 And this apparently was prepared by you?

7 A Yes.

8 Q On July 2003.

9 A It has two names.

10 Q It does.

11 A VCA called it Rattlesnake No. 1. Then

12 Paul -- Paul Shorty, they canceled their lease.

13 Paul Shorty got a mine permit and called it Shorty

14 No. 1, so it's the same mine with two names.

15 Q Okay. So it's one mine and one study.

16 A One study.

17 Q And we're at Exhibit 70, and if we could

18 designate this on the board, even with an arrow sort

19 of in its general vicinity, Mr. Chenoweth, I would

20 appreciate that.

21 A Okay. That will be No. 17.

22 Q And now -- well, you are really getting

23 your exercise, and we appreciate this very much. We

24 understand that you are going to have a knee

25 replacement operation.

1 A Yeah. We're going to have a -- in the
2 Carrizo, we are going to have a lot of numbers on
3 top because I think there are probably at least
4 eight reports down on the Carrizo Mountain mines.
5 Q Okay. Well, we're going to -- we're going
6 to simplify this for you in a minute, because we
7 really appreciate you going back and forth to that
8 board, and I, you know, want to thank you for
9 helping us with -- designate on the map where all
10 these mines are.
11 A One map of Arizona would be easier. We
12 need a larger scale map.
13 Q For the record, I'm beginning to feel
14 guilty about this, and so -- we have been looking
15 forward to the Moonlight Mine, and that is the
16 subject of 19 of our Exhibit No. 71, which is your
17 study entitled: Geology and Production History of
18 the Moonlight Uranium-Vanadium Mine in Navajo
19 County, Arizona, July 2003.
20 A That would be 18.
21 Q Okay. And you recall doing that study?
22 A Oh, yeah. It had to do -- it had to do a
23 little bit with that one lawsuit we referred to.
24 Q And why is it called the Moonlight Mine?
25 A Well, there's a -- there's a trading post

1 up there and a wash called Oljeto, O-L-J-E-T-O -- is
2 that right?
3 MR. TAYLOR: J-E.
4 A Which in Navajo is moonlight.
5 Q (By Mr. Vorhees) Okay. Oljeto.
6 A O-J -- O-L-J-E-T-O.
7 Q Okay.
8 THE DEPONENT: H?
9 MR. TAYLOR: J. J-A, I think it is.
10 THE DEPONENT: Yeah, O-L-J...
11 Q (By Mr. Vorhees) All right. Well...
12 A There's only one thing out there.
13 Q Okay. Well, I am definitely going to give
14 you a break from going up to the board for a while,
15 Mr. Chenoweth, because we're just going to just look
16 at a few more documents here to give you a bit of a
17 rest here with regard to this exercise.
18 And let's look at Exhibit No. 72, which is
19 a declaration prepared in the United States District
20 Court for the District of Columbia for El Paso
21 Natural Gas, and just take a look at this and see if
22 this refreshes your recollection of --
23 A Yeah, I remember giving it to Mr. Neumann
24 over the phone, I think it was, or he faxed it to me
25 or e-mailed it to me and I looked it over and sent

1 it back.
2 Q Okay. And I will certainly have
3 Mr. Neumann ask you questions about this -- this
4 particular declaration.
5 Now, Exhibit 73, we've referred to this
6 earlier. This is the Shattuck Chemical Company, and
7 it's a study by you; is that correct?
8 A That's right. It was -- somehow we were
9 talking about -- with the Utah people about uranium
10 was -- the AEC was the only people that bought
11 uranium back in the '50s. And I said, No, that's
12 not really true. Shattuck Chemical. And they said,
13 Oh, really? And the uranium -- the uranium per --
14 most states have a person assigned to uranium who
15 does the commodities, and uranium geologist --
16 geologist got really excited and said, Was any
17 uranium from Utah? And I said, Well, it probably
18 was, because the Shumways, I'm sure, took advantage
19 of it. That's a long-term mining family down by
20 Blanding that's been mining from the '40s, and they
21 always found ways to make money.
22 Q Okay.
23 A And, anyway, so I went to the DOE and I
24 knew there were records down there, the Shattuck
25 Chemical records. And this is sort of a little

1 background of the source of the data, where it came
2 from. And then the Circular 6, where people
3 applying for the bonus had to declare they shipped
4 ore to Shattuck. And there's a form, an AEC form,
5 where it talks about ore from -- going to the
6 Shattuck and how many pounds it was.
7 And then I tagged it and went through it.
8 DOE gave me permission to look at these
9 certification reports and fill in the archives down
10 here, and I went through and compiled where the
11 uranium came from and how many pounds. And there
12 were more -- I think there were more produced in
13 Colorado than out of Utah. And this report never
14 got anyplace except the State of Utah and in my file
15 where you found it.
16 Q Okay. Well --
17 A But it is -- they were -- even -- I have
18 shown this to some of the fellows down at DOE, like
19 Craig, and they're amazed at all this ore that was
20 sent to Shattuck during the AEC program.
21 Q Okay. Well, let's go to this -- the next
22 exhibit is No. 74. And this is entitled: Navajo
23 Indians were Hired to Assist the U.S. Atomic Energy
24 Commission in Locating Uranium Deposits.
25 Do you remember preparing this report?

1 A Yes. Well, when -- some background on
2 this. One time when I was working down there,
3 they -- somebody wanted to know what all the
4 different contractors did. So I wrote up the part
5 on Walker-Lybarger, and I said something about
6 Walker-Lybarger hired Navajos to prospect. And
7 somebody in DOE said, Really? We never knew this.
8 And here it is in the National Geographic
9 talking about this, and they said, Well, write us up
10 something. So I wrote this up for -- I forget who
11 the manager was at the time. And they said, Really?
12 That's really interesting. We never realized that.
13 And I happened to know the two guys that -- they
14 hired two young men who were sons of traders in
15 northwest New Mexico who could speak Navajo, and
16 they kind of ran this program. And Charlie Huskon
17 was working for the AEC when he made his discovery.
18 Anyway, this is the result of -- people in
19 the DOE down there were learning about this when we
20 were writing up what Walker Lybarger did. And
21 eventually they gave us -- this got to the
22 newspapers, and then Arizona wanted a copy of it.
23 And so that's why it came with Arizona -- years
24 later, it came out with an Arizona number on it.
25 Q Okay. Well, now, let's tackle the next

1 two exhibits together. The Exhibit No. 75 is the
2 Summary of the Uranium-Vanadium Ore Production, 1947
3 to 1969, in Monument Valley District, Apache and
4 Navajo Counties, Arizona.
5 This is a report by you October 2011?
6 A It was -- it was done at the request of
7 the Arizona Department of Mines and Mineral
8 Resources, which went out of business, so this put
9 the report in limbo. I don't know if the Arizona
10 Geological Survey is going to accept it or not, but
11 anyway, it went to the Arizona Department of Mines
12 and Mineral Resources in Phoenix. They lost their
13 funding, and all the records, I think, were put in a
14 warehouse. And one of their staff members got put
15 on the Arizona Geological Survey staff, and it's
16 kind of in limbo. That's why it says draft. So it
17 really -- it really hasn't gone anyplace and is not
18 out there for the public, but I happen to have a
19 copy in my bookcase.
20 Q Well, but -- but I will comment in the
21 form of a question that notwithstanding that it's a
22 draft and hasn't gone anywhere --
23 A It's never been released to the public.
24 Q -- it certainly is a comprehensive report.
25 A It is really not a geologic, for it's a

1 statistical report, and that's why I don't think the
2 State is going to do anything with it.
3 Q Okay.
4 A Might try to get someplace, but I don't
5 know where.
6 Q Well --
7 A People say, well, that's a good summary
8 and I have got all this -- all these tables and
9 things in the back.
10 Q Okay. And I wanted to just discuss this
11 with the next report. It's -- it's the February
12 2012 report designated as Exhibit No. 76.
13 A Let me comment on that.
14 Q Yeah. Go ahead.
15 A This was sent down to Arizona Geologic
16 Survey in Tucson. They apparently lost it,
17 misplaced it, and I kept bugging them what's
18 happening, because I know -- I know that people want
19 to see this report. It just got released in
20 December of 2013. I just found out about it just a
21 few days ago, and it is now CR13-A. It should be
22 13-A. And they redated it December 2013 to cover
23 their butts about losing it.
24 Q Okay. Well --
25 A So it has been released to the public,

1 because the editor down there says he never got it.
2 And one of the guys said, I remember reading it.
3 And they finally found it and they got it out last
4 month.
5 Q Okay.
6 A So it has been released to the public and
7 it's got a new number.
8 Q Okay. So these -- these two reports that
9 are 75, which -- which is the summary of ore
10 production 1947 through '69 in Monument Valley, and
11 the next one, the geology and exploration, should we
12 designate those on the map?
13 A I think Cove Mesa has already been
14 designated, I think. Cove Mesa has been designated
15 as 8.
16 Q Okay.
17 A And...
18 Q And the Monument Valley --
19 A It would be 6.
20 Q Okay. Good. Well, then, take a seat,
21 Mr. Chenoweth, because I don't want you to get up
22 there unnecessarily.
23 A Yeah.
24 Q Now we are going to turn our attention to
25 the document we've referred to previously as the

1 O'Rear report, and let's spend some time on this.
2 I'm referring now to Exhibit No. 77 and --
3 A 77?
4 Q 77, yeah. And it's a -- there's a letter.
5 There's a cover letter there.
6 A Oh.
7 Q Okay.
8 A I see.
9 Q Attaching the report.
10 A Oh, yeah. There it is.
11 Q Okay. And, really, I just want to ask you
12 a few questions about the report itself and not the
13 cover letter. The report is entitled: Summary and
14 Chronology of the Domestic Uranium Program by
15 Neilsen, N-E-I-L-S-E-N, B., and his last name is
16 O'Rear, and that's O, apostrophe, capital R-E-A-R.
17 Now, Mr. O'Rear completed this report in
18 May 1966; is that correct?
19 A That's correct.
20 Q And have you reviewed the report?
21 A I have looked at it many times --
22 Q Okay.
23 A -- to figure out dates when things
24 happened.
25 Q And it appears that we got this from you.

