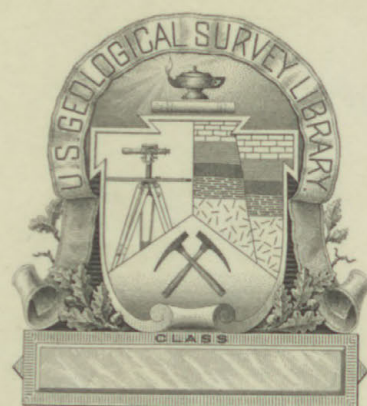






(200)
FD434u

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Uranium analyses of ground- and surface-water samples collected by the U.S. Geological Survey during 1954-56

Compiled by

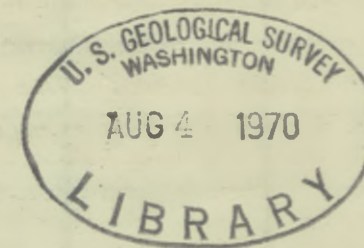
N. M. Denson

Open-file report

1970

A compilation of about 2,100 analyses (expressed in parts per billion U) of samples from
springs, wells, streams, and lakes in the following States:

California	Maryland	New York	South Dakota
Colorado	Montana	North Dakota	Texas
Kansas	Nebraska	Oklahoma	Utah
Missouri	New Mexico	Pennsylvania	Wyoming



222663

U. S. Geological Survey
OPEN FILE REPORT

This report is preliminary and has
not been edited or reviewed for
conformity with Geological Survey
standards or nomenclature.

AN/AL: 5/26/55

Project title and number

State (s) California

7.5

(over)

ANAL: 7/5/55

Project title and number Regional Office, Pacific Region 982 State (s) California

pH
7.4
7.3

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL.: 7/28/54

Project Chief J. E. Schoellhamer

Project title and number Santa Ana Mts., San Joaquin Hills, Fuels

493

State (s) California

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH			
S 345	Orange	(see over)	Spring	Nigger Canyon	4-5 gpm	clear	Feldspathic ss	Topanga	Middle Miocene	same	6/30/54	Schoellhamer, Yerkes, Vedder	9	7.9
S 346	Orange	Tributary of Coyote Can (over)	Sp.	-----	0.25 gpm	slightly muddy	feldspathic ss.	Topanga	Middle Miocene	same	6/30/54	Schoellhamer, Yerkes, Vedder	1	7.3
S 347	Orange	Shady Canyon (over)	Sp.	-----	0.5 gpm	clear	Feldspathic ss	Santiago(?)	Eocene?	same	6/30/54	Schoellhamer, Yerkes, Vedder	-1	7.6
S 348	Orange	Aliso Creek (over)	flowing well (capped)---	?	?	clear	ss	Topanga	Middle Miocene	?	6/30/54	Schoellhamer, Yerkes, Vedder	-1	8.6
S 349	Orange	Wood Canyon (over).	Stream		4 gpm	clear	Alluvium	-----	-----	ss	6/30/54	Schoellhamer, Yerkes, Vedder	9	8.1
S 350	Orange	Bryant Ranch (over)	Spring	-----	Too small to measure	clear	ss	Sespe	Oligocene(?)	ss	7/2/54	Schoellhamer	12	7.6
S 351	Orange	Wagon Wheel Ranch (over)	Spring	Walnut Spring	Too small to measure	clear	siltstone	Puente	Upper Miocene	?	7/2/54	Schoellhamer	1	7.7
S 352	Orange	Gypsum Canyon (over)	Spring	-----	Too small to measure	cloudy	Feldspathic ss	Santiago	Eocene	ss	7/2/54	Schoellhamer	2	6.8
S 353	Orange	Fremont Canyon (over)	Stream	-----	8 gpm	clear	Alluvium	-----	-----	-----	7/2/54	Schoellhamer	2	7.5
S 354	Orange	El Modeno area (over)	Spring	-----	1 gal/25 min.	clear	volcanics	El Modeno volcanics	Middle Miocene	volcanics	7/6/54	Yerkes	-1	7.3
S 355	Orange	Lambert Res. area (over)	Spring	Tomato Spring	1 gal/4 min.	clear	ss	Puente	Upper Miocene	ss	7/6/54	Yerkes	-1	6.9
S 356	Orange	Tin Mine Canyon (over)	Spring	-----	1 gal/2 min.	clear	slate	Bedford Canyon	Triassic	same?	7/6/54	Yerkes	-1	7.4
S 357	Orange	Black Star Canyon (over)	Stream	-----	20 gpm	clear	ss & cg.	Ladd	Cretaceous	same	7/6/54	Yerkes	-1	7.8
S 358	Orange	Ladd Canyon (over)	Well	-----	-----	clear	?	Santiago Pk. volcanics	Jurassic?	?	7/6/54	Yerkes	-1	7.8
S 359	Orange	Silverado Canyon (over)	Stream	-----	18 gpm	clear	slate	Bedford Canyon	Triassic	same	7/6/54	Yerkes	-1	7.6

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM), Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 2/24/55

COLORADO

Project title and number Western Fuels Reconnaissance 56803

State (s) New Mexico

PH

6.8

7.7

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA . .

Project Chief E. R. Landis

Project title and number

State (s) Colorado

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

ANAL: 2/16/55

State (s) Colorado

pH
8.2
8.2

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Kepferle

Project title and number

State (s) Colorado

[illegible]

- 1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

No original

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Roy C. Kepferle

Project title and number

State (s) Colorado

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	Date Analyzed	Date collected	Collector	Uranium (ppb)
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation					
KC-1J(a)	Larimer	NE 34 12N-69W	Sp	-	About 3gpm	Clear	T-Ss	White River	Oligocene		4/5/55	Kepferle	
KC-1J(b)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(c)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(d)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(e)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(f)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(g)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(h)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(i)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(j)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(k)	"	"	"	"	"	"	"	"	"		"	"	
KC-1J(l)	"	"	"	"	"	"	"	"	"		"	"	

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

No original

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Roy C. Kepferle

Project title and number

State (s) Colorado

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	XX
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1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

No original

(over)

OFF. MUN: 12/8/55

[illegible]

(over)

DONNELL

Bass, N. Wood

Project title and number Grand Hogback Quadrangle (Reg. Fuels) State (s) Colorado

pH
8.0
8.0
7.6
7.9
7.7
7.8
7.6

(over)

OFF. ANN. 12/12-55

State (s) Colorado

pH

(over)

ANAL: 10/24/55

Project title and number Grand Hogback E-280

State (s) Colorado

pH
8.0
7.9
8.3
7.9
8.1
7.6
8.0

(over)

FUELS BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

OFF. ADV: 12/12/55

Project Chief M. J. BerginProject title and number Maybell-Lay area, Colorado F-899State (s) Colorado

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH/se
			Type 1/	Name	Flow 2/ (gpm)	Clarity 3/	Type 4/	Formation	Age					
CMW-46	Moffat	SW 26 7N-94W	Seep	-	1 gpm	C	Congl Ss	Tbp	Miocene	Tuff - congl ss	7-21-55	Bergin & Messer	3	8.0 <6
CMW-47	"	NW 16 6N-94W	Sp	-	2 gpm	C	Fault ? Al	Mancos Recent	Cretaceous Recent	Not determinable	8-15-55	"	1	8.1 <6
CMW-48	"	NW 9 6N-94W	Sp	-	1 gpm	C	"	"	"	"	"	"	<1-	8.0 <6
CMW-49	"	NW 16 6N-94W	Sp	-	5 gpm	C	"	"	"	"	"	"	<1-	8.1 <6
CMW-50	"	SE 16 5N-94W	W Hot	-	60 gpm	C	Ss	Dakota	Cretaceous	"	10-20-55	Bergin	<1	7.9 <6
CMW-51	"	SW 4 5N-94W	Sp	-	2 gpm	C	Contact	Tbp XXXX Kmn	Miocene XXXX Cretaceous	Tuff. Ss	"	"	37	8.0 <6
CMW-52	"	"	Sp	-	2 gpm	C	"	"	"	"	"	"	72	8.1 <6
CMW-53	"	NW 29 7N-95W	River	Yampa	100-300 ?	C	?	?	?	Not determinable	10-21-55	"	2	8.0 <6
CMW-54	"	NW 22 7N-95W	Sp	Spring Creek	3 gpm	C	Tuff ss	Browns Park	Miocene	Tuff. ss	"	"	31	7.8 <6
CMW-55	"	SE 34 7N-95W	38' Well	San Steele hand pump Ranch	5 gpm	C	Al	Quater- nary	Recent	Not determinable	10-24-55	"	3	7.5 <6
CMW-56	"	SW 22 7N-95W	Sp	Spring Creek	2 gpm	C	Tuff ss	Browns Park	Miocene	Tuff ss	10-25-55	"	26	7.3 <6
CMW-57	"	NW 29 7N-95W	170' Well	-	hand pump 5 gpm	Cl	Tuff ss	"	"	Not determinable	"	"	<1	8.0 <6
CMW-58	"	NE 32 7N-95W	100' Well	Elmer Trevenen	electric pump 10-15 gpm	C	"	"	"	"	10-28-55	"	<1	7.6 <6
CMW-59 2B	"	NE 18 7N-93W	W	-	gas pump 10 gpm	C	Tuff ss	"	"	Tuff. ss	9-14-55	"	52	7.5 6
CMW- 14B	"	NW 9 7N-93W	23' W	-	Windmill 5 gpm	C	Al	Quater- nary	Recent	Not determinable	10-26-55	"	75	7.3 90

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/25/55

Project Chief Marion J. Bergin Project title and number Maybell-Lay area, E-899 State (s) Colorado

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH			
CMW-31	Moffat	NW 1/4 3 7N-95W	R	-	None	Cl-brown	Al	-	Recent	Sandstone (Tw)	14 July 55	Bergin and Musser	1.0	7.5
CMW-32	"	NW 1/4 9 7N-95W	R	-	"	Cl-light brown	Surface runoff	Wasatch	Eocene	Claystones, ss, shaly siltstones	"	"	1.8	8.8
CMW-33	"	NW 1/4 9 7N-95W	R	-	"	"	"	"	"	"	"	"	1.5	7.9
CMW-34	"	S 1/2 10 7N-94W	W	-	25 gpm Windmill (electric)	Cl-green	Tuff. ss	Browns Park	Miocene	Tuffaceous ss	19 July 55	"	1	7.1
CMW-35	"	SW 1/4 30 7N-93W	W	Texaco Sta-Lay	Unknown	C	"	"	"	"	"	"	2	7.9
CMW-36	"	SW 1/4 30 7N-93W	W	Gray house at Lay	15 gpm hand pump	C	"	"	"	"	"	"	1.3	7.8
CMW-37	"	S 1/2 14 6N-95W	Sp	Boxelder Spring	5 gpm	C	Ls	Morgan	Penna.	Limestone	19 July 55	"	2	7.8
CMW-38	"	SW 1/4 6 6N-94W	W	-	Unknown	C	Tuff. ss	Browns Park	Miocene	Tuffaceous ss	"	"	3	7.8
CMW-39	"	SW 1/4 9 6N-95W	W	-	Windmill 15 gpm	C	"	"	"	"	20 July 55	"	4	7.7
CMW-40	"	NW 1/4 22 6N-95W	W Sp	-	FAUCET Faucet	C	15 Fault Quartzite	Madison Hanta Mtn	Miss. pc	Limestone	"	"	2.1	7.7
CMW-41	"	S 1/2 27 6N-95W	W	-	Unknown	Cl-green	Tuff. ss	Browns Park	Miocene	Tuffaceous ss	"	"	2.1	7.5
CMW-42	"	NW 1/4 32 7N-95W	W	-	Electric pump 10gpm	C	Al	-	Recent	Not determinable	21 July 55	"	2.3	7.8
CMW-43	"	NW 1/4 33 7N-95W	W	-	Faucet	C	Tuff. ss	Browns Park	Miocene	Tuffaceous ss	"	"	2.1	7.9
CMW-44	"	NW 1/4 34 7N-94W	seep	-	1 gpm	C	Al	-	Recent	"	"	"	5	7.8
CMW-45	"	SE 1/4 27 7N-94W	"	-	Less than 1 gpm	C	Tuff. ss	Browns Park	Miocene	"	"	"	6	7.8

- 1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/25/55

Project Chief Marion J. Bergin

Project title and number Maybell-Lay area F-899

State (s) Colorado

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow 2/ (gpm)	Clarity 3/	Type 4/	Formation	Age					
CHW-16	Moffat	SE 1/4 19 7N-93W	Sp	-	5 gpm	C	Al	-	Recent	Not determinable	13 July 55	Bergin and Musser	4	7.8
CHW-17	"	NW 1/4 33 8N-93W	W	Emerson's Electric Ranch	pump. ?gpm	C	"	-	"	"	"	"	5	7.8
CHW-18	"	SE 1/4 32 8N-93W	Sp	-	3 gpm	C	"	-	"	"	"	"	1	8.2
CHW-19	"	NE 1/4 28 8N-93W	Sp	Jackrabbit Eggs.	less than 1 gpm	C	"	-	"	"	"	"	<1	7.3
CHW-20	"	NE 1/4 28 8N-93W	Sp	"	3 gpm	C	"	-	"	"	"	"	1	8.1
CHW-21	"	NE 1/4 2 8N-94W	R	-	less than 1 gpm	C	Shaly Ss	Wasatch	Eocene	Shaly sandstone	"	"	1	7.4
CHW-22	"	SW 1/4 7 8N-94W	W	-	Windmill 8 gpm	C	Ss	"	"	Sandstone	"	"	4	7.9
CHW-23	"	SE 1/4 1 8N-95W	R	-	None	Cl-brown	"	"	"	"	"	"	1	6.7
CHW-24	"	NW 1/4 13 8N-95W	R R	-	None	SM-Green	"	"	"	"	"	"	4	6.9
CHW-25	"	SE 1/4 21 8N-95W	Seep	-	less than 1 gpm	Cl-Green	"	"	"	"	"	"	1	6.7
CHW-26	"	SE 1/4 26 8N-95W	W	Branson's Ranch	Hand pump 10 gpm	C	"	"	"	"	"	"	4	7.8
CHW-27	"	SE 1/4 26 8N-95W	W	"	bailed	M-dark gray	"	"	"	"	"	"	8	6.8
CHW-28	"	NE 1/4 26 8N-95W	W	"	Windmill 15 gpm	C	"	"	"	"	14 July 55	"	5	7.6
CHW-29	"	NW 1/4 35 8N-95W	Seep	-	less than 1 gpm	C	"	"	"	"	"	"	5	7.6
CHW-30	"	NW 1/4 2 7N-95W	Seep	-	"	C	Al	-	Recent	"	"	"	21	7.7