1 Your name is up in the upper right-hand corner. And
2 so why don't you, first of all, tell us who
3 Mr. O'Rear was.
4 A He was -- I can't remember his title, but
5 he was the voice of the AEC down there. He was the
6 one that dealt with the newspaper. He was public
7 relations officer or something like that.
8 Q Okay.
9 A And he put out press releases, and that's
10 how he did this. He was always writing press
11 releases, and he kept -- and this is a summary,
12 really, of his press releases.
13 Q Okay.
14 A And things like that.
15 Q And he was based right here in Grand
16 Junction?
17 A Yeah. He was a neighbor of mine.
18 Q Okay.
19 A He lived two houses away from where I
20 lived.
21 Q Okay. And so he was based here in Grand
22 Junction working for the Atomic Energy Commission as
23 the publicity officer?
24 A Yeah, public relations or something --
25 Q Public relations officer.

1 A He was the only one that was really
2 allowed to talk to the newspapers.
3 Q Okay. And the report itself covers the
4 period of time, according to the report at Page 8 of
5 the exhibit --
6 A Yeah.
7 Q -- from 1946 to 1966.
8 A Uh-huh.
9 Q Was Mr. O'Rear in the Manhattan Project?
10 A No. He came to AEC, I think, from the
11 U.S. Bureau of Mines in Washington or something.
12 Q Okay.
13 A And as you see, he -- he took a medical
14 retirement and left the AEC in '66. And the
15 remaining years of the procurement program, '67
16 through '70, were never documented. And I submitted
17 a memo to the manager that says, Let me finish this
18 up because we can't just let it hanging here. No,
19 nobody will ever read that report. You don't need
20 to do that. So there's a gap in the history of the
21 procurement program because of his retirement.
22 That's here on Page 8.
23 Q And who was it that told you not to do
24 that?
25 A Oh, the manager. Probably Don Everhart or

1 somebody. Oh, I don't remember. He said, Oh, no.
2 Nobody's interested in that report. And it finally
3 got open-filed because of FOIA. It was written
4 internally as a technical memorandum. I think a TM
5 number. And nobody thought much about it until they
6 got a -- yeah, TM-187. That's kind of an internal
7 report, but because of Freedom of Information, it
8 got released, and everybody said, Gee, that's a
9 great report.
10 Q Sure. Okay. So your handwriting at the
11 bottom of Page 8 of the exhibit --
12 A Yeah, that's my handwriting on my copy
13 only.
14 Q Yeah --
15 A I put my name on it because people
16 borrow -- this is hard to find. I don't think it's
17 probably in the library down there now. I think
18 they finally got a copy, but it was hard to find and
19 people were always borrowing my report. I have
20 loaned it to several law firms.
21 Q Well, now, if you go back to the back of
22 the report where it says Chronology -- and I'm on
23 Page 43 of the exhibit.
24 A 43.
25 Q And you see this chronology beginning on

1 Page 43 and it actually goes for a total of 17
2 pages.
3 A Yeah.
4 Q With Mr. O'Rear putting in the chronology
5 specific dates, sometimes months, of activity by the
6 AEC.
7 A Uh-huh.
8 Q Now --
9 A He got this off his press releases. He
10 didn't write -- there was some release before he
11 came here, but he had them in his file. But he went
12 through and looked at every press release they had
13 in their files down there, and that's where he got
14 these entries and the dates. So it's probably the
15 only recorded history of a lot of these -- when
16 these things happened.
17 Q And presumably when the Atomic Energy
18 Commission was releasing information to the press,
19 they were releasing accurate information.
20 MR. FOSTER: Objection.
21 MR. VORHEES: I just wondered if you
22 were still awake over there.
23 Q (By Mr. Vorhees) We'll just pass on that
24 question, Mr. Chenoweth, and we'll go back and just
25 briefly, because we want to keep moving along here.

1 The table of contents of the report
2 indicates the various areas that were the subject of
3 the report. I'm looking at Page 8 of the exhibit.
4 A Yes.
5 Q And instead of going over every one of
6 those areas, Mr. O'Rear is writing a history of the
7 domestic uranium program, it appears.
8 A From here, yeah.
9 Q And have you used this report?
10 A Yeah. That's where I have looked up dates
11 of things more back in here, because this is all --
12 and then a good explanation of the AEC exploration
13 program, because he gets figures and facts on number
14 of holes drilled by us and by the USGS and number of
15 miles of access road. That's the only place I think
16 you can find this data.
17 Q Okay. And so you have relied on this
18 report.
19 A Oh, yeah.
20 Q Okay.
21 A I have referred a lot of people to this
22 report, too.
23 Q Okay. All right. Well, let's go to 78.
24 A Uh-oh.
25 Q And this appears to be a document

1 entitled: Navajo Indian Reservation Uranium Mining
2 and Milling. And I think this document comes from
3 the government.
4 A Now, I drew this for the radiation
5 program, and also the Office of Navajo Uranium
6 Mining and miners in Shiprock wanted a copy. Copies
7 got probably passed all over, probably down to
8 Window Rock and everything else.
9 Q So this map depicts what?
10 A It depicts areas of uranium mining on
11 reservation, dates involved, and then also those
12 little buildings show where mills were.
13 Q And how did you prepare this map?
14 A Well, the milling came from the Albrethsen
15 McGinley report and the areas came from most of my
16 maps I had made previously, because these are only
17 areas -- because I was at a hearing one time down in
18 Shiprock and this lady got up, Your map is all wrong
19 here. There's more uranium than that. Well, that's
20 true. There's uranium in a lot of different places,
21 but it never was mined. This is only where the
22 mining took place. Because there's an area down
23 here in the Hopi Buttes. There's one mine that was
24 uranium all over the -- all over the Hopi Buttes
25 volcanic field down here south of the Hopi

1 Reservation.
2 Q Okay. Let's go to the next --
3 A This map would be better than what is put
4 up here for the Carrizos and Monument Valley.
5 Q Well, we appreciate that. I think --
6 A This is really a public information map
7 because the DO -- it was made for DOJ, but they
8 passed it down to Shiprock and then it got to Window
9 Rock, and I think Ray Senigini over at Tuba City
10 even has a copy and all that. And it's been
11 criticized because it doesn't show all the uranium,
12 just the mines.
13 Q Okay. But as far as you know, it does
14 contain all the mines.
15 A Yes.
16 Q Okay. All right. Well, let's go to
17 Exhibit No. 79, which depicts the United States
18 Atomic Energy Commission Division of Raw Materials
19 Grand Junction Operations Office.
20 Obviously, you're familiar with this
21 map -- this depiction, correct?
22 A It's dated March of 1956.
23 Q And what does it depict?
24 A That's an artist's conception of all the
25 different buildings that were down there on the

1 site, which we always called -- in those days we
2 called it a compound. It shows the pilot plant
3 area, the sampling plant area, the offices. It was
4 something O'Rear put out in some report anyway. It
5 just -- and where the tailings from the sampling
6 plant went and all that. So it's just an historical
7 map of all the buildings that -- most of them are
8 gone now.
9 Q And this is the -- obviously the
10 headquarters in Grand Junction --
11 A Yeah, this was --
12 Q -- of the AEC.
13 A This was the headquarters of uranium
14 procurement in the Western United States.
15 Q Is your office depicted in the --
16 A Well, I didn't have an office up here
17 until '64.
18 Q I understand that, but in '64?
19 A Yeah, and my office was in Building 38,
20 938 over here, and then it moved down over here to
21 Building 8. Yeah, I forget how many -- there are
22 six or seven buildings left out there now.
23 Q Okay. 38. So you moved from 38 to 8?
24 A 8, yeah.
25 Q Okay. And when you were here in 1964,

1 will you remind me what the -- what the office was
2 doing in Grand Junction, just generally.
3 A We were -- I think we were still -- where
4 I was working was still in the uranium liaison
5 program, keeping up -- track with the drilling and
6 the mining and all that. But later when they
7 started the NURE program, I never got involved in
8 the NURE program except monitoring three projects.
9 And we were -- we were still keeping track in the
10 industry because it was going downhill and they were
11 wondering if it's still viable and all that. But
12 that was one of the big buzz words they were using,
13 viability.
14 Q Okay. Now, Exhibit No. 80 is -- is
15 something that you might be familiar with, is -- for
16 the record, the first page of Exhibit 80 is: Mine
17 Locations: Cameron area, Coconino County, Arizona.
18 Have you seen this -- this map before?
19 A Yeah, I think this -- I think this is out
20 of the -- that guide book, RME-141, blown up.
21 Q Okay.
22 A Wait. Let me see. There's the
23 reservation. What's 50? 50. Section 9. Yeah.
24 No, this is a revised one. This might be out of
25 that article Roger Malan and I published in the New

1 Mexico Geological Society, because there was an
2 error in one of the guide books and it was corrected
3 by this map.
4 Q Well, we have three maps here. So you are
5 referring to the first one, which is designated as
6 Figure 2?
7 A This is the last version of this format
8 that is correct. The earlier one is not correct. I
9 Know there's a boo-boo in it.
10 Q Okay. And then we have -- on Page 2, we
11 have another --
12 A 81?
13 Q Yeah. Oh, no. I'm sorry. This is
14 Exhibit 80, Page 2. 80, Page 2.
15 A 80. Oh, the next one is folded with it.
16 Q Yeah. Yes.
17 A Now, this -- this is Bob Scarborough's map
18 where he took the AEC preliminary map, as it says
19 down here in the bottom, AEC Preliminary Map 1971,
20 and he added -- he added every little known uranium
21 occurrence and every place that the AEC or Window
22 Rock had recovered, people had got a mining permit
23 for a uranium occurrence. So this is -- this is a
24 map that is in the back of my so-called Cameron
25 report, Plate 1.

1 Q Okay.
2 A But it's Scarborough's map modified -- my
3 map modified by Scarborough.
4 Q All right. And then the third map
5 that's --
6 A Oh, okay.
7 Q -- contained in Exhibit 80 is a colored
8 map entitled -- really, Navajo Map. But have you
9 seen this before?
10 A No.
11 Q Okay. This does depict the Navajo
12 Reservation?
13 A No, I have never seen this map before.
14 This -- this must be for the tourists.
15 Q Okay.
16 A Because it's got -- it's got the Monument
17 Valley Tribal Park and Canyon de Chelly and Coal
18 Mine Canyon and Dinosaur Tracks, Tuba City.
19 Q Okay. Now, let's move on to Exhibit No.
20 81, and now there's a couple of exhibits coming up,
21 Mr. Chenoweth, and I apologize, they seem to be a
22 collection of material. And we'll try and -- we'll
23 try and move through these exhibits as expeditiously
24 as possible, but there do seem to be a collection of
25 material in these exhibits, and this is the form we

1 got them in.

2 And if you would briefly comment on what

3 Exhibit No. 81 appears to be --

4 A Okay.

5 Q -- we'd appreciate that.

6 A Well, to get familiar, where I got

7 transferred to Flagstaff, I knew nothing about

8 uranium in Arizona except the Lukachukais and

9 Carrizos. And I guess the people there had a

10 collection of these old monthly Exploration Division

11 reports, and I went through that and commented

12 highly -- went through these reports, which no

13 longer exist, I don't think, and copied out

14 significant items to learn about the history of the

15 mining -- mining background area.

16 And it says there was uranium found over

17 by Holbrook that I didn't know about. It says

18 drilling started in Holbrook and drilling completed

19 and uranium dis -- these are highlights. These are

20 things I saw in the monthly reports from Exploration

21 Division, and I thought, Well, I will make a note of

22 them so I can have them to learn more about the

23 area. And...

24 Q Well, you know, directing your attention

25 to Page 1 of this Exhibit No. 81 --

1 A Okay. 1?
2 Q Yeah, Page 1, the first page. In light of
3 your comment that you're noting highlights, we saw
4 on this -- your note, January 1954, like two-thirds
5 of the way down the page, AEC rim-stripping at
6 Cameron.
7 A Yeah. That was -- I guess Hinckley put
8 that on his report. See, each of the field offices
9 had to write a monthly report of what they did and
10 it went to Grand Junction, and they put it in a big
11 report and sent copies out to all the field offices.
12 And not knowing about what Hinckley did there,
13 apparently that was a highlight he put in that they
14 starting rim-stripping at Cameron.
15 Q Okay.
16 A And I suppose the exact dates are on that
17 Hinckley report we saw earlier.
18 Q We did see some exact dates in that
19 report.
20 A These are the exact dates when people
21 recorded information.
22 Q Okay. And so basically our understanding
23 is is that you wrote down highlights.
24 A Yeah, these are highlights to learn about
25 what had gone on previously in my area I'm

1 responsible for.
2 Q Okay.
3 A Not -- because each monthly report was
4 maybe an eighth-of-an-inch thick. It had all
5 kinds -- about drilling data and all that, and so I
6 was just going through and get -- highlighting
7 private activities.
8 Q Okay. Do you have any recollection as to
9 when you prepared these handwritten notes?
10 A Probably in Flagstaff, probably in 1958.
11 Q Okay.
12 A What's the last date?
13 Q The last date is March -- well, there's
14 March of '57 chronologically, and then there's two
15 additional entries.
16 A Rim-stripping. Anyway, I must have gone
17 back because I jump from '56...
18 Q Well --
19 A Oh, here -- yeah, here's something about
20 Tuba City I wrote. I guess that was something
21 McGinley reported. Tuba City Mill did amenability
22 tests on the Yellow Jeep ore. That was -- that was
23 ore way up on the Echo Cliffs.
24 Q Okay.
25 A Oh, yeah.

1 Q Okay. Well, now, again, my apologies for
2 this additional material in this exhibit, but it was
3 all collected and so we just thought we'd better ask
4 you about it.
5 There's a letter here dated January 30,
6 1970. There's some additional information about
7 Coconino.
8 A Yeah, Ralph Austin was the chief
9 mineralogist here and he identified some minerals,
10 and he was notifying the USGS guys that were mapping
11 in the area.
12 Q Okay. And I see that you're copied on
13 that letter.
14 And then what's this next section here on
15 Coconinoite? Sorry. C-O-C-O-N-I-N-O-I-T-E.
16 A Now, see, all this other stuff is about
17 the upgrader and the fraud and all that.
18 Q We saw that.
19 A That I saw -- that I cut out of the --
20 what is this -- the Coconino Sun Times or whatever.
21 I forget the name of the Coconino -- Cameron paper.
22 Q Okay.
23 A Arizona Daily Sun.
24 Q Okay. Yeah. There's quite a few articles
25 about the Benson upgrader --

1 A Yeah.
2 Q -- inventor.
3 A Yeah, this was in my miscellaneous file, I
4 think.
5 Q Okay. Oh, I see. Okay. Because then we
6 go to some additional information here, handwritten
7 notes. I'm looking at Page 23 of the exhibit.
8 A Yeah, 23. Oh, yeah. George Morehouse was
9 a geologist with Arrowhead Uranium, and he's the one
10 that convinced Charlie Huskon to quit working for
11 the AEC and come to work for Arrowhead and -- when
12 he formed Arrowhead to mine the Cameron deposit
13 prior to Rare Metals. And this was kind of an
14 interview I had with them.
15 Q With Mr. Morehouse?
16 A Yeah, with George Morehouse, yes.
17 Q Okay. And your notes reflecting the
18 interview with Mr. Morehouse.
19 A Yeah.
20 Q Okay. And let's go to the next page, No.
21 24.
22 A Here's a letter that, I guess, George
23 wrote me here.
24 Q Oh, right after your interview?
25 A Yeah.

1 Q Right. So you were obtaining information
2 for Mr. Morehouse?
3 A Oh, yeah.
4 Q And then we've got some --
5 A Wait a minute. George -- let me see.
6 That might not be George -- oh, this is not George
7 Morehouse. This is George Billingsley, a USGS
8 geologist, because he talks about his mapping of the
9 hard-to-pronounce Navajo word for cliffs.
10 Q Okay.
11 A Yeah, he -- George Billingsley was mapping
12 an area east of the Cameron Uranium District up in
13 the Echo Cliffs and there was a uranium deposit up
14 there that I could never find. And he's describing
15 where it was and what he saw up there, so that's
16 George Billingsley of the USGS.
17 Q I see.
18 A And here's -- this is a section of his
19 map, geologic map, and he circled where he thought
20 the uranium was.
21 Q So is it fair to say that in this
22 miscellaneous file --
23 A This was in my box of stuff that said
24 Cameron.
25 Q Okay.

1 A Now I remember.
2 Q So this is -- this is information that you
3 were collecting, background information.
4 A And then 27 here is a map I got down at
5 Window Rock, showing all the mining permits in the
6 main district of Cameron and where Pat Lynch had a
7 claim way back at the foot of the Echo Cliffs, over
8 here. And these DP are drilling permits.
9 The Tribal Mining Department, mainly Leo
10 Denetsoni, he was a draftsman, he -- people would
11 say we're going to -- we want a permit to drill in
12 this area and he'd get the description and plot it
13 on maps. And he kept good maps down there of
14 drilling permits and mining permits and -- he says
15 Vermillion Cliffs Mining Corporation drilling permit
16 expires 15 of June '56, so the tribal people down
17 there kept track of what was going on all over the
18 reservation.
19 Q Okay. And we see a letter to you dated
20 March 1, 1972 from the tribe, Page 28.
21 A Yeah, he took over -- he took over, I
22 think, for Mr. Collins.
23 Q All right. And response. And we're just
24 about ready to switch the tapes here, but just take
25 a quick look at remaining material here. There's

1 Bureau --

2 A I forget who this reply was to. Oh, here

3 it is. This is a letter I wrote.

4 Q Okay.

5 A This is a letter about our map that was

6 going to be open-filed.

7 Q And then there's some additional notes of

8 a review of BIA records.

9 A Yeah. George Morehouse told me on October

10 21st, 1988, that Evans Huskon and Paul Huskie were

11 both Charlie's sons. I didn't know that. I knew

12 Evans was, but I never knew Paul Huskie was.

13 Q Okay. And then we have got on Page 36...

14 A 36.

15 Q Yeah, take a look at that. That's...

16 A Well, there's more old notes. These are

17 my field notes that I had in my file. And

18 there's -- yeah, that's George Morehouse's -- I mean

19 George Billingsley's description where the Yellow

20 Jeep Mine is on that map, but there's another

21 section that goes down here.

22 Q Okay. And then we're just wrapping up

23 this portion of the tape, but let's go over to Page

24 41.