- 1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/25/55

Project Chief Marion J. Bergin

Project title and number Maybell-Lay area F-899

State (s) Colorado

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
CMW-1	Hoffat	SW 1/4 29 8N-91W	Seep	Mud Spring	less than 1 gpm	C	Al	-	Recent	-	7/6/55	Bergin and Gussar	5	7.9
CMW-2	"	NE 1/4 18 7N-93W	W	-	gas pump 10 gpm	C	Tuff. Ss	Browns Park	Miocene	Tuff. sandstone	"	"	68	7.5
CMW-3	"	SE 1/4 9 7N-94W	W W	-	Windmill 12 gpm	C	"	"	"	"	"	"	37	6.8
CMW-4	"	SE 1/4 23 6N-96W	W	-	Windmill 8 gpm	C	"	"	"	"	"	"	3	7.7
CMW-5	"	NW 1/4 13 6N-95W	W	-	Windmill 10 gpm	C	"	"	"	"	7/7/55	"	4	7.7
CMW-6	"	NE 1/4 29 6N-95W	W	-	Windmill 8 gpm	C	"	"	"	"	"	"	1	8.9
CMW-7	"	SW 1/4 16 6N-94W	Hot Spring	Juniper Hot Sps.	20 gpm	C	Sandstone	Dakota	Cretaceous	not determinable	"	"	< 1	7.8
CMW-8	"	"	"	"	2 gpm	Cl	"	"	"	"	"	"	< 1	7.9
CMW-9	"	"	"	"	"	C	"	"	"	"	"	"	1	7.7
CMW-10	"	NW 1/4 18 7N-91W	W	-	Windmill 3 gpm	C	Tuff. Ss	Browns Park	Miocene	Tuff. sandstone	7/8/55	"	12	7.4
CMW-11	"	SE 1/4 28 7N-94W	Sp	-	3 gpm	Cl	Al	-	Recent	not determinable	7/12/55	"	16	7.3
CMW-12	"	NE 1/4 26 7N-94W	Seep	-	less than 1 gpm	C	"	-	"	"	"	"	8	7.6
CMW-13	"	NE 1/4 26 7N-94W	"	-	"	C	"	-	"	"	"	"	10	7.6
CMW-14	"	NE 1/4 93 7N-93W	W	-	Windmill 5 gpm	C	Sandstone	Top ?	MIOCENE	Sandstone	"	"	88	7.6
CMW-15	"	SE 1/4 32 8N-93W	W	-	Electric pump 40 gpm	C	"	LANCE ?	CRETACEOUS	"	"	"	4	7.6

CHANGES AS PER BERGIN 11/10/55

- 1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS WATER SAMPLE DATA

Project Chief M. J. Bergin Project title and number Maybell-Lay area F-899 State(s) Colorado

Sample No.	County	Location Sec., T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	U	
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation	Age				(ppb)	pH
BC6-1	Moffat	NE 1/4 17 7N-91W	W	W.C. Scott electric Ranch pump	15 gpm	C	ss	Browns Park	Miocene	SS Tbp	6-19-56	Bergin	16	7.8
2	do.	NE 1/4 7N-92W	W	Arthur Allen Ranch	pressure tap	C	ss	do.	do.	do.	6-19-56	Bergin	2.1	7.8
3	do.	NE 1/4 21 8N-92W	W	Glen Updike Ranch	windmill	C	ss	do.	do.	do.	6-19-56	Bergin	1.6	7.8
4	do.	SW 1/4 17 7N-92W	R	Prease Ranch	none	C	Al	Quat.	Recent	do.	6-19-56	Bergin	8	7.8
5	do.	SW 1/4 16 7N-92W	W		windmill 10 gpm	C	Al	do.	do.	do.	6-19-56	Bergin	5	7.9
6	do.	SW 1/4 13 7N-92W	R		none	Cl	ss	Ft. Union	Paleocene	ss	6-19-56	Bergin	1.3	7.3
7	do.	SW 1/4 6 7N-91W	W		pressure tap	C	ss	Browns Park	Miocene	SS Tbp	6-19-56	Bergin	5	8.2
8	do.	SW 1/4 15 7N-91W	Sp		pressure tap	C	ss	do.	do.	do.	6-21-56	Bergin	15	8.3
9	do.	NW 1/4 9 7N-91W	W		5 gpm	C	do.	do.	do.	do.	6-21-56	Bergin	.1	7.9
10	do.	SE 1/4 17 7N-91W	Sp		20 gpm	C	fault	Kl Tbp	K Tm	do.	6-22-56	Bergin	5	8.0
11	do.	SE 1/4 22 7N-91W	Seep		less than 1 gpm	Cl	Cgl.	Ft. Union	Paleocene	not determinable	6-27-56	Musser	5	8.1
12	do.	NW 1/4 24 7N-92W	W	Gerber Ranch	gas pump 20 gpm	C	Cgl ss	Browns Park	Miocene	Cgl ss Tbp	7-16-56	Bergin	12	7.8
13	do.	SE 1/4 12 7N-92W	R		none	Cl (grn-yl)	ss and sh	Ft. Union	Paleocene	run-off	7-18-56	Bergin	2.3	7.6
14	do.	NE 1/4 12 7N-92W	R		none	do.	do.	do.	do.	do.	7-18-56	Bergin	.7	7.5
15	do.	SW 1/4 2 7N-92W	W	Al McKinnon Ranch	electric pump 25 gpm	C	Al	Quat.	Recent	not determinable	7-27-56	Bergin	3.1	7.6

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
Estimated flow in gallons per minute; use second feet (cubic feet per second) if necessary.
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM), Color, if any.
Qz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

(over)

WATER SAMPLE DATA

M. J. Bergin

F-899

State (s) Colorado

[illegible]

- Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

**FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA**

Project Chief M. J. Bergin Project title and number Maybell-Lay area F-899 State(s) Colorado

Sample No.	County	Location Sec., T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector (ppb)	
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation	Age				
BC6-16	Moffat	SE 1/4 36 7N-92W	Seep		1 gpm	M	ss and sh	Lance	Cretaceous	not determinable	8-7-56	Bergin	2.1 U pH 7.5
BC6-17	do.	SE 1/4 35 7N-92W	W	Gerber Ranch	pressure tap	C	ss	Browns Park	Miocene	ss Tbp	8-7-56	Bergin	62 7.7
BC6-18	do.	SE 1/4 35 7N-92W	W	do.	hand pump 10 gpm	C	ss	do.	do.	do.	8-7-56	Bergin	10 7.6
BC6-19	do.	SW 1/4 35 7N-92W	W	Fogg Ranch	electric pump	C	ss	do.	do.	do.	8-8-56	Bergin	4 7.9
BC6-20	do.	NW 1/4 8 6N-92W	W		hand pump (19 gpm)	C	sh	Lewis	Cretaceous	not determinable	8-14-56	Bergin	33 7.7
BC6-21	do.	SE 1/4 21 7N-93W	W	Culverwell Ranch	hand pump windmill	C	ss	Browns Park	Miocene	ss Tbp	8-26-56	Bergin	560 7.5
BC6-22	do.	NW 1/4 32 7N-93W	Seep		1-2 gpm	Cl	fault	Tbp/Kwf	Mio/Cret.	not determinable	8-26-56	Bergin	.2 8.0
BC6-23	do.	SE 1/4 30 7N-93W	Seep		1 gpm	Cl	fault	do.	do.	do.	8-27-56	Bergin	1.2 8.2
BC6-24	do.	SW 1/4 29 8N-91W	W	Butler Ranch	electric pump	C	ss and sh	Wasatch	Eocene	ss and sh Tw	9-7-56	Bergin	1.3 7.2
BC6-25	do.	SW 1/4 29 8N-91W	W	do.	do.	C	do.	do.	do.	do.	9-7-56	Bergin	.6 7.5
BC6-26	do.	NE 1/4 25 8N-92W	Seep		less than 1 gpm	Cl-SM	ss	contact Tbp/Tw	Miocene/ Eocene	not determinable	9-7-56	Bergin	27 7.0
BC6-27	do.	SW 1/4 33 7N-92W	Sp	Sand Spring	1 gpm	C	do.	Browns Park	Miocene	ss Tbp	9-12-56	Bergin	1.2 7.2
BC6-28	do.	NE 1/4 12 7N-92W	W		windmill	C	ss and sh	Ft. Union	Paleocene	not determinable	9-15-56	Bergin	.2 7.5
BC6-29	do.	C of S line 31-6N-91W	Seep		less than 1 gpm	SM	ss	Browns Park	Miocene	do.	9-15-56	Bergin	22 7.4
BC6-30	do.	SE 1/4 36 7N-91W	WS W	Craig water supply	pressure tap	C	?	?	?	do.	9-20-56	Bergin	3.7 7.7

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
 2/ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary.
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief N. M. Denson

Project title and number Western Fuels TE F-567

State(s) Colorado

[illegible]

- 1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFFICIALS: 3/12/55

Project Chief E. R. Landis Project title and number Cimarron Area - 567 State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppm)	pH
			Type 1/	Name	Flow (gpm)	Clarity 3/	Type 4/	Formation	Age					
LK-196	Wallace	8-14S-38W	R	-	-	Cl	Al	-	Recent		8/25/54	ERL	1	7.5
LK-197	"	8-14S-38W	R	-	-	Cl	Al	-	"		"	"	1	7.5
LK-198	"	7-14S-38W	"	-	-	Cl	sand and gravel	Ogallala	Plio		8/26/54	"	13	8.1
LK-199	"	6-14S-38W	"	-	-	Cl	Al	-	Recent		8/28/54	"	2	7.6
LK-200	"	7-14S-38W	"	-	-	Cl	"	-	"		8/29/54	"	3	7.7
LK-201	"	7-14S-38W	"	-	-	Cl	"	-	"		8/31/54	"	<1	7.4
LK-202	"	17-14S-38W	"	-	-	M	Al+	-	"		"	"	1	7.7
LK-203	"	3-14S-38W	"	-	-	SM	Al+	-	"		9/1/54	"	<1	7.6
LK-204	"	3-14S-38W	"	-	-	Cl	Al+	-	"		"	"	3	7.6
LK-205	"	11-14S-38W	"	-	-	SM	Al+	-	Recent		"	"	4	7.6
LK-206	"	8-14S-38W	R	-	-	Cl	Al+	-	"		"	"	2	7.7
LK-207	Logan	22-12S-35W	W	-	2+	C	sand and gravel	Ogallala?	Plio		9/16/54	"	20	8.2
LK-208	"	2-13S-35W	W	-	2	C	sand and gravel	Ogallala	PLEISTOCENE Plio *		"	"	48	7.8
LK-209	"	16-13S-36W	W	-	2+	C	Al	-	Recent		9/17/54	"	12	7.9
LK-210	"	5-14S-36W	W	-	5-10	C	sand and gravel	Ogallala	Plio		9/18/54	"	10	7.9

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* Change at ERL's request -
3/31/55, JF

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief E. R. Landis

Project title and number Fuels 567 - Cimarron Area

State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
Type 1/	Name	Flow	(gpm)	Clarity	Type 4/	Formation								
LK-181	Hamilton	3-23S-41W	Sp	---	?	M	Al and Sand	Carlile (Codell)	Recent Cret.		8/10/54	ERL	<1	7.1
LK-182	Hamilton	10-23S-41W	Sp	---	?	Sm	Al	-----	Recent		8/10/54	ERL	<1	7.0
LK-183	Hamilton	7-23S-40W	W	---	---	Cl	Al	-----	Recent		8/10/54	ERL	<1	6.5
LK-184	Hamilton	36-22S-42W	W	---	2	C	?	Dakota	Cret.		8/10/54	ERL	<1	8.0
LK-185	Hamilton	25-22S-42W	Sp	---	?	C	Ss?	Carlile (Codell)	Cret.		8/10/54	ERL	2	7.5
LK-186	Hamilton	25-22S-42W	Sp	---	?	C	?	Codell?	Cret.		8/10/54	ERL	2.1	7.5
LK-187	Hamilton	2-23S-42W	Cr	---	?	Cl	Al	-----	Recent		8/10/54	ERL	2	7.2
LK-188	Hamilton	1-23S-42W	Cr	---	?	Cl	Al	-----	Recent		8/10/54	ERL	<1	7.3
LK-189	Hamilton	1-25S-41W	Cr	---	---	Sm	Al Sand	-----	Recent Pleist.?		3/11/54	ERL	<1	7.0
LK-190	Hamilton	34-24S-41W	W	---	10	C	?	Ogallala?	Plio.- Pleist.		8/11/54	ERL	<1	7.8
LK-191	Hamilton	36-24S-42W	W	---	5	C	?	Ogallala?	Plio. - Pleist.		8/11/54	ERL	<1	7.5
LK-192	Hamilton	33-24S-42W	St	---	---	M	Al	-----	Recent		8/11/54	ERL	<1	6.9
LK-193	Hamilton	1-25S-43W	St	---	---	M	Al	-----	Recent		8/11/54	ERL	<1	7.2
LK-194	Hamilton	5-26S-42W	W	---	5-10	C	Al	-----	Recent		3/11/54	ERL	2	7.6
LK-195	Hamilton	2-26S-42W	St	---	?	Sm	Al	-----	Recent		8/11/54	ERL	<1	7.2

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief E. R. Landis

Project title and number Fuels 567 - Cimarron Area

State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LK-166	Stanton	12-27S-41W	W ---	5-10 C	Silt and Sand Ogallala	Plio. - Pleist.		8/6/54	ERL	4	7.4
LK-167	Stanton	22-27S-40W	W ---	10 1/2 C	? Ogallala	Plio. - Pleist.		8/6/54	ERL	2	7.5
LK-168	Stanton	26-27S-40W	W ---	1000 1/2 C	Sand and Gravel Ogallala	Plio. Cret.		8/6/54	ERL	2	7.8
LK-169	Stanton	2-29S-42W	W ---	10 1/2 C	? Ogallala	Plio. - Pleist.		8/8/54	ERL	1	7.5
LK-170	Hamilton	35-26S-42W	W ---	10 1/2 C	Sand Ogallala	Plio. - Pleist.		8/8/54	ERL	4	7.5
LK-171	Hamilton	18-26S-41W	W ---	10 C	? Ogallala	Plio. - Pleist.		8/8/54	ERL	3	7.5
LK-172	Hamilton	13-26S-42W	W ---	5 C	Al and/or ? Ogallala	Recent and/or Pleist.		8/8/54	ERL	8	7.4
LK-173	Hamilton	12-26S-42W	R ---	--- M	Sand and Gravel Ogallala	Plio. Cret.		8/8/54	ERL	<1	7.5
LK-174	Hamilton	13-24S-40W	W ---	10 C	? Al?	Recent		8/9/54	ERL	<1	7.8
LK-175	Hamilton	2-24S-39W	W ---	10 1/2 C	? Al and/or Ogallala	Recent and/or Plio.		8/9/54	ERL	2	7.9
LK-176	Hamilton	25-24S-39W	W ---	10 1/2 C	Al and/or Sand Dakota	Recent and/or Cret.		8/9/54	ERL	<1	7.7
LK-177	Kearney	12-24S-38W	W ---	10 1/2 C	Shale Graneros	Cret.		8/9/54	ERL	<1	7.7
LK-178	Kearney	12-24S-38W	W ---	5 C	Al ---	Recent		8/9/54	ERL	<1	7.4
LK-179	Kearney	27-24S-36W	W ---	800 C	Sd and Gravel Ogallala	Plio. - Pleist.		8/9/54	ERL	3	7.6
LK-180	Kearney	11-24S-35W	W ---	? C	Al ---	Recent		8/9/54	ERL	3	7.8

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/56

Project Chief E. R. Landis Project title and number Fuels 567 - Cimarron Area State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/ (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
LK-151	Grant	35-29S-36W	St N. Fork Cimarron	5-10 C1	Ss and Gravel	Meade	Pleist.	8/5/54	ERL	< 1	7.3
LK-152	Grant	33-29S-35W	W --	5-10 C	Ss and Gravel	Meade	Pleist.	8/5/54	ERL	2	7.6
LK-153	Grant	26-29S-35W	W --	5-10 C	Ss and Gravel	Meade	Pleist.	8/5/54	ERL	2	7.7
LK-154	Haskell	13-30S-34W	W --	475 C	Sand and Gravel	Ogallala	Plio.	8/5/54	ERL	3	7.6
LK-155	Haskell	32-29S-32W	W --	275 C	Sand and Gravel	Ogallala and/or Meade	Plio. and/or Pleist.	8/5/54	ERL	1	7.5
LK-156	Grant	2-29S-36W	W -- --	50? C	Ss and Gravel?	Meade	Pleist.	8/5/54	ERL	2	7.7
LK-157	Grant	6-29S-37W	St I. Fork Cimarron	-- Sm	Ss and Gravel	Meade	Pleist.	8/5/54	ERL	< 1	7.3
LK-158	Grant	22-29S-38W	St N. Fork Cimarron	-- C1	Ss and Gravel	Meade	Pleist.	8/5/54	ERL	< 1	7.3
LK-159	Grant	4-30S-38W	St I. Fork Cimarron	-- C1	Ss and Gravel	Meade	Pleist.	8/5/54	ERL	< 1	7.0
LK-160	Stanton	35-28S-39W	W --	100? C	? Ogallala	Plio.		8/6/54	ERL	2	7.5
LK-161	Stanton	21-29S-39W	W --	5-10 C	Ss and Gravel	Meade and/or Ogallala	Pleist. and/or Plio.	8/6/54	ERL	3	7.5
LK-162	Stanton	25-29S-40W	W --	10 C	Ss and Gravel	Meade and/or Ogallala	Pleist. and/or Plio.	8/6/54	ERL	2	7.7
LK-163	Stanton	26-29S-41W	W --	10? C	? Ogallala	Plio.		8/6/54	ERL	2	7.7
LK-164	Stanton	36-28S-41W	W --	110 C	Coarse Gravel	Ogallala	Plio.	8/6/54	ERL	2	8.1
LK-165	Stanton	11-28S-41W	W --	10? C	? Ogallala	Plio.		8/6/54	ERL	1	7.8

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANALY 1/3/55

Project Chief E. R. Landis

Project title and number Fuels 567 - Cimarron Area

State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
LK-136	Seward	30-33S-31W	W	---	10+	C	Al	---	Recent		8/3/54	ERL	2
LK-137	Seward	31-33S-31W	W	---	5-10	C1	Ss and Gravel	Meade and/or Ogallala	Pleist. and/or Plio.		8/3/54	ERL	<1
LK-138	Seward	9-34S-31W	W	---	10-	C1	Al	---	Recent		8/3/54	ERL	<1
LK-139	Seward	15-34S-31W	W	---	5-10	C	Al	---	Recent		8/3/54	ERL	4
LK-140	Stevens	26-31S-36W	W	---	10+	C	Sand Gravel	Ogallala and/or Meade	Plio. and/or Pleist.		8/4/54	ERL	2
LK-141	Grant	35-30S-36W	W	---	10	C	?	Meade	Pleist.		8/4/54	ERL	2
LK-142	Grant	24-30S-36W	W	---	5-10	C1	?	Al and/or Meade	Pleist. and/or Recent		8/4/54	ERL	4
LK-143	Grant	8-30S-36W	W	---	2000	C	?	Ogallala and/or Dakota	Plio. and/or Cret.		8/4/54	ERL	2
LK-144	Grant	17-30S-36W	W	---	500+	C	?	Ogallala and/or Dakota	Plio. and/or Cret.		8/4/54	ERL	2
LK-145	Grant	12-30S-37W	St	---	---	M	?	Al and Meade	Pleist. and Recent		8/4/54	ERL	2
LK-146	Grant	33-30S-37W	St	Cimarron River	20+	C1	Al	---	Recent		8/4/54	ERL	2
LK-147	Grant	35-30S-37W	W	---	10+	C	?	Meade	Pleist.		8/4/54	ERL	2
LK-148	Grant	27-28S-37W	W	---	350	C	Sand and Gravel	Ogallala and/or Meade	Plio. and/or Pleist.		8/5/54	ERL	1
LK-149	Grant	7-29S-36W	St	N. Fork Cimarron	10	C1	Al, Sd, Gravel	Meade	Recent Pleist.		8/5/54	ERL	<1
LK-150	Grant	21-29S-36W	Sp	---	?	C	?	Meade	Pleist.		8/5/54	ERL	15

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APAL: 1/3/55

Project Chief E. R. Landis

Project title and number Fuels 567 - Cimarron Area

State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow 2/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
K-121	Seward	22-34S-31W	W	--	10 1/2	C	A1	--	Recent		7/30/54	ERL	3
K-122	Seward	22-34S-31W	Pond	--	--	C1	A1	--	Recent		7/30/54	ERL	1
K-123	Seward	28-33S-32W	W	--	5?	C1	A1	--	Recent		7/30/54	ERL	3
K-124	Seward	30-33S-32W	W	--	5-10	C	?	Meade	Pleist.		7/30/54	ERL	2
K-125	Seward	19-33S-32W	W	--	?	C1	A1?	--	Recent		7/30/54	ERL	3
K-126	Seward	21-32S-33W	W	--	5-10	C	A1	--	Recent		7/31/54	ERL	7
K-127	Seward	13-32S-34W	W	--	5 1/2	C	?	Meade	Pleist.		7/31/54	ERL	4
K-128	Seward	3-32S-34W	W	--	2-5	C	A1	--	Recent		7/31/54	ERL	3
K-129	Seward	6-33S-32W	W	--	5-10	C	A1	--	Recent		7/31/54	ERL	4
K-130	Seward	19-31S-34W	Pond	--	--	C1	A1	--	Recent		8/1/54	ERL	1
K-131	Seward	6-31S-34W	W	--	5-10	C	?	Meade	Pleist.		8/1/54	ERL	2
K-132	Haskell	33-30S-34W	W	--	5-10	C	A1	--	Recent		8/1/54	ERL	5
K-133	Grant	24-30S-35W	Pond	--	--	C1	Sand	Meade	Pleist.		8/1/54	ERL	1
K-134	Grant	16-30S-35W	St	N. Fork Cimarron River	15-20	Sm	A1	--	Recent		8/1/54	ERL	5
K-135	Grant	9-30S-35W	St	S. Fork Cimarron River	15-20	Sm	A1	--	Recent		8/1/54	ERL	1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM), Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief E. R. Landis Project title and number Fuels 567 - Cimarron Area State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
UK-106	Meade	24-34S-26W	W	---	5?	C	? Perm. Red Beds	Perm.	7/28/54	ERL	13 7.9
UK-107	Meade	23-34S-26W	St	?	---	Cl	A1	Recent	7/28/54	ERL	4 7.4
UK-108	Meade	35-33S-26W	W	---	5-10	C	Gravel Ogallala	Plio.	7/28/54	ERL	6 7.7
UK-109	Meade	16-33S-26W	St	Sand Creek	10+	C	A1	Recent	7/28/54	ERL	3 7.2
UK-110	Meade	64-33S-28W	W	---	5-	C	? Ogallala	Plio.	7/29/54	ERL	8 8.1
UK-111	Meade	14-34S-28W	St	Crooked Creek	10+	M	A1	Recent	7/29/54	ERL	4 7.3
UK-112	Meade	62-34S-29W	W	---	5+	C	Ss Meade	Pleist.	7/29/54	ERL	7 7.4
UK-113	Meade	25-33S-29W	St	---	---	Cl	A1	Recent	7/29/54	ERL	1 7.2
UK-114	Meade	9-35S-29W	St	Cimarron River	20+	Cl	A1	Recent	7/29/54	ERL	7 7.3
UK-115	Meade	4-35S-29W	Pond	---	---	Cl	Silt Stone Meade	Pleist.	7/29/54	ERL	1 7.3
UK-116	Meade	30-34S-29W	W	---	10+	C	? Meade	Pleist.	7/29/54	ERL	7 7.5
UK-117	Meade	20-34S-30W	W	---	5-	C	Sand Ogallala and Laverne	Plio. Mid-Plio.	7/29/54	ERL	7 7.8
UK-118	Meade	9-34S-30W	W	---	5-	C	--- Ogallala and Laverne	Plio. Mid-Plio.	7/29/54	ERL	7 7.9
UK-119	Meade	15-33S-29W	W	---	200?	C	Ss and Gravel? Ogallala?	Plio.	7/29/54	ERL	7 7.8
UK-120	Seward	22-34S-31W	W	---	5-10	C	? Meade and/or linedown	Pleist.	7/30/54	EAL	3 7.6

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief		Project title and number		State (s)							
E. R. Landis		Fuels 567 - Cimarron Area		Kansas							
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
LK-91	Meade	9-32S-26W	St	---	?	C1	Al and Ss and Gravel Ogallala	Recent and Plio.	7/27/54	ERL	1
LK-92	Meade	16-32S-26W	W	---	54	C1	Ss and Gravel Ogallala	Plio.	7/27/54	ERL	4
LK-93	Meade	9-32S-26W	W	---	54	C	Ss and Gravel Ogallala	Plio.	7/27/54	ERL	8
LK-94	Meade	3-32S-26W	W	---	54	C	Ss and Gravel Ogallala	Plio.	7/27/54	ERL	6
LK-95	Meade	2-31S-28W	W	---	10	C	? Meade and Ogallala	Pleist. or Plio.	7/27/54	ERL	6
LK-96	Meade	4-33S-28W	St	Crooked Creek	10	C	Al	Recent	7/27/54	ERL	4
LK-97	Meade	20-33S-28W	St	Crooked Creek	104	C	Al	Recent	7/27/54	ERL	3
LK-98	Meade	24-33S-29W	L	State Lake	---	C1	Al and Ss and Gravel Ogallala	Recent and Plio.	7/27/54	ERL	5
LK-99	Meade	15-33S-29W	Sp	---	104	C	Ss and Gravel ? Ogallala	Plio.	7/27/54	ERL	7
LK-100	Meade	17-32S-28W	Sp	Big Spring	20?	C	? Ogallala	Plio.	7/28/54	ERL	21
LK-101	Meade	35-33S-27W	W	---	104	C	Ss and Gravel Ogallala	Plio.	7/28/54	ERL	7
LK-102	Meade	19-34S-26W	W	---	54	C	? Perm.	Perm.	7/23/54	ERL	17
LK-103	Meade	32-34S-26W	W	---	5	C	? Perm.	Perm.	7/23/54	ERL	11
LK-104	Meade	1-35S-27W	W	---	104	C	Gravel	Recent	7/28/54	ERL	3
LK-105	Meade	2-35S-26W	W	---	54	C	Ss and Gravel Ogallala	Plio.	7/28/54	ERL	4

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 11/3/55

Project Chief E. R. Landis Project title and number Fuels 567 - Cimarron Area State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LK-76	Meade	6-31S-26W	W	---	800	C	Ss and Gravel	Ogallala	Plio.		7/26/54	ERL	5	7.6
LK-77	Ford	33-29S-26W	W	---	10	C		Meade and Ogallala			7/26/54	ERL	5	7.7
LK-78	Ford	32-29S-26W	St	Crooked Creek	---	Sm	Al	---	Recent		7/26/54	ERL	3	7.3
LK-79	Ford	35-29S-26W	W	---	5-10	C	Ss and Gravel	Ogallala and/or Dakota	Plio. and/or Cret.		7/26/54	ERL	6	7.5
LK-80	Ford	2-29S-25W	W	---	10+	C	Ss and Gravel	Ogallala	Plio.		7/26/54	ERL	9	7.6
LK-81	Ford	25-29S-24W	W	---	10+	C	?	Ogallala?	Plio.		7/26/54	ERL	7	7.5
LK-82	Clark	12-30S-25W	W	---	100+	C	?	Ogallala?	Plio.		7/26/54	ERL	4	7.3
LK-83	Clark	36-31S-25W	R	---	---	Sm	Ss and Gravel	Ogallala	Plio.		7/26/54	ERL	< 1	7.0
LK-84	Clark	10-32S-25W	Sp & R	---	---	Sm	Ss and Gravel	Ogallala	Plio.		7/26/54	ERL	1	7.0
LK-85	Clark	10-32S-25W	St	?	---	Sm	Al	---	Recent		7/26/54	ERL	2	7.1
LK-86	Clark	8-32S-25W	St	---	---	Cl	Al	---	Recent		7/26/54	ERL	8	7.3
LK-87	Meade	12-32S-26W	St	?	---	C	Al	---	Recent		7/27/54	ERL	2	7.3
LK-88	Meade	2-32S-26W	R	---	---	C	Al	---	Recent		7/27/54	ERL	< 1	7.3
LK-89	Meade	3-32S-26W	R	---	---	C- Brown tinge	Ss and Gravel	Ogallala	Plio.		7/27/54	ERL	< 1	7.0
LK-90	Meade	10-32S-26W	St	---	---	Sm	Al	---	Recent		7/27/54	ERL	5	7.2

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
... WATER SAMPLE DATA ...