25 A Okay. 36 is a list of mines and the

1 certification report that go with them and
2 connecting to the mining permit numbers that go with
3 those certification reports.
4 Q Okay. Well, then, we are going to switch
5 the tape right now. We'll stop right at Page 36.
6 A 36. Okay. I'm getting ahead of you here.
7 Q That's okay. Let's switch tapes.
8 A 36.
9 VIDEOGRAPHER: The time is
10 approximately 3:57. This is the end of Tape No. 5
11 in the deposition of William Chenoweth. We are
12 going off the record now to change tapes.
13 (Recess taken.)
14 (Exhibit 122 was marked.)
15 VIDEOGRAPHER: We are on the record.
16 This is the beginning of Tape No. 6 in the
17 deposition of William Chenoweth. The time is
18 approximately 4:06.
19 Q (By Mr. Vorhees) Mr. Chenoweth, we were
20 discussing Exhibit No. 81, and we were on Page 36 of
21 that exhibit. Can you direct your attention to that
22 page.
23 A Yeah.
24 Q And will you tell us what's -- what is --
25 what are the notes that are contained on Page 36.

1 A Well, working with the mineral people over
2 in Window Rock, they always kept the AEC informed on
3 who was getting new mining permits, who were
4 committing mining permits to leases and so forth.
5 And this is something I must have -- may have made a
6 note. I don't know why I picked these ones up.
7 But this -- MPs, these are the mining
8 permit numbers. L means the lease's numbers where
9 it had been converted to a lease. Mining permits
10 are two years, can be renewed for two years, so
11 forth on. Leases are for ten years. So I think the
12 tribe encouraged big companies to take out leases so
13 they didn't have to do the paperwork on it. I don't
14 know why. But, anyway, this is a bunch of -- this
15 is a bunch of Cameron properties, and over here are
16 the certification numbers. And I don't know what --
17 Q Under -- under the --
18 A C number is certification number.
19 Q Okay.
20 A And MP is mining permit. L means leases.
21 And these are the names of the mines, and I have no
22 idea where I did this.
23 Q Okay.
24 A I know I probably did it over at Window
25 Rock.

1 Q Okay. And then the remainder of the
2 exhibit, I see we have the form, the Grand Junction
3 form, entitled: Recurring Visits to Certified
4 Properties. And those -- you are the examining
5 engineer on Page 37 of this exhibit?
6 A Yeah, I was -- and Tom Young. We talked
7 about this earlier.
8 Q Sure.
9 A That Tom Young and I went out there in the
10 end and other people went out, but this should be a
11 complete set of recurring visits on Section 9.
12 Q Okay. And going over to the remainder of
13 the exhibit --
14 A The final exhibit.
15 Q Yeah. Includes a couple more recurring --
16 A Yeah.
17 Q -- recurring --
18 A We talked about this earlier.
19 Q Yeah, right.
20 A And this next page is a bunch of notes
21 with apparently...
22 Q Are you referring to Page 41?
23 A Yeah, 41.
24 Q The Cameron aerial...
25 A Radioactive anomalies. Radioactivity

1 anomalies.
2 Q Okay.
3 A This is -- these are maps the AEC made of
4 their aerial surveys and apparently -- and the dates
5 they were released, and they're published in a
6 report, RME-147. It just shows -- even though it's
7 on Navajo land, the Navajos wanted us to publish
8 these areas to get more prospectors interested. But
9 Charlie had the most -- Charlie Huskon had most of
10 the good ones anyway.
11 Q All right.
12 A Then this other one is reports -- a
13 summary of reports on Cameron and the -- on the
14 Cameron area, yeah, RME-2002. There's an aerial
15 survey and then Hinckley's report and Gregg's
16 report, and then a TM that Irving Gray wrote on the
17 Liba claims off the reservation. And then Bollin
18 and Kerr, he's a student at Columbia under Dr. Kerr.
19 He wrote something about uranium and Cameron. And
20 then -- and then -- apparently then there was a
21 report on the Hosteen Nez property and one along
22 Cameron. I don't remember what this is all about.
23 Q Okay.
24 A Anyway...
25 Q Well, let's go Exhibit No. 82 and --

1 A Oh.
2 Q -- again, it does look like this is
3 another compilation from one of your files.
4 A Yeah, this is -- this is -- this is a
5 proposed report that Arizona was kind of interested
6 in me doing, so I wrote them up a summary of what it
7 was going to be about. And I don't know if they're
8 going to let -- have any -- if they want me to
9 finish this in my spare time or not.
10 Q Okay.
11 A This is -- I said, This is a summary of
12 something you might be interested in, and I haven't
13 heard from them.
14 Q Okay. And that's on the Rattlesnake
15 Mines?
16 A Rattlesnake, Plot 6, that's the big --
17 that's one of the biggest mines -- biggest mining
18 areas in the Northwest Carrizo Mountains.
19 Q Okay. And then what's Table 1?
20 A It's a continuous from one of -- here's
21 Scarborough's map of the area, and I'm just going to
22 update the history of it.
23 Q Okay.
24 A And then this is a piece of paper I had
25 because there is -- there was a mine on the

1 Canoncito Indian Reservation, which is a separate
2 part, east of Mt. Taylor, west of Albuquerque, about
3 the mining that was done there. And this was
4 something I had in my files for, I guess, the
5 Albuquerque EPA office or somebody.
6 Q Okay. Well, we -- we certainly appreciate
7 the thoroughness of your obtaining these documents
8 pursuant to --
9 A The next page is something I did for the
10 RECA people, and they had no problem with me giving
11 this to you. It's a list of who the contract miners
12 were for all the mines at Cameron.
13 Q What page are you referring to?
14 A 10.
15 Q 10. Okay.
16 A 82-10 and 82-11.
17 Q All right.
18 A These are from my field notes and talking
19 to people and stuff I got at Window Rock and all
20 that, so this was done for RECA.
21 Q And then on 12 and 13, there's a reference
22 to -- what's the Durango site?
23 A This was what I wrote -- the New Mexico
24 Geological Society was having a field trip and they
25 were going by the old Durango mill site and they

1 wanted to put something in their guide book about
2 the uranium mill there. And this is what I
3 submitted to them. And I can't remember where it
4 got published, but it did get published in a guide
5 book.
6 Q And then No. 14 and 15.
7 A This got published in the Grand Junction
8 paper with the help of John Elmer. I think this is
9 the one he helped me on. No, this is -- this is
10 about the first edition when we wrote something
11 about that cleanup, John over here helped me on it.
12 Oh, here. Here it is. John's on this.
13 Q Okay. Yeah, we see his name.
14 A Got to give him credit because he knew
15 more about it than I did.
16 Q Okay. All right. And then moving on, we
17 have seen the document on Pages 16 and 17 before.
18 A This is -- we have already talked about
19 this for Stewart Udall.
20 Q Yeah. That's a Stewart Udall submission.
21 And then 18 we have got uranium mining in the
22 Cameron area, April 9, 2008, just a summary.
23 A This is something I wrote for RECA because
24 the NIOSH records show that a lot of the mines in
25 Cameron were underground mines. I said this isn't

1 true. I don't know where we -- where NIOSH got this
2 information. They said, Well, write us a memo
3 and -- so we can talk to them about it, because
4 they -- they showed all the Huskon mines having
5 underground and underground WL radiation reading.
6 And I said, That's all phony. There aren't any
7 underground mines on the Huskon property. There are
8 on the Ramco property, and I attached a map of the
9 underground working on Ramco 20 and 21.
10 Q So this is -- the purpose of this memo
11 here --
12 A For RECA.
13 Q -- is to straighten out the --
14 A Straighten out a discrepancy that they
15 kept finding.
16 Q Okay. And then there's a short summary of
17 ore-buying stations on Page 19.
18 A That was something, obviously, I did for
19 RECA also about what the AEC ore-buying stations
20 were. Were they a mill? I said, No, they were --
21 they were actually the front end of a mill. Mills
22 had ore-buying stations, but these were individual
23 things, and what they did and what the people that
24 worked at those were -- what kind of radiation they
25 were exposed to.

1 Q Look at Pages --
2 A This was --
3 Q -- Pages 20 and 21. The next two pages
4 are --
5 A That's a summary that I wrote about the
6 AEC lease on Cove Mesa, which I did -- there's no
7 date on it here, I don't think.
8 Q And then -- but this is your historical
9 summary of --
10 A It's a summary of that brand-new Arizona
11 Bureau of Mines -- Arizona Bureau Geology --
12 Geologic Survey report of Cove Mesa. This is a
13 summary I did for somebody when the report was lost.
14 Q Okay. Next is Page 22, Tuba City
15 ore-buying station and mill site. Looks like
16 another chronology.
17 A I think I did that for RECA also.
18 Q Okay. And we have seen --
19 A They had some Navajos working in the
20 ore-buying station, working -- said they worked at
21 the mill when there wasn't even an ore-buying
22 station there. They were confused.
23 Q Okay. And we have seen the timeline for
24 the Navajo --
25 A Oh, that was what I did for some -- some

1 attorney someplace wanted to know about my -- how
2 much time did I really spend on the reservation.
3 (Interruption in proceedings.)
4 A I think maybe this was for -- Region 9 EPA
5 wanted to know about my actual time on the
6 reservation, so this is something I prepared many
7 years ago.
8 Q (By Mr. Vorhees) Now, Page 24 is just a
9 list of the camps and activity on the camps. Do you
10 see that?
11 A Yeah.
12 Q Did you prepare that?
13 A I prepared this for somebody long ago
14 about what -- what -- where the camps were and what
15 were they established for.
16 Q Okay. All right. That's on page --
17 A New Mexico has got more detail over here.
18 Every time we would build a camp, we would have to
19 go to -- get permission from Window Rock to disturb
20 the land out there and all that. And they said, Are
21 you going to hire any people? Yeah, we will if
22 we -- we hired -- we had Navajo camp tenders. They
23 would wash windshields and they'd empty the trash in
24 the landfill and sweep the offices out and all that,
25 and so we did give -- we did give a few little --