ANAL: 1/3/55

Project Chief H. R. Landis Project title and number Fuels 567 - Cimarron Area State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LK-61	Ford	29-26S-22W	W	--	150	C	Ss and Gravel	Ogallala	Plio.		7/24/54	ERL	7	7.6
LK-62	Meade	12-30S-27W	St	Crooked Creek	--	Sm	Al	--	Recent		7/25/54	ERL	2	6.9
LK-63	Gray	23-29S-28W	W	--	5-	C	?	Ogallala and/or Meade	Plio. and/or Pleist.		7/25/54	ERL	5	7.5
LK-64	Gray	7-28S-27W	W	--	?	C	?	Ogallala and/or Meade	Plio. and/or Pleist.		7/25/54	ERL	7	7.6
LK-65	Gray	66-27S-27W	W	--	?	C	?	Ogallala and/or Meade	Plio. and/or Pleist.		7/25/54	ERL	3	7.4
LK-66	Ford	35-26S-25W	W	--	500	C	Ss and Gravel	Ogallala	Plio.		7/25/54	ERL	5	7.4
LK-67	Ford	22-27S-24W	St	Arkansas River	5+	C	Al	--	Recent		7/25/54	ERL	16	7.6
LK-68	Ford	31-27S-21W	W	--	5-10	C	Al and/or Ss	Dakota	Recent and/or Cret.		7/25/54	ERL	4	7.4
LK-69	Ford	30-27S-21W	W	--	250	C	Ss	Dakota	Cret.		7/25/54	ERL	6	7.4
LK-70	Ford	17-26S-21W	W	--	5-	C	Ss and Gravel ?	Ogallala?	Plio.?		7/25/54	ERL	4	7.5
LK-71	Ford	15-26S-22W	W	--	3	C	Al	--	Recent		7/25/54	ERL	4	7.4
LK-72	Ford	15-26S-22W	W	--	5+	C	Ss	Dakota	Cret.		7/25/54	ERL	7	7.3
LK-73	Ford	5-28S-22W	W	--	100+	C	Al?	--	Recent?		7/25/54	ERL	5	7.4
LK-74	Ford	5-29S-21W	W	--	600	C	Ss and Gravel	Ogallala	Plio.		7/25/54	ERL	4	7.3
LK-75	Meade	11-32S-22W	W	--	900+	C	Ss and Gravel	Ogallala and Meade	Plio. and Pleist.		7/25/54	ERL	5	7.6

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief E. R. Landis Project title and number Fuels 567 - Cimarron Area State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
IK-46	Gray	13-24S-30W	W	---	5 1/2	C	Ss and Gravel Ogallala	Plio.	7/23/54	ERL	40	7.4
IK-47	Gray	11-26S-28W	W	---	250	C	Ss and Gravel Ogallala	Plio.	7/23/54	ERL	14	7.6
IK-48	Gray	2-25S-28W	W	---	5 1/2	C	Ss and Gravel? Ogallala	Plio.	7/23/54	ERL	12	7.6
IK-49	Hodgeman	7-23S-25W	W	---	1 1/2	C	Ss and Gravel? Ogallala?	Plio.	7/23/54	ERL	14	7.7
IK-50	Hodgeman	7-23S-24W	St	Buckner Cr.	---	Sm	Al	Recent	7/23/54	ERL	5	7.2
IK-51	Hodgeman	6-23S-23W	W	---	50 1/2	C	Al	Recent	7/23/54	ERL	6	7.4
IK-52	Ness	30-18S-23W	W	---	50 1/2	C	Ss	Dakota Cret.	7/24/54	ERL	11	7.3
IK-53	Ness	31-18S-23W	St	North Walnut Cr	---	Sm	Al	Recent	7/24/54	ERL	10	7.7
IK-54	Ness	32-10S-23W	W	---	5	C	Ss	Dakota Cret.	7/24/54	ERL	8	7.8
IK-55	Ness	32-20S-23W	St	Pawnee River	---	Sm	Al	Recent	7/24/54	ERL	4	7.0
IK-56	Hodgeman	25-21S-24W	W	---	5	C	Ss and Gravel Ogallala	Plio.	7/24/54	ERL	6	7.6
IK-57	Hodgeman	8-23S-22W	W	---	5-10	C	Al or Ss	_____ or Dakota Recent or Cret.	7/24/54	ERL	6	7.4
IK-58	Hodgeman	14-24S-23W	W	---	5	C	Ss	Dakota Cret.	7/24/54	ERL	14	7.4
IK-59	Ford	6-24S-23W	W	---	5 1/2	C	Al	Recent	7/24/54	ERL	7	7.6
IK-60	Ford	23-25S-23W	L	?	---	Sm	Ss and Gravel Ogallala	Plio.	7/24/54	ERL	11	7.3

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/6/54

Project Chief Edwin R. Landis

Project title and number Cimarron Area, Colorado, Kansas, Oklahoma-567 State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation	Age								
LK-31	Lane	14-18S-30W	W	--	5-	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	Edwin R. Landis	9	7.6
LK-32	Lane	30-19S-30W	W	--	1+	C	Ss	Dakota	Cret.	----	7/16/54	"	1	8.0
LK-33	Scott	32-19S-31W	W	--	5-	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	8	7.8
LK-34	Scott	25-19S-33W	W	--	?	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	23	7.7
LK-35	Finney	2-21S-33W	W	--	15+ or -3	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	19	7.7
LK-36	Finney	6-23S-32W	W	--	5	C	Ss and gravel	Ogallala	Plio.	----	7/19/54	"	8	7.7
LK-37	Finney	11-22S-33W	W	--	5+	C	Ss and gravel?	----	Pleist.	----	7/19/54	"	6	7.9
LK-38	Finney	26-21S-31W	W	--	10-	C	Ss and gravel	Ogallala	Plio.	----	7/19/54	"	7	7.6
LK-39	Finney	25-21S-30W	R	--	--	Cl	Al and shale	Niobrara	Recent Cret.	----	7/19/54	"	11	7.5
LK-40	Finney	34-22S-30W	Sp	--	10-	C	frac. ls	Niobrara	Cret.	----	7/19/54	"	13	7.5
LK-41	Finney	15-23S-30W	Sp	--	1+	C	frac. ls ?	Niobrara	Cret.	----	7/19/54	"	14	7.6
LK-42	Finney	12-23S-29W	W	--	5 ?	C	Ss and gravel	Ogallala	Plio.	----	7/19/54	"	8	8.0
LK-43	Finney	1-22S-29W	W	--	1+	C	shale?	Carlile	Cret.	----	7/19/54	"	6	7.7
LK-44	Finney	6-22S-27W	L	State Lake	--	Cl	Al and shale	Carlile	Recent Cret.	----	7/19/54	"	7	7.6
LK-45	Finney	4-23S-27W	W	--	?	C	Ss and gravel	Ogallala	Plio.	----	7/19/54	"	8	7.8

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/16/54

567

Project Chief Edwin R. Landis

Project title and number Cimarron Area, Colorado, Kansas, Oklahoma- State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
Type 1/	Name	Flow	(gpm)	Clarity3/	Type 4/	Formation								
LK-16	Wallace	27-13S-40W	W	---	---	C	Al	--	Recent	----	7/14/54	Edwin R. Landis	10	7.8
LK-17	Scott	13-18S-33W	W	---	1000+	C	Ss and gravel	Ogallala	Plio.	----	7/15/54	"	12	7.9
LK-18	Scott	13-16S-33W	Sp	Big Spring	400+	C	Ss and gravel	Ogallala	Plio.	----	7/15/54	"	18	7.8
LK-19	Scott	12-16S-33W	Sp	Old Steele Home	50-	C	Ss and gravel	Ogallala	Plio.	----	7/15/54	"	8	7.8
LK-20	Scott	2-16S-33W	L	Scott Lake	200+	Cl	--	Ogallala	Plio.	----	7/15/54	"	18	7.6
LK-21	Lane	3-17S-30W	W	--	--	C	Ss and gravel	Ogallala	Plio.	----	7/15/54	"	8	7.8
LK-22	Gove	29-14S-29W	W	--	5+	C	Al	--	Recent	----	7/15/54	"	16	7.5
LK-23	Scott	2-17S-32W	W	--	10+	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	8	7.9
LK-24	Lane	32-16S-28W	W	--	2+	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	5	8.0
LK-25	Lane	20-16S-27W	W	--	--	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	4	7.7
LK-26	Lane	3-16S-27W	W	--	?	C	Ss	Dakota	Cret.	----	7/16/54	"	-1	8.3
LK-27	Lane	21-17S-27W	W	--	5+	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	5	7.7
LK-28	Lane	28-18S-27W	W	--	100-	C	Al?	--	Recent	----	7/16/54	"	9	7.9
LK-29	Lane	1-19S-27W	W	--	10+	C	Ss	Dakota	Cret.	----	7/16/54	"	-1	8.0
LK-30	Lane	18-18S-28W	W	--	500+?	C	Ss and gravel	Ogallala	Plio.	----	7/16/54	"	10	7.9

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/16/54

-567

Project Chief Edwin R. Landis

Project title and number Cimarron Area, Colorado, Kansas, Oklahoma State (s) Kansas

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation									
LK-1	Wallace	10-14S-41W	W	--	2	C	Al	--	Recent	----	7/10/54	Edwin R. Landis	9	7.6
LK-2	"	5-14S-41W	W	--	5+	C	Ss and gravel	Ogallala	Plio.	----	7/10/54	"	9	7.9
LK-3	"	11-13S-42W	St	--	2+	Cl	Al	--	Recent	----	7/10/54	"	13	7.8
LK-4	"	14-12S-42W	W	--	1+	C	Ss and gravel	Ogallala	Plio.	----	7/10/54	"	11	7.8
LK-5	"	8-14S-39W	Sp	--	1-	C	Ss	Ogallala	Plio.	----	7/11/54	"	10	7.7
LK-6	"	21-13S-38W	W	--	1+	C	Al	----	Recent	----	7/11/54	"	30	7.8
LK-7	"	25-13S-39W	W	--	100-	C	Al	-- ----	Recent	----	7/11/54	"	26	8.1
LK-8	"	5-14S-38W	R	--	----	Sm	Al	----	Recent	----	7/11/54	"	380	6.9
LK-9	"	21-14S-38W	W	--	1	C	Ss and gravel	Ogallala	Plio.	----	7/12/54	"	8	7.6
LK-10	Logan	31-13S-36W	W	--	2+	C	--	Pierre or Mio.	Cret.	----	7/12/54	"	50	7.8
LK-11	"	20-13S-35W	St	Smoky Hill River	----	Cl	Al	----	Recent	----	7/13/54	"	26	7.5
LK-12	"	2-13S-35W	W	--	2+	C	Ss and gravel	Ogallala <i>Pietra</i>	----	7/13/54	"	49	7.8	
LK-13	"	27-13S-36W	W	--	2+	C	--	Niobrara	Cret.	----	7/13/54	"	69	7.6
LK-14	Wallace	6-14S-38W	R	--	----	Sm	Al and shale	Pierre	Recent and Cret. *	----	7/14/54	"	42	7.0
LK-15	Logan	14-15S-33W	St	Chalk Creek	----	Sm	Al	----	Recent	----	7/14/54	"	22	7.2

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* Deleted at Landis' request 2/25/55 - J71

* Original at ERL's request - 3/31/55 J72 (over)

AVAIL: 9/13/54

Project title and number Cimarron Area, Colo., Kans., Okla.

State (s) Kansas

pH
7.3
7.5
7.1

(over)

ANAL: 3/4/55

State (s) *Missouri*

pH
6.4
7.7
7.8
7.7
8.0
6.9
7.7
7.1

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief N. M. Denson

Project title and number Regional Synthesis

State (s) Montana

[illegible]

pH

8.2

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

Project Chief A. E. RobertsProject title and number Livingston, Montana F-872State (s) Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
W5-1	Gallatin	2-2S-7E	St Jackson Creek	C	A1 Livingston Upper Cretaceous		23 July 55	Roberts & Hollingsworth	1	7.8
W5-2	"	27-1S-7E	St Spring Creek	C	" " "		"	"	<1	7.8
W5-3	"	9-1S-7E	St Stone Creek	C	" (Lower Paleozoic to Upper Cretaceous)		"	"	1	7.8
W5-4	"	20-1N-7E	St Bridger Creek	C	" ↓ ↓		"	"	1	7.5
W5-5	"	8-1N-7E	St South Fork Bracket Creek	C	" " "		"	"	<1	7.9
W5-6	"	21-2S-7E	St Cache Creek	Cl	" " "		"	"	<1	7.5
W5-7	"	36-2S-7E	St Nixon Creek	Cl	" Livingston Upper Cretaceous		"	"	1	7.8
W5-8	Park	33-2S-9E	St Schieldo River	M	" Cretaceous sediments and extrusives		"	"	2	7.9
W5-9	"	9-1S-12E	Sp Hunter's Hot Sp	C	A1 Livingston Upper Cretaceous		"	"	<1	8.8
W5-10	"	23-2S-8E	St Eldridge Creek	C	A1 Colorado and Montana groups-Upper Cretaceous		25 July 55	"	<1	7.9
W5-11	"	31-2S-8E	Sp Di Lulo Mine	C	Ss Eagle ss Up. Cretaceous		"	"	<1	8.0
W5-12	Gallatin	25-2S-7E	St Timberline Creek	Cl	A1 " "		"	"	<1	7.8
W5-13	"	23-2S-7E	Sp Stinking Water Mine	C	Ss " "		"	"	<1	7.8
W5-14	"	20-2S-7E	St Meadow Creek	C	A1 Lower Paleozoic to Upper Cretaceous		"	"	<1	8.0
W5-15	"	13-3S-7E	S St Trail Creek	C	A1 Paleozoic & Mesozoic		"	"	<1	7.4

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA

Project Chief J. D. Love

Project title and number

F-105

State (s)

Montana

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. R. Gill Project title and number Dakota lignites, Regional synthesis State(s) Montana
F-469a

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	U ppb	pH
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation	Age					
GFM6-1	Valley	17-36N-42E	W	Stein	unlimited	C	ss-cgl	Flaxville	Mio-Pliocene	ss-cgl	9-6-56	Gill	5	7.8
GFM6-2	Valley	C32-36N-42E	St		.20 gpm	C	ss-cgl	Flaxville	do.	ss-cgl	9-6-56	Gill	3	8.4
GFM6-3	Valley	C29-36N-42E	W	Glentana		C	ss-cgl	Flaxville	do.	ss-cgl	9-6-56	Gill	9	8.4
GFM6-4	Daniels	NE NE 31-36N-45E	W	?	?	Cl	ss	Flaxville	do.	ss-cgl	9-8-56	Gill	1.2	7.7
LP6-1	Carter	SE SE 5-3S-61E	Sp	Double E no. 2	1 qt/min.	C	ss	Arikaree	Miocene	ss		Gill	5	8.4
LP6-2	Carter	NW 5-3S-61E	Sp	Maverick no. 1	do.	C	ss	do.	do.			Gill	12	8.4
LP6-3	Carter	C20-2S-61E	Sp	Burditt	1/2 gpm	C	ss	Hell Creek	Cretaceous			Gill	29	8.4
LP6-4	Carter	NE NW 21-2S-61E	Sp	A. J.	1/2 gpm	Cl	lig.	do.	do.			Gill	2.4	8.3
LP6-5	Carter	SE 32-SE 3-2S-61E		Maverick no. 2								Gill	4	8.1
DF6-1p	Valley	NE SE 16-36N-40E	W			C	ss	Flaxville	Miocene	ss	9-9-56	Denson	10	8.0

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
2/ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary.
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. R. Gill

Project title and number	Regional synthesis	F-469a
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State(s) Montana

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief N. M. Denson

Project title and number Dakota lignites F-469

State (s) Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
DM6-1	Carter	NE21-2S-61E	Sp		C		Ludlow	Paleocene		July 56	Denson	93	7.9
DM6-2p	"	NE30-2S-62E	Sp		C		Ludlow	Paleocene		7-30-56	Denson	37	8.2
DM6-3	"	NW 26-2S-62E	W Plum Creek	1 pt/10 sec.	C		Ludlow	Paleocene		7-30-56	Denson	12	7.8
DM6-9	"	NE13-1S-57E	Sp Bronco Sam	1 pt/2 min	C	ss	Ludlow	Paleocene	Arikaree	7-31-56	Gill	23	7.8
DM-6-10	"	SE30-1S-57E	Sp Alstorm	1 pt/20 sec.	C	ss	Hell Cr	Cretaceous	Arikaree	7-28-56	Gill	11	7.6
DM6-4	Fallon	SE14-10N-60E	W Sam		C	ss		Paleocene	Ft. Union-Tongue River	8-3-56	Denson	6.8	7.4
DM6-5	"	NE20-10N-61E	W Fisher		C	ss		Paleocene	"	8-5-56	Denson	1.5	7.3
DM6-6	Dawson	SE16-21N-53E	W	1 pt/10 sec	C	ss	Ft. Union	"	"	8-20-56	Denson	.3	7.1
DM6-7	"	SE28-20N-52E	Sp	1 pt/40 sec	C	ss	"	"	"	8-20-56	Denson	4	7.6
DM6-8	"	SE32-19N-51E	W	1 pt/10 sec	C	ss	"	"	"	8-20-56	Denson	7.8	7.8
DM6-11	Carter	NW SE 32-2S-61E	Maverick no. 2	1 pt/60 sec.				Arikaree		7-21-56	Gill	9.3	7.9
DM6-12	"	C 3-61E-3S	Big Moose	1 pt/40 sec.				Arikaree		7-21-56	Gill	7.8	7.9

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. R. Gill Project title and number F-469 Regional synthesis State (s) Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
GM6-1	Big-horn	19-9S-44E	Well			Clear	ss-sh	Wasatch	Eocene	ss - sh	7-3-56	J.R. Gill N. M. Denson	7	7.8
GM6-2	do.	SW15-9S-43E	do.			Cloudy	do.	do.	do.	do.	do.	do.	36	7.7
GM6-3	do.	SE15-9S-43E	do.			Clear	do.	do.	do.	do.	do.	Gill	< 1	7.9
GM6-4	do.	NW 1-10S-43E	do.			Clear	do.	do.	do.	do.	do.	Gill-Denson	< 1	8.0
GM6-5	do.	do.	Stream			Clear	do.	do.	do.	do.	do.	Gill	18	7.9
GM6-6	do.	SW 22-8S-42E	Well			Clear	do.	do.	do.	do.	do.	Denson	< 1	7.9
GM6-7	do.	NW 21-8S-42E	Stream			Cloudy	do.	do.	do.	do.	do.	Gill	< 1	6.8
GM6-8	do.		Stream			Cloudy	do.	do.	do.	do.	7-4-56	Gill	6	7.8
GM6-9	Powder River	C 32-50E-8S	Well			Clear	do.	do.	do.	do.	7-5-56	Denson	62	7.8
GM6-10	do.	SE 6-50E-9S	Well			Clear	do.	do.	do.	do.	do.	Gill-Denson	< 1	8.3
GM6-11	do.	NE 8-52E-9S	Well		1 gal/min	Clear	do.	do.	do.	do.	do.	Denson	1	7.7
GM6-12	Carter	S SW 35-5S	Spring			Clear	do.	Arikaree	Miocene	tuff	7-9-56	Denson	7	8.0
GM6-13	do.	NE 20	Spring	OW Tiegem Ranch	1/2 gal pm	Clear	sandstone	do.	do.	do.	7-15-56	Gill	3	7.5
GM6-14	do.	NW 20	Spring	do.	1 gal pm	Clear	do.	do.	do.	do.	do.	Gill	2	7.8
GM6-15	do.		Spring	do.	2 gal pm	Clear	do.	do.	do.	do.	do.	Gill	6	8.2

** BULKS ALSO COLLECTED

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief E. R. Landis Project title and number Midcont. Dev. - 320 State (s) New Mexico

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief E. H. Baltz

Project title and number

State (s) New Mexico

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 2/24/55

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief E. H. Baltz Project title and number Western Fuels Reconnaissance 56803 State (s) New Mexico

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
BMI-1W	Taos	27-25N-13E	St. Rio Faramando de Taos	C				July 1954	Baltz	1
2W	Taos	20-25N-15E	Sp/	C	T	Picuris(?) tuff	E. Tertiary	do.	do.	1
3W	San Miguel	Water Canyon 1 mi. n. Montezuma	St.	C				do.	do.	2
10W	Colfax	1-26N-26E	Sp.	SM	Ss.	Dakota	E. Cretaceous	Aug. 1954	do.	7
15W	Colfax	9-27N-25E	W	C	Al.	Qal	Q	do.	do.	3
16W	Colfax	9-27N-25E	Sp	C	Ss.	Dakota	E. Cretaceous	do.	do.	10
17W	Colfax	23-27N-25E	W	C	Al	Qal	Q	do.	do.	2
18W	Colfax	26-27N-25E	W	C	Al	Qal	Q	do.	do.	2
19W	Colfax	26-27N-25E	Sp.	C	Al	Qal on Dakota	Q	do.	do.	4
20W	Colfax	33-27N-25E	Sp.	C	Shale on Ls.	on Greenhorn	Late Cretaceous	do.	do.	4
24W	Otero	29-15S-13E	Sp. Spring Creek	C	Peat	No name	Q	do.	do.	6
30W	San Miguel	27-12N-18E	Sp.	M	Ss.	Chinle	Triassic	do.	do.	2
32W	San Miguel	5-11N-24E	St.	C				do.	do.	3
BMI-11E	Arriba	3 mi. n. Chama 32N-3E (projected)	Sp	SM	ss.	Dakota	E. Cretaceous	do.	do.	1

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/23/55

Project Chief Roy L. Griggs

Project title and number

State (s) New Mexico

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	PH
IRMGW-8	Catron	Sec.11,T. 2S,R10W	Well Tom Reynolds	5 gpm C	Tuff	Datil	Miocene	Tuff	8/26/54	R. L. Griggs	4.8
IRMGW-10	Catron	Sec.1,T. 7N, R10W	Well Tom Farr	0 C	?	?	?	?	"	"	3 9.0
IRMGW-11	Catron	Sec.17,T. 8S,R11W	Well Canning	1 gpm C	Tuff	Posh Datil	Pliocene(?)	Tuff	"	"	2 8.1
IRMGW-12	Catron	Sec.1,T. 9S,R13W	Well Tovrea	5 gpm C	Tuff	"	"	"	"	"	1 8.0
IRMGW-13	Catron	Sec.7,T. 8S,R15W	Well Collins Park	10 gpm C	?	?	?	rhyolite(?)	"	"	1 8.0
IRMGW-1	Catron	Sec.21,T. 2N,R10W	Well	C	ss	Mesa Verde	ss	7/21/54	"	<1	7.8
IRMGW-2	Socorro	Sec.20,T. 1N,R6W	Sp	1 gpm C	Baca				"	3	7.7
IRMGW-3	"	Sec.24,T. 1N,R6W	Sp Hook Ranch	1 gpm C	Datil	Miocene	Tuff		"	2	7.5
IRMGW-4	"	Sec.27,T. 1N,R6W	Sp Douc Spring	1 gpm C	Tuff	Datil	"	Tuff	"	3	7.8
IRMGW-5	Catron	Sec.10,T. 2S,R11W	Sp Hidden Spring	1 gpm C	Tuff(?)	Datil(?)	"	Tuff	"	1	7.6
IRMGW-6	Catron	Sec.33,T. 5S,R17W	St Apache Creek	10 gpm C					"	1	7.6
IRMGW-7	Catron	Sec.17,T. 5S,R16W	St Aragon, N.M.	C					"	1	7.6
IRMGW-9	Socorro	Sec.7,T. 1S,R5W	Well	C	?	?	?		"	3	7.8
IRMGW-14	Catron	Sec.27,T. 2N,R11W	Well McPhauls Ranch	5 gpm C	ss	Baca	Tertiary		"	2	7.9
IRMGW-15	Catron	Sec.30,T. 1N,R10W	Well Davenport Spring	1 gpm C	Tuff	Datil	Miocene	Tuff	8/13/54	"	1 9.3

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA .

ANAL: 2/24/55

Project Chief R. L. Griggs Project title and number Black shale reconnaissance 556803 State (s) New Mexico

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* DATA ADDED AS PER LETTER
GRIGGS TO HAIL, 3/7/55

(over)

FUELS-BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

Project Chief Ormond Yacovella

Project title and number

State(s) New York

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief N. M. Denson

Project title and number Regional Synthesis

State (s) North Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief N. M. Denson

Project title and number Dakota lignites F-469

State (s) North Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA

Project Chief J. R. Gill

Project title and number	Regional synthesis	F-469a
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State(s) North Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.

Q₁. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

WATER SAMPLE DATA .

0.043

Project Chief W. Danilchik

Project title and number

Midcontinent Pennsylvanian Investigation

State (s)

~~Oklahoma~~

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/14/55

Project Chief N. M. Denson

Project title and number 5-56703

State (s) Oklahoma

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Flow Acres	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH		
D04-1	Nowata	N $\frac{1}{2}$ NW $\frac{1}{4}$ 6-25N-17E		42,000 gals/day		Gravel Recent		1/22/55	Bass-Denson Hagan	2	7.2	
D04-2	Nowata	N $\frac{1}{2}$ NW $\frac{1}{4}$ 6-25N-17E	80 A	600 bbls/day + 1000 fresh	50%	Salt water	Pennsylvanian Bartlesville sandstone	1/22/55	"	< 1	7.3	
D04-3	Nowata	31-32 26N-17E 5-6 27N-17E	80A	600 bbls/day + 1000 fresh	50%	Salt water	Pennsylvanian "	1/22/55	"	< 1	7.4	
D04-4	Nowata	SW 20-25N-17E	1000 $\pm$	1000 + bbls/day	425' depth	Salt water	Pennsylvanian "	1/22/55	"	2	7.5	
D04-5	Nowata	S $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ 21-25N-17E	20 A	200 bbls/day	25% f	425' depth	Salt Water	Pennsylvanian "	1/22/55	"	< 1	7.8
D04-6	Nowata	SE $\frac{1}{4}$ SW $\frac{1}{4}$ 21-25N-17E	50A	600 bbls/day	25% f	425' depth	Salt Water	Pennsylvanian "	1/22/55	"	< 1	7.3
D04-7	Nowata	E $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ 21-25N-17E	30 A	300 bbls/day	25% f	425' depth	Salt Water	Pennsylvanian "	1/22/55	"	< 1	7.7
D04-8	Nowata	NE $\frac{1}{4}$ SW $\frac{1}{4}$ 28-25N-17E	80 A	300 bbls/day	25% f	425' depth	Salt Water	Pennsylvanian "	1/22/55	"	6	7.4
D04-9	Rogers	S $\frac{1}{2}$ NW $\frac{1}{4}$ 3-24N-17E	80 A	1000 bbls/day		425' depth	All 100% salt	Pennsylvanian "	1/22/55	"	< 1	7.1
D04-10 -11	Rogers	SE $\frac{1}{4}$ SW $\frac{1}{4}$ 9-24N-17E	50A	700 bbls/day		420' depth	40% salt	Pennsylvanian "	1/22/55	"	2	7.3
D04-12	Nowata	NW $\frac{1}{4}$ 6-26N-17E				Brine		1/23/55	"	< 1	5.9	
D04-13	Nowata	35-27N-16E				Brine		1/23/55	"	4	7.8	
D04-13	Nowata	35-27N-16E				Brine		1/23/55	"	60	8.7	
D04-14	Nowata	C NE 27N-15E		15000 bbls/day	1900' depth	Brine		1/23/55	"	1	6.9	

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

State (s) Oklahoma

pH
8.0
7.4

(over)

FUELS BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

ANAL: 1/10/55

Harold H. Arndt

Western Middle Anthracite Field - F 120

Project Chief Gordon H. Wood, Jr.