1 some employment.
2 Q Okay. All right. That gets us over to
3 Page 26, Summary of U.S. Atomic Energy Commission
4 Activities.
5 A This was -- DOE down here got a request, I
6 think, from the Counsel General in D.C. or somebody
7 wanting to know what AEC did on the Jicarilla
8 Reservation. So Mrs. Gill, I think, or somebody
9 asked me to write this up, and so this is a summary
10 I wrote of what I remembered doing over there,
11 because I spent one summer over there.
12 Q All right. Well, now I'm going over to
13 Exhibit No. 83: AEC Statement of Uranium
14 Concentrate Purchase Commitments and Prices for
15 Uranium Under 27 Domestic Milling Contracts.
16 A I have never seen this report.
17 Q Okay. We --
18 A It went mill by mill, didn't it?
19 Q It did. And we believe this is a
20 government document. Can you confirm that?
21 A Yeah, I would say it looks like it,
22 because it has a lot of the information that had --
23 from Albrethsen McGinley report in here, but it must
24 have some more because it's...
25 Q Well, we may have seen this document

1 before, earlier today, Mr. Chenoweth.
2 A This must be an AEC document, but -- just
3 from the wording and the price per pound and the
4 total price of the uranium they paid for and all
5 that, so...
6 Q Okay. Well, that kind of information is
7 depicted in the -- or is certainly summarized in the
8 exhibit, and we don't have to go over all of that.
9 Exhibit No. 84 is a document entitled
10 Table 5. Does this look familiar to you?
11 A Yeah, that looks like a table out of my
12 report.
13 Q All right. And --
14 A Or maybe this is Scarborough's -- no.
15 This has to be -- yeah, because we started with No.
16 1 up at the north end of the district and went right
17 through -- geographically came south, and he listed
18 all his by -- alphabetically by mine, so this is a
19 table of mines that I made.
20 Q Okay.
21 A Yeah.
22 Q All right.
23 A That looks like the table out of my
24 report.
25 Q It's pretty self-evident as to what the

1 information is in the Table 5, but you recognize
2 this as a document you prepared?
3 A Yeah.
4 Q Okay. Let's go to 85. There appears an
5 article entitled: The Uranium Deposits of
6 Northeastern Arizona, by you and Mr. Roger Malan.
7 A Malan.
8 Q Malan. Sorry. And I don't think we have
9 a date on this.
10 A This was published in the -- the New
11 Mexico Geological Society was having a field trip in
12 the Four Corners, and they wanted something on
13 uranium. This is way back in the early '70s, maybe.
14 Q Well, it looks -- it looks like it was a
15 publication authorized by the Atomic Energy
16 Commission.
17 A You're right. We had to get permission
18 from somebody higher up to get it published, which
19 we did. And it's our summary of the uranium in
20 Northeastern Arizona as well as mines down in the
21 Holbrook area and all that, so...
22 Q So it's a published article.
23 A It's a published article. We had maps --
24 maps from -- some of these AEC maps we reduced down
25 and put in here.

1 Q Okay.
2 A But it's -- it was published by the New
3 Mexico Geological Society someplace.
4 Q All right. Now, we're going to look at
5 Exhibit No. 86, which is the document headed:
6 Arrowhead Uranium Company, Inc.
7 I know this isn't a document you created,
8 but --
9 A I have never seen this before.
10 Q Do you remember Mr. E. J. Carlson?
11 A No.
12 Q Okay.
13 A I knew Russ Cutter and Morehouse.
14 Q Russell C. Cutter, the geologist?
15 A Yeah, he was a geologist. And Morehouse
16 was a geologist and John Munro was -- I remember
17 meeting him. He was the president. He was -- he
18 was not -- I think he was an investor or something.
19 I don't remember.
20 Q Well, then, Mr. Morehouse, we were just
21 talking about him, weren't we, a couple exhibits
22 ago?
23 A Yeah.
24 Q Okay.
25 A Yeah, he -- he was the one that I talked

1 to about the early days down there.
2 Q All right.
3 A In fact, the USGS named a mineral after
4 him, some kind of a uranium cobalt mineral. They
5 called it Morehouseite after George. He was real
6 pleased with that.
7 Q I bet he was.
8 Let's look over at Exhibit 86, Page 4,
9 in -- I'm just going to read a -- just two lines. I
10 know you didn't write this, but I want to ask you to
11 comment on it.
12 It says on Page 4 in the second paragraph,
13 quote, The AEC cut many bulldozer trenches on all
14 the properties, except in the hard Shinarump,
15 S-H-I-N-A-R-U-M-P, and disclosed various outcrops of
16 ore. Little bulldozer work has been done by the
17 company except to strip off overburden.
18 What is the Shinarump?
19 A That is a geologic unit below -- most of
20 uranium in Cameron occurred in the petrified forest
21 member of the Chinle, C-H-I-N-L-E -- L-I or L-E,
22 L-E -- C-H-I-N-L-E, yeah -- Chinle Formation. But
23 below the petrified forest member is this hard unit
24 called a Shinarump. It's a hard, well-cemented
25 sandstone; whereas the petrified forest is a lot of

1 clay and soft sandstone lenses. And most the
2 uranium in Cameron is in the petrified forest. So I
3 think Huskon 11, Huskon 26, and there's a few other
4 ones -- I can't remember exactly -- are in the
5 Shinarump. Obviously, they didn't strip those, but
6 they stripped the ones up in the petrified forest.
7 Q Okay.
8 A Where Huskon 1 through 3, 10, 8 -- I can't
9 remember all of them, but some of Charlie's deposits
10 were in this Shinarump, and it's a very hard
11 sandstone.
12 Q Do you know what Section 9 was in --
13 A It's in Shinarump. Channel 9 -- Section 9
14 is -- up here on the reservation you've got
15 Section -- Huskon 26, 11, and then you've got --
16 THE REPORTER: Sir, please take your
17 hand away from your mouth.
18 A You've got -- up across the reservation
19 fence, you've got Huskon 26, Huskon 11, then you've
20 got the Liba claims. Then you've got Section 9.
21 That's all over the Shinarump channel, and it's
22 softer down there on Section 9 than it is up on 11.
23 Q (By Mr. Vorhees) Did the AEC rim-strip on
24 Section 9?
25 A No. Only thing they did that I read about

1 is stripping Charlie's deposits on the reservation,
2 Charlie's petrified forest ones.
3 Q Okay. Let's flip over now to Exhibit No.
4 87.
5 A Oh.
6 Q And this is your handwriting here?
7 A Yeah, this is something I wrote for -- I
8 don't know who I wrote this -- maybe this is
9 something I did when I was preparing a PowerPoint,
10 and this was going to be -- what the PowerPoint
11 looks like, but...
12 Q Well, will you take us through this. It
13 says at the top -- this is a document where the
14 first line is AEC involvement.
15 A Uh-huh.
16 Q And there's two headings: Mining and
17 milling. What do we have here?
18 A Well, these are -- these are the
19 incentives, basically the incentives and other
20 things that AEC did to get -- to start the uranium
21 boom. They set the price schedule for ore, and that
22 was Circular 5 revised. It took the earlier
23 circulars, 1, 3, and 4, and put them all into one
24 unit, and that was Circular 5 revised.
25 And then they had the Circular 6. That's

1 the bonuses for new discoveries that we have already
2 talked about. And they paid for the haulage, first
3 100 miles at 6 cents a ton-mile. That's when the
4 AEC had to go out and measure the physical distance
5 from mine to mill so nobody would take a roundabout
6 road to get more money.
7 And they paid for vanadium in certain ore
8 because they said that was a resource they didn't
9 want to go to waste, and so they paid for vanadium
10 at certain vanadium mills. And if -- and if the
11 companies couldn't sell vanadium, the AEC would buy
12 it and then sell it at auction later.
13 And then they established ore-buying
14 stations at areas of new discoveries, and then they
15 did metallurgical testing of ores of new
16 discoveries. That was done at the pilot plant. So
17 you found -- like up in the Gas Hills, when they
18 found ore and uranium up there in a different kind
19 of rock, they did testing on down here. And Lucky
20 Mc knew what kind of a mill to build because of the
21 AEC testing.
22 Q So --
23 A I just happen to remember Lucky Mc always
24 gave the AEC credit for telling them what kind of a
25 mill to build.

1 Q When you say "Lucky," could you give us
2 the spelling of that. Lucky...
3 A That's the name of a mine and a company.
4 L-U-C-K-Y, M-C, capital M-C.
5 Q Okay. And then we're going to also just
6 want to go down the list here. Under "Milling," can
7 you tell us what your notes here reflect.
8 A Well, it was all done by private industry
9 who had contracts with the government. And like I
10 said earlier, each contract was negotiated
11 separately to ensure the government could get a good
12 price for the concentrate, and the milling company
13 was getting a fair return for their investment.
14 Q Right.
15 A And then so each company -- there's a
16 document that's been open-filed, and it shows each
17 company, how during the years the price changed as
18 the AEC negotiated with them. And some of the early
19 mills was high. I think the Vitro Mill in Salt Lake
20 City was 15 and they finally -- at the very end,
21 they were down around $9. Anyway --
22 Q Okay.
23 A -- that's all -- that's all summarized in
24 Albrethsen McGinley.
25 Q So under "Milling," we have got contracted

1 with companies to purchase uranium and then -- and
2 then uranium concentrate (yellowcake) to be produced
3 at the company-owned plants.
4 A Yeah.
5 Q And then each contract was negotiated
6 separately to ensure that the government was getting
7 a good price for the uranium and the milling company
8 was getting a fair return.
9 A Yeah.
10 Q Okay. And then -- then with regard to the
11 mining and those -- those one, two, three, four,
12 five, six, seven -- seven things under mining, could
13 we add that the AEC was rim-stripping too?
14 A Yeah. And they did drilling, like if --
15 if -- on some of the old vanadium mines around
16 Uravan, they went in and we went in and drilled
17 behind these mines to see if we could find
18 extensions because -- to get industry started again,
19 because U.S. Vanadium was slow to do it. And the
20 mines I worked on in '54 were old vanadium mines of
21 VCA, and they were very reluctant to spend any
22 money. So the AEC went in and drilled and found
23 them more ore. And in the case of Cameron and other
24 places, they did rim-stripping to expose to see what
25 they had there.