Project title and number Southern Anthracite Field - F 915

State (s) Pennsylvania

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
1	Schuylkill	South of Fearnot	St. Pine Creek	22.8 cfs. C	Ss., Cgl. shale	Pottsville, Pennsylvanian	Mauch Chunk and some Mississippian Post Pottsville	Sept. 15, 1954	J. P. Trexler	2.3
2	Dauphin	Loyalton	St. Wiconisco Creek	17.8 cfs. C	SS, Cgl., sh.	Pottsville, Post Pottsville, Mauch Chunk, Pocono	"	"	"	1.9
3	Dauphin	2-3 miles from Susquehanna River	St. Clark Creek	14.0 cfs. C	Ss, Cgl., sh.	"	"	"	"	1.0
4	Dauphin	Dauphin, Pa.	L Stony Creek	about the same as above C	Ss, Cgl., sh.	"	"	"	"	0.9
5	Schuylkill	Lovesberry Gap W. Pine Grove	St. Swatara Creek	6.33 cfs. SM	Ss, Cgl, sh.	Mostly Post Pottsville	Mauch Chunk, Pocono, Pottsville	"	"	2.7
6	Schuylkill	Cressona, Pa.	St. West branch Schuylkill R.	15.0 cfs. M	Ss, cgl, sh.	Mostly Post Pottsville	Pennsylvanian Mississippian also Mauch Chunk, Pocono, Pottsville, Devonian	"	"	1.3
57	Schuylkill	1/2 mi. NE Port Carbon, Pa.	St. Schuylkill R.	22.5 cfs. SM	Ss, cgl, sh.	Post Pottsville	Pennsylvanian	"	"	2.1
6	Schuylkill	1/2 mi. N. of Tamaqua, Pa.	St. Little Schuylkill R.	4.3 cfs. C	Ss, cgl, Al, sh.	Pottsville, Mauch Chunk, Post Pottsville	Pennsylvanian Mississippian	Oct. 12, 1954	H.H. Arndt	1.3

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

Samples + requests submitted to
 Washington through Don Duncan
 (letter from G. H. Wood 11/28/54)
 (over)

ANAL: 1/10/55

Project title and number Western Middle Anthracite Field F 120
Southern Anthracite Field E 915 State (s) Pennsylvania

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief M. E. Denson

Project title and number Electric Logging Research

State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/ (gpm) Clarity 3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
1	Fall River	NE 1/4 SW 1/4 13 7S, R2E	Well		-	C	ss.	Sundance	J	sandstone	11 July 54	ME Denson	<1	7.7
2	"	NE 1/4 SE 1/4 5 8S, R3E	Well		-	C	"	Basal Dakota	K	sandstone-shale	"	"	20	7.2
3	"	NW 1/4 SE 1/4 8 8S, R3E	Abandoned Flowing Oil Well	5 gpm	C	"	"	Basal Lakota? or Morison?	K? J?	"	"	"	<1	7.7
4	"	NW 1/4 NW 1/4 32 8S, R3E	Windmill Well	-	-	C	"	Fall River 2	K?	sandstone	"	"	8	7.5
5	"	NW 1/4 NE 1/4 31 8S, R3E	Spring	Flowing	10 gpm	C	"	Fall River	K?	"	"	"	10	7.7
6	"	SE 1/4 SW 1/4 23 8S, R2E	Windmill Well	-	-	C	"	source? Probably Lakota	K	"	"	"	1	7.3
7	"	SE 1/4 NE 1/4 2 8S, R2E	Windmill Well	-	-	C	"	Fuson or Lakota	K	"	"	"	14	7.5
8	"	SE 1/4 SE 1/4 32 7S, R2E	Well			C	"	Fall River	K	"	"	"	<1	7.4
9	"	SW 1/4 SW 1/4 30 7S, R2E	Well	Artesian	1 gpm	C	"	Fall River	K	"	"	"	<1	8.0
10	"	W 1/4 SE 1/4 23 7S, R1E	Well	Flowing	2 gpm	C	"	Lakota	K	"	"	"	<1	7.8
11	"	W 1/4 SE 1/4 23 7S, R1E	Well		-	C	"	Fall River	K	"	"	"	<1	7.9
12	"	SE 1/4 NE 1/4 9 7S, R1E	Well	Flowing	10 gpm	C	"	Lakota?	K	"	"	"	<1	8.0
13	"	NE 1/4 SE 1/4 23 8S, R2E	Well	?	?	C	"	?	?	"	"	"	4	8.0
14	"	E 1/4 SW 1/4 12 7S, R2E	Well		-	C	Pink sandstone	Sundance	J	"	"	"	20	7.5

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 3/2/55

State(s) S. Dakota

LI	PH
40	-

Q6. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cg), Limestone (Ls), Tuff (T), Other (specify).

ANAL. : 8/2/54

Project title and number 5-56730 Dakota lignites

State (s) South Dakota

PH

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UP OFF.: 3/22/55

Project Chief James R. Gill

Project title and number Dakota Lignite

State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
43D-443	Harding	NE30-19N-8E	Sp. Lena #1	5 gpm C	T-SS Arikaree	Miocene	Tuff	July 1954	Gill	6
444	Harding	NW29-19N-8E	Sp.	2 gpm C	T-SS Arikaree	Miocene Paleocene	do.	do.	do.	19
445	Harding	E19-19N-8E	Creek Lena	20 gpm CL	T-SS Arikaree	Miocene	do.	do.	do.	14
452	Perkins	2.5 mi. W Bison, S.D.	W -	- CL	SS Hell Creek	Cretaceous	SS	do.	do.	1
453	Perkins	27 mi. W. Bison, S.D.	Sp/ -	- C	SS Ludlow	Paleocene	SS	do.	do.	<1
455	Perkins	3.5 mi. W. Lemmon, S.D.	W -	- C	SS Tongue R.	Paleocene	SS	do.	do.	3
458	Harding	JB Pass S	Spr. ?	2 gpm C	? Chadron	Oligocene Paleocene	SS-T	do.	do.	55
459	Perkins	30-21N-16E	St Grand R.	? CL	- Drains Ludlow	Tongue R.-Hell Creek	do.	do.	do.	5
460	Harding	NE NW 25-19N-7E	Sp -	3 gpm C	T-SS Arikaree	Miocene	SS-T	do.	do.	27
461	Harding	NE NW 25-19N-7E	Sp North	3 gpm C	T-SS Arikaree	Miocene	SS-T	do.	do.	16
462	Harding	SW NW 6 18N-8E	Sp -	2 gpm C	T-SS Arikaree	Miocene	do.	do.	do.	50
463	Harding	NE SE 1-18N-7E	Sp Bonniwell #1	3 gpm C	T-SS Arikaree	Miocene	do.	do.	do.	28
464	Harding	1-18N-14E	St -	Stagnant CL	T-SS Arikaree	Miocene	do. SS	do.	do.	6
465	Harding	SE 12-21N-11E	Sp H. Parker	1 gpm C	T-SS Tongue R.	Paleocene	SS	do.	do.	83
466	Harding	R 12 E SW 15, 21N	W -	2 gpm C	Tongue R.	Paleocene	SS	do.	do.	83

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. R. Gill

Project title and number Dakota lignite 567

State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)		
GSD-467	Perkins	15-21N-12E	St	Lodgepole	-	C	ss-sh	Fort Union	Paleocene	ss ?	July 1954	Gill	38
468	Harding	E. Short Pine Hills	W	Mackie	1 qpm	C	ss	Hill Cr.	Cretaceous	ss-sh	August 1954	"	2
469	Harding	34-19N-8E	W	L Laramie	2 qpm	C	ss	Ludlow	Paleocene	ss	"	"	49
470	Perkins	2-21N-12E	Sp		1 qpm	Cl	ss	Tongue R.	Paleocene	ss	"	"	<1
471	Perkins	24-19N-7E	Sp		1 qpm	C	ss	Tongue R.	Paleocene	ss	"	"	10
472	Perkins	20-22N-9E	Sp		1 qpm	C	ss	Tongue R.	Paleocene	ss	"	"	2
473	Harding	S. Cave Hills	Sp	Clarkson #1	2 qpm	Cl	ss	Ludlow	Paleocene	ss	"	"	1
474	Harding	3-18N-8E	Sp	-	3 qpm	C	ss	Ludlow	Paleocene	ss	"	"	6
475	Perkins	35-19N-14E	W	-	2 qpm	C	ss	Tongue R.	Paleocene	ss	"	"	<1
476	Perkins	33-22N-12E	W	-	2 qpm	C	ss	Tongue R.	Paleocene	ss	"	"	38
477	Harding	19-19N-8E	Sp	Lena #2	1 gpm	C	t-ss	Arikaree	Miocene	ss-t	"	"	7
478	Perkins	Chance S. D.	St	Thunder Butte	50 gpm	C	ss	Fort Union	Paleocene	ss	"	"	1
479	Harding	E. Short Pines	Sp	Mackie	1 qpm	C	ss-t	Arikaree	Miocene	ss-t	"	"	25
480	Harding	E. Lodgepole S. D.	W	-	-	C	ss	Fort Union	Paleocene	ss	"	"	1.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA

-State (s) South Dakota

pH
7.0
9.9
pts

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/31/55

Project Chief J. R. Gill

Project title and number Regional Synthesis 469b

State (s) S. Dak. (W. Short Pine)

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow 2/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium, (ppb)
SDS-1	Harding	SW NW 33 17 N-2E/	Sp	-	1 qt	C	Tuff	Arikaree	Miocene	Tuff	7/19/55	Gill	4
SDS-2	"	NE 33 17N-2E	Beaver Pond	-	Spring fed	C	"	"	"	"	"	"	7
SDS-3	"	C 33 17N-2E	Sp	-	1 gpm	C	"	"	"	"	"	"	8
SDS-4	"	NE 27 17N-2E	W	-		C	Sandstone	Hell Creek	Cretaceous	Sandstone	"	"	2
SDS-5	"	SW 23 17N-2E	W	-		C	"	"	"	"	"	"	20
SDS-6	"	SW 34 17N-2E	Sp		1 qt	C	Tuff	Arikaree	Miocene	Tuff	7/20/55	"	3
SDS-7	"	NE 9 16N-2E	Sp		"	C	"	"	"	"	7/22/55	"	2
SDS-8	"	NW 3 16N-2E	Sp		"	C	"	"	"	"	"	"	4
SDS-9	"	NE 10 16N-2E	Sp		2 gpm	C	"	"	"	"	"	"	3
SDS-10	"	SE 1 16N-2E	Sp		1 qt	C	"	"	"	"	7/24/55	"	4
SDS-11	"	NW 16 16N-2E	Sp		"	C	"	"	"	"	7/27/55	"	11
SDS-12	"	SE 22 16N-2E	W		-	Cl	Sandstone	Hell Creek	Cretaceous	Sandstone	"	"	42
SDS-13	"	NW NE 11 16N-2E	Sp	-	less than 1 pt pm	C	Tuff	Chadron	Oligocene	Sandstone - Tuff	7/29/55	"	8
SDS-14p	"	SW 34 17N-8E	SP	PHILLIPS				ARIKAREE	MIOCENE		8/18/55*	DENSON	176
SDS-15p	"	NE 12 18N-8E	W	REVA				HELL CREEK	UPPER CRETACEOUS		8/18/55*	"	14

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* Analyzed: 9/6/55

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/25/55

Project Chief J. R. Gill

Project title and number Synthesis-Lignites F-469

State (s) S. Dak. (East Short Pine)

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
DS5-1	Harding	CSL 11 16N-3E	Sp		1 pt-20 sec.	C	Tuff	Brule	Oligocene	Tuff	7/11/55	Denson	4	7.8
DS5-2	"	SW NE 13 16N-3E	Sp		1 pt-35 sec.	C	"	Chadron (?)	"	"	"	"	6	7.8
DS5-3	"	SW SW 12 16N-3E	Sp	Box No. 2	1 pt-17 sec.	C	"	Brule	"	"	"	"	8	7.9
DS5-4	"	SW SW 13 16N-3E	Sp		1 pt.-15sec.	C	"	Chadron (?)	"	"	"	"	4	7.8
DS5-5	"	NW NW 11 16N-3E	Sp		1 pt-10 sec.	C	"	"	"	"	"	"	8	8.0
DS5-6	"	NE NW 20 16N-4E	W		1 pt-5 sec.	C	"	Hell Creek	Upper Cretaceous	"	7/13/55	"	2	8.3
DS5-7	"	NE NE 21 16N-4E	W		1 pt-5 sec.	Cl (?)	"	"	"	"	"	"	1	8.3
DS5-8	"	SW NE 1 16N-3E	Sp		1 pt-30 sec.	CL (?)	"	Chadron	Oligocene	"	7/15/55	"	11	8.2
DS5-9	"	NW SE 1 16N-3E	Sp		1 pt-10 sec.	C	"	Arikaree	Miocene	"	"	"	7	8.0
DS5-10	"	SW NW 7 16N-4E	Sp		1 pt-43 sec.	Cl (?)	"	"	"	"	"	"	5	7.9
DS5-11	"	NE NW 1 16N-4E	Sp		1 pt-60 sec.	C	"	"	"	"	7/17/55	Gill and Denson	9	7.8
DS5-12	"	NE 35 17N-2E	W	Harding P. O.	Water system	C	Sandstone	Hell Creek	Upper Cretaceous	Sandstone	7/18/55	"	660	7.9
DS5-13	"	NE 35 17N-2E	W	"	"	C	"	"	"	"	"	"	89	8.0
DS5-14	"	SW NW 20-17N-2E	W		1 pt-20 sec.	C	Tuff	"	"	Tuff	"	"	6	7.9
DS5-1479p	"	NE 35 17N-3E	Sp	Mackie	1 pt-50 sec.	C	"	Arikaree	Miocene	"	7/9/55	Denson	22	8.3*

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* GS DS-479p collected
drained off from bulk,
ran 4 pt 24 and pH 8.5.
(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/25/55

Project Chief J. R. Gill

Project title and number Regional Synthesis F-169

State (s) S. Dak. (H. Short Pine)

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
DS5-16	Harding	SE SW 18 17N-2E	Sp	1 pt-30 sec C	Tuff	Brule	Oligocene	7/19/55	Denson	7	7.8
DS5-17	"	NE SW 18 17N-2E	"	1 pt-7 sec C	"	Chadron	"	"	"	5	7.7
DS5-18	"	NE SE 13 17N-1E	"	1 pt-50± sec C	"	"	"	"	"	7	7.5
DS5-19	"	NW NE 13 17N-1E	"	1 pt-2± min C	"	"	"	"	"	16	7.5
DS5-20	"	NE NW 5 16N-2E	"	1 pt-2± min C	"	Brule(?)	"	7/20/55	"	8	7.8
DS5-21	"	NW NW 13 17N-1E	"	1 pt-10 sec C	"	Chadron	"	7/21/55	"	15	7.6
DS5-22	"	SW NE 24 17N-1E	"	" C	"	"	"	"	"	29	8.0
DS5-23	"	SW SE 30 17N-2E	"	1 pt-30± sec C	"	Brule	"	7/22/55	"	7	7.5
DS5-24	"	NW NE 2 16N-1E	W	no flow Cl	Sandstone	Hell Creek	Upper Cretaceous	"	"	8	7.7
DS5-25	"	CNE 20 17N-2E	W	1 pt-22 sec C	"	"	"	7/23/55	"	5	7.5
DS5-26	"	CSL 36 17N-1E	Sp	1 pt-3 min C	"	"	"	7/28/55	"	4	7.9
DS5-27	"	NE NE 13 17N-3E	Sp	1 pt-10 sec C	Sandy shale	"	"	7/29/55	"	41	8.1
DS5-28	"	NE 19 18N-9E	Sp	1 pt-10 sec C	Tuff	Arikaree	Miocene	8/5/55	"	20	8.9
DS5-30	"	SE SE 10 16N-3E	Sp	Rock Spring	"	"	"	8/9/55	Kepferle	85	9.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA.

Project Chief J. R. Gill

Project title and number Regional Synthesis F-469

State (s) S. Dak. (Slin Buttes)

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppm)	
55-40	Harding	13-16N-8E	Sp	Twin	qt/min	C	T	Arikaree	Miocene	Tuff	August 55	Gill	19
41	"	"	Sp	Batt #2	"	C	T	"	"	"	"	"	10
42	"	6-17N-7E	W	-	"	C	Ss	Hell Creek	Upper Cretaceous	Ss	"	"	2
55	"	"	Sp	Joe James	2 qt/min		T	Chadron	Oligocene	Ss-T	"	"	35
66	"	"	Sp	XXXX									
67	"	18-17N-8E	Sp	-	2 qt/min	Cl	Ss	Ludlow	Paleocene	"	"	"	4
69	"	7-19N-8E	Sp	-	1 pt/20 min	C	Ss-T	Chadron	Oligocene	Ss-T	"	"	11
70	"	6-18N-8E	Sp	-	1/2 pt/min	C	Ss	Ludlow	Paleocene	Ss	"	"	59
71	"	"	Sp	Bonniwell #1	"	C	Ss-T	Arikaree	Miocene	Tuff	"	"	143
72	"	12-19N-7E	Sp	Little Joe	1 pt/20 sec	C	"	Chadron	Oligocene	"	"	"	18
63	"	15-18N-8E	Sp	-	1/2 pt/min	C	"	Arikaree	Miocene	"	"	"	4
55-128p	"	NE 35 17N-2E	W	HARDING P.O.	WATER SYSTEM	C	SANDSTONE	HELL CREEK	UPPER CRETACEOUS	SANDSTONE	10-31-55	DENSOR + GILL	

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 3/2/55

Project Chief Kepferle

Project title and number S. Dakota Black SL. WFAEL 5-56703

State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH		
KSD-16W	Custer	SE $\frac{1}{4}$ 6 T. 5 S., R6E.	W	-	C		Gravel - shale	9/2/54	R. C. Kepferle	23	8.6		
KSD-17W	Fall River	CN $\frac{1}{2}$ sec. 6 T8S., R7E.	Sp	2 gal/min	SM	Sharon Spgs. Al & shale Pierre	U.K.	Gravel - shale	9/3/54	"	10	7.6	
KSD-18W	"	SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T8S	W	Ingall's	C	Al Gravel	Pleist.	Gravel - shale	9/4/54	"	30	7.6	
KSD-19W	"	R6E. NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36 T7S	W	-	C	"	"	"	"	"	30	7.8	
KSD-20W	"	R6E SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20 T8S, R5E	Sp	Cascade Spgs.	300 gal/min	C	-s Minnekahta	Permian(?)	Ls and shale	9/5/54	"	7	8.0
KSD-21W	"	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6 T8S, R7E	W	?Macks	C	Al Gravel	Pleistoc Recent	Gravel, sand, shale	9/7/54	"	11	8.0	
KSD-22W	"	SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW sec. 8 T7S, R7E	seep	-	trickle	brown color shale	Sharon Spgs. Pierre	U. Cret.	sand and shale	"	"	120	2.9
KSD-23W	"	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T7S	Pit well	-	C	shale-Al Granerous	U. Cret.	shale and sand	"	"	2	4.8	
KSD-24W	Custer Co.	R6E NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17 T5S, R7E	W	E. Snidow	C	Al & sh Pierre	Pleist-U.K.	shale, and gravel	9/10/54	"	15	8.2	
KSD-25W	"	SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19 T5S	W	F. White	C	Al & sh Niobrara	Pleist-U.K.	gravel & calc. shale	"	"	90	7.8	
KSD-26W	"	R8E SW $\frac{1}{4}$ sec. 8 T5S, R8E	W	-	C	Al & sh Carlile	Pleist-U.K.	gravel & shale	"	"	6	8.1	
KSD-27W	"	SE $\frac{1}{4}$ sec. 4 T5S, R7E	stock tank	-	C	T - 5s White River	Olig.	Tuffaceous, ss & clays	"	"	45	8.2	
KSD-28W	Fall River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ 14, T8S, R6E	W	R. Pierce	C	Al-sh Pierre	Pleist - U.K.	Gravel - shale	9/13/54	"	13	8.0	
KSD-29W	"	SW $\frac{1}{4}$ NW sec. 33 T9S, R5E	seep	-	SM	shale Sharon Spgs. mbr Pierre	U.K.	shale	9/16/54	"	20	2.6	
KSD-30W	"	SESW $\frac{1}{4}$ E sec. 29 T9S, R5E	W	-	C	Al & sh Niobrara	U.K.	shale, calc.	"	"	30	7.7	

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 3/29/55

Project Chief Roy C. Kepferle

Project title and number South Dakota Black Shale - WFAEC 5-56703 State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
SD-31W	Fall River	NW 1/4 30, 10S, 3E	Seep ---	---	Suspended solids	Shale	Sharon Springs Mbr. Pierre Sh. U. Cret.	Shale and Al.	9/23/54	Kepferle	7 7.9
SD-32W	Fall River	NW 1/4 8, 12S, 4E	Seep ---	---	Suspended solids	Shale	" U. Cret.	Shale and Al.	9/25/54	Kepferle	48 2.2
SD-33W	Fall River	NW 1/4 11S 28, 42S, 1E	Seep ---	---	Suspended solids	Shale	" U. Cret.	Shale and AL.	9/25/54	Kepferle	57 3.5
SD-34W	Shannon	C, SW 1/4 12, 41N, 46W	Sp ---	1 1/2	C	T silt	Brule Whitney Mbr. U. Olig.	Tuffaceous silts	9/27/54	Kepferle	31 7.7
SD-34A	Brule	S 1/2 22, 101N, 69W	Seep ---	---	Suspended solids	Alluvian shale	Pierre U. K.	Ss, shale, alluvian	9/30/54	Kepferle	8 8.2
SD-35W	Shannon	12, 41N, 46W	Sp ---	1 1/2	C	T silt	Brule U. Olig.	T. silts	9/27/54	Kepferle	25 7.7
SD-36W	Fall River	NE 1/4 12, 10S, 6E	W H. Whetstone	---	C	Ss	Pierre U. K.	Shale-Alluvian	9/28/54	Kepferle	25 8.6
SD-37W	"	SE 1/4 12, 10S, 8E	W ---	---	C	Ss	Pierre U. K.	Shale-Alluvian	9/28/54	Kepferle	25 8.6
SD-38W	Shannon	SE Cor. 10, 37N, 46W	W Oglala	---	C	T silt, clay	Brule M.U. Olig.	T. silt-clay	9/28/54	Kepferle	34 8.6
SD-39W	Shannon	SW 1/4, Sec. 3, same TWP as 38W	W Oglala	---	C	"	" " "	"	9/28/54	Kepferle	11 8.3
SD-40W	Shannon	NW 1/4 1, 35N, 42W	W ---	---	C	"	Arikaree? Mioc.	"	9/28/54	Kepferle	4 8.0
SD-41W	Bennett	NE of Martin 1 1/2 mi.	W ---	---	C	"	" " "	"	9/28/54	Kepferle	4 8.0
SD-42W	Bennett	2.9 mi. W of Vetal	W ---	---	C	"	" " "	"	9/28/54	Kepferle	< 1 8.0
SD-43W	Charles Mix	SW 1/4 16, 99N, 69W	W ---	---	C1	Ss	Dakota L. Cret.	Not determinable	9/29/54	Kepferle	< 1 7.8
SD-44W	"	SW 1/4 10, 90N, 70W	W ---	50?	C	Ss	Dakota L. Cret.	"	9/29/54	Kepferle	< 1 7.9
SD-45W	Brule	S 1/2 22, 101N, 69W	W ---	---	C	Al	Pierre U. Cret.	Al, ss, shale	9/30/54	Kepferle	2.7 7.6

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Ray C. Kepferle

Project title and number Dakota Lignites F-469a

State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
			Type 1/	Name	Flow (gpm)	Clarity 3/	Type 4/	Formation	Age					
KD5-1W	Harding	NE 1/4 15 21N-5E	W	-	4 gpm	C	Ss	Hell Creek	Upper Cretaceous	Ss and mudstone	7/11/55	Kepferle	12	pk 8.0
KD5-2W	"	NE 1/4 33 21N-5E	Sp	Brown's Ranch	1 1/2 gpm	C	Ss coal?	Ludlow mem Tfu	Paleocene	Ss and mudstone, coal	7/16/55	"	6	7.8
KD5-3W	"	SE 1/4 30 21N-5E	Sp	-	1 1/2 gpm	C	"	"	"	"	"	"	8	7.5
KD5-4W	"	SW 1/4 15 22N-5E	Sp	Devil's Gulch #1	1/4 gpm	C	coal	Contact(?) Ludlow-	"	"	"	"	18	7.8
KD5-5W	"	NE 1/4 22 22N-5E	Sp	-	1/2 gpm	C	"	"	"	"	7/18/55	"	27	7.8
KD5-6W	"	SE 1/4 15 22N-5E	Sp	-	1/2 gpm	C	"	"	"	"	"	"	28	7.7
KD5-7W	"	SW 1/4 NE 1/4 22-22N-5E	Sp	-	1 gpm	C	Ss	"	"	"	"	"	23	7.8
KD5-8W	"	near above locality	Sp	-	1/4 gpm	C	"	"	"	"	"	"	7.9	7.9
KD5-9W	"	near center 22-22N-5E	Sp	Long Tree	1/4 gpm	C	E or F coal (?)	Tongue R. member	"	"	"	"	3	7.8
KD5-10W	"	NE 1/4 15 22N-5E	Sp	Picnic	1 gpm	C	Ss or coal	Ludlow-Tongue R.	contact	"	"	"	17	8.0
KD5-11W	"	SW 1/4 NE 1/4 19-21N-5E	W	"Billy" Johnson	5 gpm	C	Ss	Hell Creek	Upper Cretaceous	"	"	"	31	8.0
KD5-12W	"	NE 1/4 27 22N-5E	Sp	Cabin Spring	1/4 gpm	Brown color (no solids)	coal	Ludlow	Paleocene	"	7/20/55	"	13	8.7
KD5-13W	"	NW 1/4 26 22N-5E	Sp	Padoloway Sp	1/2 gpm	C	"	"	"	"	"	"	290	7.7
KD5-14W	"	SW 1/4 23 22N-5E	Sp	-	1 gpm	Brown color (no solids)	"	"	"	"	"	Chisholm	20	8.0
KD5-15W	"	NW 1/4 NE 1/4 15-22N-5E	Sp	-	1 gpm	C	"	Tongue R. - Ludlow contact	"	"	"	"	5	7.7