1 Q Okay. And then with regard to milling,
2 could we also add to the list that the AEC in Grand
3 Junction assisted -- those employees assisted in
4 helping set up mills?
5 A Yeah, yeah. They did testing on these new
6 ores to see what the best process was to use, and
7 they did a lot of metallurgical research on what
8 minerals were in the ores and all that here at the
9 pilot plant.
10 Q At the pilot plant here, right here in
11 Grand Junction.
12 A Right here in Grand Junction.
13 Q Okay. Well, then -- well, let's go to
14 Exhibit No. 88 and --
15 A Oh.
16 Q Well, if you could tell us what this is.
17 I know this is a lot of notes, Mr. Chenoweth, but
18 maybe we could just go over this and you could give
19 us a --
20 A This is -- this is also done for RECA
21 about the different contractors that operated the
22 different mines. The first group of mines are all
23 the Lukachukai mines, and then Cove Mesa. This is
24 from Arizona -- the Lukachukai miners up here at the
25 top, excuse me, those are all from the State Mine

1 Inspector reports. The mining on Cove Mesa -- on
2 the Cato Sells part of Cove Mesa was done for my
3 field notes, going up there seeing who was mining in
4 a certain year.
5 Q Okay. And as we go through this --
6 A And here's some more over here on the
7 other page, who I picked up mining in certain areas.
8 Q And these are your notes, again,
9 reflecting information that you have with regard
10 to --
11 A Field notes and -- yeah, if it doesn't say
12 Mining Inspector Reports, it's something I picked up
13 by visiting mines.
14 Q Okay. Well, if you could walk us through
15 a little more of the documentation here, we would
16 appreciate it.
17 A Part of Cove Mesa is an AEC lease, and I
18 see that Leroy Pettigrew and Trenton Davis mined up
19 there '51 through '57. And the man I talked to on
20 them, Bill Goforth, G-O-F-O-R-T, was his employee.
21 And then on the Cato Sells part of Cove Mesa, Gene
22 Hemphill, H-E-M-P-H-I-L-L, was a foreman on -- at
23 the No. 1 mine; and George Chavez, C-H-A-V-E-Z, was
24 a foreman on the No. 2 mine. These are just my
25 field notes on who was the contact up there.

1 Q I see your field notes are reflected, at
2 least the reference to them in the exhibit, on
3 Page -- Exhibit 88, Page 6.
4 A 6.
5 Q Right. And then Page 7, we have the
6 Grants area.
7 A Some of -- some of these typed pages here
8 were made one time, and then we had it corrected and
9 all that and it's kind of messed up here because --
10 but we are talking about 6?
11 Q Well, yes. I was on Page 6.
12 A 6. That's a continuation of 5, which we
13 talked about earlier today anyway.
14 Q And then on Page 7 -- 7 through the end,
15 really, is a --
16 A These are from the Mining Inspector
17 reports of who was -- who was mining in Grants.
18 This was all done for RECA.
19 Q And when you refer to RECA, let's --
20 A That is the Radiation Exposure
21 Compensation Act where miners, millers, and ore
22 transporters can get reimbursed if they have certain
23 diseases, but they have to approve -- they have to
24 record where they worked. And somebody will say,
25 Well, I worked for Fife and Bailey, for example, in

1 Grants. Well, that doesn't show up in the AEC
2 records because that mine -- their mine was owned by
3 the Santa Fe Railroad.
4 So they can go to my records that I
5 compiled for them and see exactly where Fife and
6 Bailey worked because that might be the name in the
7 Social Security records. As I said earlier, the AEC
8 records show who got paid, not who actually mined
9 the ore. And in RECA they needed to know who was
10 operating that mine so they can verify different
11 claims and everything, and that's why this was done.
12 Q I see. So you were performing this work
13 on behalf of the Department of Justice?
14 A Just this radiation -- radiation unit in
15 the civil division.
16 Q Okay. Okay. And that's what we have here
17 in Exhibit No. 88, and continuing on, I suppose, I'm
18 on Page 8, 9, 10, 11.
19 A Some of this has been summarized and typed
20 up. I see all this Cameron stuff has already been
21 typed up someplace.
22 Q Okay.
23 A And I gave him my preliminary notes that I
24 made.
25 Q Okay. And these, again, are they from

1 your field notes?
2 A Yeah.
3 Q All right.
4 A Now, I don't understand -- I don't
5 remember what 10 and 11 are. I have no idea.
6 Q Okay. Let's see. 10 and 11.
7 A Line number so-and-so and a date. I have
8 no idea.
9 Q 10 and 11 you don't, and I suppose that
10 includes 12 and 13?
11 A That might have been something I edited
12 for the Labor Department when they were all messed
13 up with who miners were and who controllers were.
14 But, my gosh, I have no idea.
15 Q Okay.
16 A Is this correcting dates or adding dates
17 to names of mines apparently? I don't know. I
18 really can't tell you.
19 Q Okay.
20 A Something I had in my notes and I have
21 no -- I have no idea what all that is. Boy, and I
22 can't understand what -- I don't understand what 17
23 is either.
24 Q Well, let's move on to Exhibit No. 89,
25 shall we?

1 A Yeah, I don't...
2 Q I mean --
3 A I -- like I say, combining this, I can't
4 really tell you what that is.
5 Q That's okay. Obviously, looking at old
6 notes is a difficult exercise, but we appreciate
7 your --
8 A I just don't know. I can't identify all
9 that numbers and stuff.
10 Q Okay. Well, let's then -- we'll wrap up
11 here with -- today with just a few more exhibits
12 here, and then we'll --
13 A Okay.
14 Q -- we'll call it quits for today.
15 So with regard to Exhibit No. 89, Summary
16 of Mineral Leasing Program at DOE Office in Grand
17 Junction, do you recognize this document?
18 A Yeah. I contributed to this. This is a
19 joint report between myself and Ed Cotter, who is
20 working for the contractor in charge of the mineral
21 leasing program today. This was for a field trip
22 the Grand Junction Geological Society had down
23 through Uravan in -- last year I guess it was.
24 Q Okay. And --
25 A And we had this guy put out this little

1 guide book we'd go buy, and Ed would go by some of
2 the leases and Ed would point them out and all that,
3 especially down at Slick Rock. And so we figured
4 we'd better have something in it about the leasing
5 program, because a lot of people don't realize the
6 government still controls -- well, people around
7 here know it, but outsiders don't realize the
8 government still controls quite a bit of land down
9 here and it's already leased for uranium.
10 Q Okay.
11 A And he -- let's see. Wait a minute.
12 Well, this is -- no. This is an earlier version,
13 because this doesn't have the -- when we were -- I
14 got to take that back.
15 The one we wrote, Ed and I and Craig, it
16 included the third leasing program, how it's tied up
17 in the courts, and this doesn't include that.
18 Q This only goes through the second leasing
19 program.
20 A Now I know what this is.
21 Q Okay.
22 A This is something Ed and I did because the
23 General Counsel back in D.C. wanted a summary of the
24 AEC leasing program. And Ed says, You write the old
25 history stuff about the Manhattan Project and I'll

1 write about the second leasing program. And now I
2 remember we attached all these attachments to this
3 document that we sent back to the General Counsel.
4 Q Of DOE?
5 A Yeah, yes.
6 Q Okay.
7 A Because we sent back copies of mining
8 leases. We sent back the public land orders that Ed
9 had in his file. This is -- and then I had written
10 a thing about the summary of the leases that AEC
11 acquired from the Manhattan District, and then Ed
12 had a mining deed of these. And, anyway, this was
13 kind of a joint report that I wrote some of the
14 history and he did most of the work on this.
15 But this was not for the public. This
16 went back to the -- and I don't know -- I don't
17 think I had this in my file. Maybe I did, because I
18 kept a copy in case somebody down at the compound
19 lost it. But, anyway, this was not for the public.
20 It went to the General Counsel.
21 Q Okay. Let's look at Exhibit No. 90
22 entitled: Uranium Deposits in the Painted Desert of
23 Coconino and Navajo Counties.
24 Now, admittedly --
25 A This -- this was never public. This was

1 a -- this was a report that I was going to do for
2 the Arizona people about the whole Painted Desert
3 area, the Cameron area and the Holbrook area. And
4 then we decided, No, I didn't want to do it.
5 Q Okay.
6 A So this is just a draft, and you will see
7 it's just a draft because it's got a lot of markup
8 notes in here.
9 Q All right.
10 A And it never was completed.
11 Q Okay. No. 91 is a document entitled:
12 Working on the Navajo Indian Reservation in the
13 1950s.
14 A Yeah. This is a -- there's a mining club
15 here. They're always looking for interesting
16 programs, and they came to me and said, When you and
17 your wife worked down there in the '50s and it's a
18 lot different than it is today. Can you put
19 together a PowerPoint for one of our social
20 gatherings. And I talked to Miriam and said, Yeah,
21 we could. She says, You can do the work. And so
22 most -- so this is -- this is a PowerPoint
23 presentation we gave to the mining club, and I think
24 I have given it to other people.
25 Q Yeah. We -- I think we have a copy of

1 this.
2 A Yeah. I have no problems letting anybody
3 else show it, and so you guys copied my PowerPoint,
4 and the following are...
5 Q And 92. Exhibit No. 92 is --
6 A 92 is a list -- wait. 91 is a list of the
7 101 images. And 92 is -- 92. Oh, that's a list of
8 another PowerPoint I said you could copy. This is a
9 PowerPoint I made for the RECA to educate the RECA
10 claims examiners and the RECA attorneys on what
11 uranium mining is all about. And I know -- I said
12 this was done for RECA, and I didn't know if DOJ was
13 going to object to them copying it. I guess you
14 didn't.
15 Q Okay. Well, you know, why don't we just
16 jump over --
17 A Anyway, these are the slides in this
18 training film I did for the RECA attorneys and
19 claims examiners.
20 Q Okay. So --
21 A Now I don't understand what No. 93 is.
22 Q Well, 93 is -- it appears to be more of
23 your notes.
24 A Oh. I had to make a -- I made a list of
25 trucking contractors I knew about for DOJ for the

1 RECA program, because truck drivers are included in
2 that. And apparently this is additional things I
3 got from talking to Union Carbide.
4 Q Okay.
5 A And then this other stuff is a summary
6 of -- this is something I did for Labor Department.
7 They wanted to know what mills these guys hauled to.
8 And so like on 93-2, it says W.R. Hall. From the
9 best of my guessing and Frank McGinley's guessing,
10 we said they hauled ore to mill number -- Colorado
11 No. 1 mill, Utah No. 1 mill, and Colorado No. 3
12 mill. Now, someplace there's a list of these mills
13 and I couldn't tell you where they are.
14 Q Okay.
15 A And when we did it, they wanted to go
16 through the whole list of -- Labor Department wanted
17 to go through the whole list of milling -- mining --
18 truck -- hauling contractors that DOJ had, and they
19 wanted to know what mills they hauled to for some
20 reason. And so that's what all this stuff's about.
21 And someplace there's an index to what mill New
22 Mexico No. 5 is. And then there's all -- the ore
23 was also shipped on the railroad and they wanted to
24 know where the railroad delivered ore. So that's
25 what all this -- all this is.

1 93-5 is still listing contractors, so is
2 No. 7. Gosh. They won't do you any good unless you
3 know -- and then -- and then I went through the list
4 that DOJ had and found a lot of duplicate -- a lot
5 of duplicate names and misspellings and found
6 additional names we found. And, anyway, that's what
7 that's all about, is where truck drivers took their
8 ore.
9 Q Okay. And, again, this is a pretty
10 comprehensive compilation of notes of yours.
11 A Yeah, this -- most of -- because I did a
12 lot of work for the Labor Department, but trying to
13 work with some -- their uranium experts in the Labor
14 Department were old coal miners in Pennsylvania, and
15 they didn't know anything about uranium and it was
16 very frustrating and I didn't work for them very
17 long.
18 Q Okay. Well, then, if it's okay, why don't
19 we go over to Exhibit No. 94.
20 A Okay.
21 Q And now we have some --
22 A Yeah, here are more truck drivers.
23 Q If we go to 94, we'll see some photographs
24 and...
25 A Okay. Yeah. This is an aerial photo. I

1 don't know the date. These are -- oh, my goodness.
2 Q What is that? Is that Grand Junction?
3 A These are just a bunch of photos I had in
4 my collection, but this one is the -- and this is
5 the Grand Junction site. And down here in the lower
6 left-hand corner is the pilot plant, and those rows
7 of things are drums of uranium that they -- from the
8 different ores they've tested there at the pilot
9 plant. And up here, the lake up in the other corner
10 is an old gravel pit that was on the site when they
11 bought it. It has nothing to do with uranium, and I
12 don't...
13 Q That's the Rio Grande -- the Colorado
14 River.
15 A Yeah, this is -- no, this is the Gunnison
16 River.
17 Q Oh, the Gunnison River.
18 A Yeah, when the Army bought that, their
19 deed says along the Gunnison River swamps.
20 Q Okay. Well, we've got another picture --
21 A This is an earlier picture, because the
22 pilot plant -- there are the drums, but the pilot
23 plant is not as big, I don't think.
24 Q Yeah, there was a small pilot plant to
25 begin with and then --

1 A I forget how many tons a day, but it was
2 just research and development.
3 Q All right. And then the picture on No. 3
4 is -- I take it that's the Grand Junction personnel?
5 A No, this was -- this was the PED. This
6 was Production Evaluation Division people.
7 Q Okay.
8 A No miners in here.
9 Q But this is in Grand Junction?
10 A Yeah, this is the office here. This is --
11 Q Are you in this photograph?
12 A Should be. There I am.
13 Q There you are.
14 A Middle row. Anyway, I'm over here in the
15 upper left with my horn-rimmed glasses and losing my
16 hair. Oh, here's the name of the -- yeah, here's
17 the pictures. Oh, no. We were the Resource
18 Division then, April '77, and that's all the names
19 of the people.
20 Q Okay. We see you. No. 17.
21 A Yeah. No. 17. Yeah, back here.
22 Q Then we go -- we have more photographs and
23 more information here, and my colleague is going to
24 go over some of these photographs. These are your
25 photographs?

1 A Yeah. These -- yeah, these are all mine,
2 except when we get back to the Navajo pictures, some
3 of those -- most of those are mine.
4 Q Okay.
5 A Some of those classy ones are my wife's
6 photos.
7 Q All right. Well, we're going to -- we're
8 going to cover them tomorrow, and so let's go to No.
9 95.
10 A 95. Okay.
11 Q Exhibit No. 95, more photos, and there's a
12 list of photos.
13 A These are photos that I took out of the El
14 Paso plane on the Nez Tsosie case, and some of the
15 photos are missing. But I took the pictures out of
16 the El Paso plane -- the pipeline -- the plane they
17 used to fly the pipeline. We took the O'Connor law
18 people around and I was pointing out all the pits to
19 them and which ones had been reclaimed and all that.
20 And then they had me write captions for the photos,
21 and that envelope that Copy -- Copy Copy didn't have
22 all the photos in it when I sent it to them. I
23 don't know where they are, but --
24 Q Okay.
25 A -- but these are the photos taken for Nez

1 Tsosie case from the El Paso airplane.
2 Q Okay. Now, let's go to 96, and 96 appears
3 to be the PowerPoint that you were referring to
4 earlier.
5 A This is -- this is a PowerPoint that I
6 gave, oh, to the --
7 MS. RUDOLPH: Object. We haven't
8 actually had a chance to review this PowerPoint that
9 was identified at collection, I believe, and we
10 hadn't actually okayed --
11 THE DEPONENT: Oh.
12 MS. RUDOLPH: -- we haven't just yet.
13 MR. VORHEES: Oh, this is this
14 PowerPoint of Western Colorado Uranium Legacy?
15 MS. RUDOLPH: It was the training he
16 did for DOJ.
17 THE DEPONENT: Yeah, this was done
18 for a presentation at the Museum of Western Colorado
19 and other places.
20 MS. RUDOLPH: Okay.
21 THE DEPONENT: There was some
22 carnotite in it, a little history of the area, and
23 the radium era, the vanadium era, and Manhattan
24 Project. It just summarizes everything here. It's
25 kind of -- and then I got -- and then it goes to the

1 AEC program and the things we've talked about about
2 the -- it talks about the Uravan district.
3 Q (By Mr. Vorhees) Okay. So this is --
4 A And then starting here on Page 24 or 25 is
5 the AEC program, highlights of the AEC program.
6 Q So this is a PowerPoint for the museum --
7 A It's a PowerPoint I've given some -- given
8 up at Mesa College and I think I even gave it out at
9 the compound one time.
10 Q Okay.
11 A So it's just a little historical
12 PowerPoint on the legacy of the mining around here.
13 Q Okay.
14 A We call it -- gave it a catchy title.
15 Q All right. Well, we'll probably have some
16 questions on that tomorrow.
17 97 is -- what do we have here? Uranium
18 Mining, Navajo Reservation.
19 A That's -- that's the PowerPoint my wife
20 and I gave the mining club.
21 Q This is for the mining club.
22 A Yeah.
23 Q And there's some wonderful photographs in
24 here, but, again --
25 A I was surprised we got them on PowerPoint

1 because they're Kodachrome slides taken 60 years
2 ago, you know.
3 Q Yeah.
4 A So --
5 Q And we're going to cover -- we're going to
6 cover some of these tomorrow specifically, but in
7 any event, so that's you and your wife's compilation
8 PowerPoint.
9 How about 98?
10 A 98. I don't know where that came from.
11 That's not my --
12 Q Well, this --
13 A That's one of your drawings.
14 Q This is another one of those compilations
15 of documents.
16 A Yeah, that's right. That's all the
17 Cameron District and all the Rare Metals property I
18 recognize.
19 Q Okay.
20 A Not all -- not all of the Arrowhead
21 properties because apparently Rare Metals dropped
22 Huskon 4 and Huskon 5 and another one of the
23 Huskons, which they shouldn't have done. 4 was the
24 second biggest mine in the district. But, anyway,
25 these are -- these are the major Rare Metals

1 properties as I remember. Yeah, this is Huskon 11.
2 Q Okay. Again, maps and information.
3 A Yeah.
4 Q Some correspondence, some internal
5 government memoranda: This Mr. Maurice Hansen and
6 Mr. Hill letters. Again, this is -- appears to be
7 coming from some file that you had.
8 A Now, which is that?
9 Q This is this Exhibit No. 98.
10 A 98. No, I have never seen any of these
11 before.
12 Q You've never seen this?
13 A Never seen this.
14 Q Okay.
15 A These are all Rare Metals documents.
16 Q Okay.
17 A Here's a letter that -- who wrote this to
18 Rare Metals? Bob Toole. He was the head of the
19 leasing program or certification program. Okay.
20 This has to do with certification of the
21 Ramco properties. No, I have never seen any of
22 this, even this 98-19, health and safety engineers
23 report.
24 Q I apologize.
25 A I have never seen any of this.

1 Q I thought this was coming from your files,
2 but that's certainly okay. So 98 you haven't seen
3 before.
4 A No, I have never seen -- I might have seen
5 some of these certification letters in the
6 certification files but not in -- not in -- not
7 here, not with those Rare Metals maps.
8 Q Okay. So let's pass over 98, then, and go
9 to 99.
10 A Oh, yeah.
11 Q And why don't you --
12 A I've probably seen this. This is a
13 typical Navajo mining permit. It's a form you
14 filled out and filled it all in there. And I have
15 seen lots of these, and then here's all the things
16 permitted. As you know, there's not a single word
17 in here about reclamation.
18 Q Okay.
19 A I have seen dozens of Navajo mining
20 permits after writing these reports and things, and
21 they all have the same format. And then one year
22 they changed it differently, but I have probably
23 seen these but never kept copies of them.
24 Q Okay. You know, if we could just go for a
25 moment over to Pages 16 and 17 of this exhibit.

1 A 16 -- 19, 16 and 17?
2 Q Yeah, 99. Exhibit No. 99, 16 and 17.
3 A Oh, yeah.
4 Q These appear to be legal descriptions.
5 A Yeah. This is something that Window Rock
6 did. The mining department there kept records like
7 this on all the properties, and this draftsman they
8 had, Leo Denetsoni, drew up maps plotting all this
9 stuff from these descriptions. And he did an
10 excellent job, and I saw one of his maps back here a
11 while ago. But these are the legal descriptions of
12 the different mining permits.
13 Q Okay. And over to page --
14 A Rare Metals probably submitted this to the
15 mining department -- mining -- yeah, mining office.
16 Q Over to Page 23 of this exhibit.
17 A Oh, I see this is all from Nez Tsosie.
18 Q Well, it certainly is a compilation.
19 A Yeah, it's all a legal description of the
20 Rare Metals properties involved in that.
21 Q Okay. Can we go over to Page 22 and 23
22 just for a minute.
23 A Back to 22 -- 19?
24 Q Yeah. Exhibit No. 99, 22 and 23.
25 A Okay.

1 Q I just would ask if you have seen this
2 before.
3 A 99, 22 and 23.
4 Q Yeah. And for the record, this appears to
5 be a Health and Safety inspection report, dated
6 February 18 and 19, 1959.
7 A I have seen one of these. I don't
8 remember seeing these, but these are the -- mining
9 engineers from, I guess, Mesa or whoever the agency
10 was in the Bureau of Mines, they came down and made
11 inspections and then they would write a report about
12 what they saw and all that. And up here is the
13 mining permit numbers at the top. And I have met
14 this Derzay. He was a mining engineer out of the
15 Denver office in the Bureau of Mines on a -- was a
16 mine inspector.
17 Q Uh-huh.
18 A And at one time, the Navajo office of
19 mining -- the mining department and that, they had
20 their own mine inspectors. And they said, We don't
21 want you feds coming up here and inspecting a mine.
22 We do our own good job, and they kicked the Bureau
23 of Mines people out for a few years and then they
24 came back. And the State didn't even get into the
25 reservation because the tribe had their own mine

1 inspectors.

2 So there's a gap in the federal

3 inspections of the mines on the -- the big mines on

4 the reservation because of this, I know, because the

5 people in Denver were really mad about it, but there

6 was nothing they could do about it.

7 Q Okay. And you met Mr. Derzay?

8 A Yeah, I met him.

9 Q D-E-R -- D-E-R-Z-A-Y.

10 A D-E-R -- yeah.

11 Q All right. Well, we are wrapping up here.

12 We have only got a few more minutes on the video.

13 There's more material here, but I hesitate to really

14 rush through this because, again, it's a

15 compilation, Mr. Chenoweth, and we want you to have

16 a fair opportunity to, you know, comment if you can

17 on the documentation that that's here, and I do not

18 want to rush this.

19 A No, I have never seen --

20 Q You've never seen this.

21 A -- these exact reports, but I guess -- I

22 have never -- yeah, I've seen -- I remember seeing

23 one of the Kerr-McGee mines in the Lukachukai

24 written by this same group. And they go around and

25 point out, you know, hazardous dust and things like

1 that and safety training and all that, so -- but
2 these are detailed reports. But you would have --
3 to know what mines they are talking about, you'd
4 have to go back to one of those sheets and look up
5 these mining permit numbers.
6 Q Okay. Well, let's then -- let's just go
7 finally to Exhibits 100 and 101.
8 A Okay.
9 Q 100 is a biographical sketch of
10 Mr. Mitchell H. Kline.
11 A Uh-huh.
12 Q Did you know him?
13 A I think he was at the meeting in Salt Lake
14 to discuss the November 24th ore reserves.
15 Q And you referred to that earlier. That's
16 your meeting with Rare Metals?
17 A Yeah, it was in Salt Lake, and I was one
18 of three or four AEC people there talking about...
19 Q And this appears to be a biographical
20 sketch of Mr. Kline.
21 A Yeah, he worked for the Bureau of Mines, I
22 know, before Rare Metals.
23 Q Okay. Do you know whether he worked on
24 the Manhattan Project?
25 A The what?

1 Q The Manhattan Project.
2 A I don't think so. I don't know.
3 Q And then 101 is -- is -- we are going to
4 start with --
5 A Oh, okay.
6 Q What's 101?
7 A 101 is a map, base map, that the Cameron
8 Mining Company gave to the AEC office when we
9 started over there to -- to get acquainted with
10 where the mines were and the mining permits and the
11 names of the mines. And I have no idea where
12 Mr. Blakemore got this map, because he's got -- he's
13 got mine names and then he's got certification
14 numbers after it.
15 And this is the only copy I have right
16 now, and I can't remember why this piece is cut out
17 of here. I think it was -- but for the Nez Tsosie
18 case, I got a clean copy -- made a clean copy of
19 this map and I colored in all of the Rare Metals --
20 all the properties Rare Metals had ever mined in
21 orange. And then I colored in in green all the
22 mining permits where other ore had been produced to
23 show that -- you look at the map, there's more green
24 there than there is orange. And that map is now --
25 that I had is now with EPA Region 9 in San

1 Francisco.
2 Q Okay.
3 A And they're going to send it back to me
4 one of these days, because I said all I have is a
5 beat-up map with a hole in the middle.
6 Q Well, we've enlarged that map, which is
7 Exhibit No. 101. And we'll start with that tomorrow
8 morning.
9 A Because we used this map in the Nez Tsosie
10 case and they probably reduced it down. I don't
11 know what happened to it, but -- and why there's
12 this rectangle around the major mining area -- well,
13 that's not the major mining area. I don't know what
14 that means and I don't know what the mines within
15 that are circled for.
16 Q Okay.
17 A I probably did it, but -- but, anyway, the
18 orange in this map's always been a mystery, because
19 I don't think it's a Rare Metals map and I don't
20 know where Cameron Mining Company got the resources
21 to put it together. So it's always been a mystery
22 to me where this map came from.
23 Q But it's an accurate depiction of --
24 A Oh, yeah. It's got all the mining permits
25 all drawn up here and it's got some geology planted

1 on here, and then it's got all the certification
2 numbers over here along the property, so...
3 Q Okay. Well, our videographer has given us
4 an indication that we only have two minutes of tape
5 left on this tape, and we've just completed Volume
6 No. 3. And what we will do is we'll start here
7 tomorrow morning.
8 A Okay.
9 MR. VORHEES: 9:00, is that
10 appropriate? And, thank you, Mr. Chenoweth, for a
11 full day.
12 THE DEPONENT: Okay.
13 VIDEOGRAPHER: The time is
14 approximately 5:04. This is the end of Tape No. 6
15 in the deposition of Mr. William Chenoweth. We're
16 off the record.
17 (Proceedings adjourned at 5:04 p.m.)
18
19
20
21
22
23
24
25

1 I, WILLIAM L. CHENOWETH, do hereby certify
2 that I have read the foregoing transcript and that
3 the same and accompanying amendment sheets, if any,
4 constitute a true and complete record of my
5 testimony.
6
7
8 _____
Signature of Deponent
9
( ) No amendments
10 ( ) Amendments attached
11
12 Acknowledged before me this _____ day of
13 _____, 2014.
14 Notary Public: _____
15 My commission expires _____
16 Seal:
17
18
19
20
21
22
23
24
25 CFF

1 STATE OF COLORADO)

2)ss. REPORTER'S CERTIFICATE

3 COUNTY OF MESA)

4 I, Candice F. Flowers, do hereby certify that I

5 am a Certified Shorthand Reporter and Notary Public

6 within the State of Colorado; that previous to the

7 commencement of the examination, the deponent was

8 duly sworn to testify to the truth.

9 I further certify that this deposition was

10 taken in shorthand by me at the time and place

11 herein set forth, that it was thereafter reduced to

12 typewritten form, and that the foregoing constitutes

13 a true and correct transcript.

14 I further certify that I am not related to,

15 employed by, nor counsel for any of the parties or

16 attorneys herein, nor otherwise interested in the

17 result of the within action.

18 In witness whereof, I have affixed my signature

19 this 29th day of January, 2014.

20 My commission expires February 14, 2016.

21

22

23 _____

Candice F. Flowers, CSR

24 216 - 16th Street, Suite 600

Denver, Colorado 80202

25