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Roy C. Kepferle Project title and number Dakota Lignites 6904693 State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
KD5-31W	Harding	NE 1/4 4 20N-5E	Sp	-	1/2 gpm	C	Coal	Ludlow member	Paleocene	Ss, coal, mudstone	8/28/55	Chisholm	2	7.6
32W	"	NW 1/4 16 22N-5E	Sp	-	7 gpm	C	Coal B or C	"	"	"	8/27/55	"	6	7.9
33W	"	SW 1/4 16 22N-5E	Sp	-	1/2 gpm	Brownish	Coal	"	"	"	"	"	1	7.9
34W	"	SW 1/4 16 22N-5E	Sp	Traverse	5-6 gpm	C	D(?) Coal	"	"	"	"	"	<1	8.2
35W	"	SE 1/4 17 22N-5E	Sp (pool)	-	?	C	B(?) Coal	"	"	"	"	"	5	8.7
36W	"	SW 1/4 18 22N-5E	Sp	-	1/4 gpm	Brownish	D(?) Bed	"	"	"	"	"	17	8.6
37W	"	NE 1/4 19 22N-5E	Sp	-	1/2 gpm	C	70' below Coal TR member	"	"	"	"	"	<1	7.7
38W	"	NE 1/4 33 22N-5E	Sp	-	1/8 gpm	C	Coal(?)	"	"	"	"	"	5	8.4
39W	"	SW 1/4 3 22N-5E	Sp	-	1/8 gpm	C	75' below TR mbr coal	"	"	"	8/28/55	"	3	8.3
40W	"	SW 1/4 5 22N-4E	Sp	-	1/2 gpm	Brn	Coal(?)	"	"	"	8/30/55	"	2	8.1
41W	"	SW 1/4 34 22N-5E	Sp (pool)	-	1/4 gpm	C	150' below TR Al	"	"	"	9/2/55	"	124	7.9
42W	"	NE 1/4 21 22N-5E	Beaver Dam	-	1/2 gpm	C	25' below TR (D coal)	"	"	"	"	"	2	7.7
43W	"	SE 1/4 16 22N-5E	Pool	-	1/8 gpm ?	C	50' bel. TR Al	"	"	"	"	"	10	7.8
45W	"	SE 1/4 34 22N-5E	R	Schleich- art	?	C	-	"	"	"	"	"	28	9.6
46W	"	"	Sp	-	1/2 gpm	C	150' bel TR Coal & Ss?	"	"	"	"	"	2	8.0

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 10/11/55

Project title and number Dakota Lignites 6904693

State (s) S. Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 11/17/55

Project Chief Ray G. Kepferle

Project title and number Dakota Lignites 6904693

State (s) South Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
KD5-47	Harding	SW 15 21N-5E	St Bull Creek	Standing pool Clay. Brownish	Runoff Tongue River	Paleocene	Ss, coal, mudst	9/3/55	Chisholm	8	8.3
							Ludlow mbrs				
KD5-48	"	NE 36 21N-4E	Sp Picnic 1	1 2 gpm ± C	D Coal Ludlow	"	"	"	"	5	7.8
KD5-49	"	"	Sp Picnic 2	1/2 gpm C	"	"	"	"	"	4	8.0
KD5-51	"	NW 1 22N-5E	W Merwin Feist	1/2 gpm C	Ss or coal	"	"	9/12/55	Kepferle	4	7.9
KD5-52	"	SE 2 22N-5E	Sp Bill Conniff	1/2 gpm C	"	"	"	"	"	1	7.9
KD5-53	"	NW 11 22N-5E	Sp Harold Feist	1/2 gpm C	"	"	"	"	"	11	7.7
KD5-54	"	NE SE NW 22N-5E	Sp -	1/4 gpm C	" "	"	"	9/15/55	"	22	8.0
KD5-55	"	SW SW 11 22N-5E	Sp -	3/4 gpm C	"	"	"	9/24/55	"	<1	8.3
KD5-56	"	S 1/2 SW 26-22N-5E	Pool Relf claim	- C	Runoff Tongue River	"	Uraniferous Lig. Mudstone	10/4/55	"	2250	7.4
KD5-57	"	SW NW 26 22N-5E	Seep -	- Brownish SM	Coal Ludlow	"	Ss, coal, mudst.	10/19/55	"	126	8.2
KD5-58	"	SW SE SW 20-21N-5E	Seep -	- "	"	"	"	10/21/55	"	3	8.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief George N. Pipiringos

Project title and number	Dakota lignites	F-469
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State (s) South Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. R. Gill Project title and number Dakota lignites - Regional synthesis F-469a State(s) South Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.

Q12. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

WATER SAMPLE DATA

Project Chief J. R. Gill

Project title and number Regional synthesis F-469a

State (s) South Dakota

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

No original

FUELS BRANCH TRACE ELEMENTS
 WATER SAMPLE DATA . .

ADRL: 7/27/55

Project Chief Kepferle

Project title and number

State (s) South Dakota & Nebraska

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA

Project Chief D. H. Eargle

Project title and number Texas black shale and coal F-977

State (s) Texas

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

State (s) Texas

pH
7.4

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF. ANAL.: APPROX 7/1/55

Project Chief		D. Hoyer Eargle		Project title and number		F-977		State (L)		Texas			
Sample No.	County	Location See 2, 3	Source of sample Type 1/ Name	Condition of water Flow 2/ (gpm) Clarity 3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
STW-1	Karnes	.6 mi. S. Coy City	W Rufino	0.25	C	Ss	Catahoula?	Oligocene	Tuffaceous ss and siltstone	5-31-55	John L. Snider	12	8.1
STW-2	"	3 mi. SW Coy City	W Hardt	"	C	Ss	"	"	Do.	"	"	19	8.3
STW-3	"	2.4 mi. W Coy City	W Miller	"	Gray-yellow	Ss	"	"	Do.	"	"	8	7.9
STW-4	"	3 mi. S Hobson	W Janer	"	C	Ss	Whitsett mem. Fayette	Eocene	Tuffaceous ss	"	"	29	7.7
STW-5	"	2.5 mi. NW Helena	W Pieza	"	C	Ss	Do.	"	"	"	"	41	8.3
STW-6	"	4 mi. NE Helena	W Sickenius	"	C	Ss	Do.	"	"	"	"	3	7.8
STW-7	"	Do.	W "	"	Cl	Ss	Catahoula	Oligocene	Tuffaceous ss and siltstone	"	"	41	7.4
STW-8	"	1 mi. S Karnes City	W Seale	"	C	Ss	Oakville?	Miocene	Tuffaceous ss	6-1-55	"	7	7.6
STW-9	"	2.5 mi. NE Gillett	W Penja	"	Cl	Ss	Yegua	Eocene	Ss	"	"	41	7.4
STW-10	"	1 mi. E Cestichowa	W Mzyk	"	Cl	Ss	Fayette	Eocene	Tuffaceous ss	"	"	41	7.9
STW-11	"	3.5 mi. N Coy City	W Pfeiffer	"	C	Ss	Catahoula	Oligocene	Tuffaceous ss and siltstone	"	"	12	7.9
STW-12	"	1 mi. W Kennedy	W Tam	"	C	Ss	Oakville	Miocene	Do.	6-3-55	"	96	7.5
STW-13	"	9.6 mi. W Falls City	W Korzekwa	"	Cl	Ss	Fayette	Eocene	Do.	"	"	41	8.0

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 ✓ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
 ✓ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 ✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 9/1/55

State (s) Texas

PH
8.5
8.5

(over)

WATER SAMPLE DATA .

ANAL: 2/24/55

Project title and number	Southern Kolob Plateau
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State (s) Utah

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. David Love

Project title and number F-105

State (s) Utah

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

pH
8.4

ANAL: MARCH 2, 1955

State (s) Wyoming

PH

(over)

ANAL: 7/12/55

Project title and number

State (s) Wyoming

PH

7.5

7.8

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief N. M. Denson

Project title and number Regional Synthesis

State (s) Wyoming

[illegible]

(over).

State (s) Wyoming

7,6

* Also listed under S.D., V.D., + Wyo.

(over)

ANAL: 1/3/55

HALL

Project title and number

State (s)

Wagon

pH
 7.5
 7.3
 7.8V

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 7/27/54

Project Chief		Project title and number		Fuels 930		State (s)		Wyoming			
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LW-321	Teton	NE 1/4 NW 1/4 2-42N-115W	SP Kelly warm spg	1 sec. ft. or more C	Probably T	Cal. adj. Suspect from cent to M. Pliocene thru 1000' of M. Pliocene	May be Madison ls to SH, but if so has to come thru M. Pliocene tuff	7/2/54	Love	5	7.6
LW-322	Teton	23-42N-112W	SP None.	1" pipe full C	Cgl	Pinyon cgl Paleocene	Cgl in Pinyon	7/2/54	Love	5	7.6
LW-323	Teton	28-42N-112W	SP Not known	1.5 sec. ft. C	Shale	Cody U. Cret.	Uncertain: 150' below base Bacon Ridge ss.	7/2/54	Love	5	7.9
LW-324	Teton	28-42N-112W	SP None	1 gal. per min. SM	Ss	Coaly sequence U. Cret. See Units 157-62, WGS Bull. 4D, P. 19	Ss in Coaly sequence	7/2/54	Love	10*	8.1
LW-325	Teton	1-42N-114W	ST Not known	3" pipe full C	Siltstone	Chugwater Triassic	Probably red siltstone in chugwater fm.	7/2/54	Love	8	7.7
LW-326	Teton	NE NE 4-42N-114W	SP None	1" pipe full C	Sh	Lower Sundance U. Jurassic	Uncertain	7/2/54	Love	5	7.9
LW-327	Teton	SE cor. 32-43N-114W	ST IWW Creek	4" pipe full C	Sh	Lower Sundance U. Jurassic	Probably L. Sundance Sh & ss.	7/2/54	Love	5	8.0
LW-328	Teton	17-48N-116W unsurveyed	SP West Flagg Ranch Hot	2" pipe full C	Rhyolite	Pliocene? unnamed Pliocene?	Probably rhyolite	7/6/54	Love	5	7.2
LW-329	Teton	17-48N-116W unsurveyed	SP Spg. 200' E of LW-328	1" pipe full C	Rhyolite	Pliocene? unnamed Pliocene?	Probably rhyolite	7/6/54	Love	6	7.4
LW-330	Teton	5-47N-115W unsurveyed	SP Not known	1 1/2" pipe full C	Rhyolite	Pliocene? unnamed Pliocene?	Probably rhyolite	7/6/54	Love	4	7.3
LW-331	Teton	33-47N-115W unsurveyed	SP None	1" pipe full C	Bentonite	Frontier Porcellanite zone U. Cret.	Probably basal Frontier ss.	7/6/54	Love	5	8.6
LW-332	Teton	NE cor. sec. 29, T. 46N., R. 114W	SP Not known	1" pipe full C	Tuff	Miocene unnamed Miocene	Basic andesite tuff	7/6/54	Love	5	7.9
LW-333	Teton	NE cor. sec. 29, T. 46N., R. 114W	SP None	1" pipe full C	Tuff	Miocene unnamed Miocene	Basic andesite tuff	7/6/54	Love	5	7.5
LW-334	Teton	NE NW 7-42N-115W	SP Not known	2" pipe full C	Ls & tuff	M. Pliocene unnamed M. Pliocene	White ls and tuff	7/6/54	Love	13	7.7
LW-335	Teton	SW SW 5-42N-115W	SP Not known	2" pipe full C	Ls & tuff	M. Pliocene unnamed M. Pliocene	White ls and tuff	7/6/54	Love	6	8.0

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Ss, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 9/7/54

Project Chief J. D. Love

Project title and number WPAEC 5-56703

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
			Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation	Age						
W-351	Teton	NE 1/4 35-40N-116	W	Sp	not known	1/2" pipe full	C	sandy claystone	Camp Davis	Lower Pliocene	Probably congl. or ss	7-29-54	Love	1	8.2
W-352	"	Center 35-40N-116	W	Sp	"	1" pipe full	C	congl.	"	"	Probably congl.	7-29-54	"	1	7.8
W-353	"	NENW 24-43N-115	W	Sp	Hunter	2" pipe full	C	probably porous ls	Teewinot	Middle Pliocene	Limestone or tuff	8-2-54	"	4*	8.1
W-354	"	CN 1/2 16-41 N-115	W	Sp	not known	1" pipe full	C	shale	Gros Vantre	Cambrian	Shale or limestone	8-3-54	"	4*	8.2
W-355	"	NW NE 21-41N-115	W	Sp	Curtis Canyon	1 sec ft	C	ls	Death Canyon	Cambrian	Probably limestone	8-3-54	"	2	7.9
W-356	"	NW NE NW 21-41N-115	W	Sp	not known	2" pipe full	c	shale	Gros Vantre	Cambrian	Shale or ls	8-3-54	"	1	8.0
W-357	"	NE SE SW 16-41N-115	W	Sp	N. Vanderweir	1/2 sec ft	C	cgl.	Teewinot	Middle Pliocene	Water probably comes from Gros Ventre	8-3-54	"	1	8.0
W-358	"	SE SE SW 16-41N-115	W	Sp	S. Vanderweir	1/2 sec ft	C	sh.	Gros Ventre	Cambrian	sh or ls	8-3-54	"	-1	8.0
W-359	"	SW SE SW 14-41N-115	W	Sp	not known	2 sec ft	C	dol	Bighorn	Indovician	probably dol.	8-3-54	"	-1	8.0
W-360	"	SE NE 14-41N-115	W	Sp	Soest sawmill	3/4 sec ft	C	ls	Madison	Miss.	ls.	8-3-54	"	-1	8.1
W-361	"	SW NE NE 14-41N-115	W	Sp	not known	1 1/2" pipe full	C	ss	Darwin ss	Penn.	probably ss	8-3-54	"	-1	7.9
W-362	"	NE NE NE 14-41N-115	W	Sp	"	1" pipe full	C	ss	"	"	"	8-3-54	"	-1	8.2
W-363	"	NW NW 7-42N-115	W	Sp	"	2" pipe full	C	ls	Teewinot	Middle Pliocene	probably tuffaceous ls	8-4-54	"	6*	8.2
W-364	"	NW NW SW 5-42N-115	W	Sp	"	1" pipe full	C1	Qal	Uncertain	Uncertain	see reverse side	8-4-54	"	3	8.2
W-365	"	NW NW SE 11-43N-115	W	Sp	Antelope	4" pipe full	C	Ls	Teewinot	M. Pliocene	probably tuffaceous ls	8-4-54	"	3	7.9

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ ss, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief		J. D. Love		Project title and number				Fuels 567		State (s)		Wyoming	
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)			
LN-336	Teton	SWSWSW 36-42N-115W	Sp Not Known	2-inch pipe full C	Dolomite	Phosphoria	Middle Permian	Cherty dolomite	7/13/54	Love	7.7		
LN-337	Teton	SS 4 14-42N-115W	Sp Not Known	2-inch pipe full C	Porous Tuffaceous Limestone	Middle Pliocene	Middle Eocene	Probably tuffaceous ls.	7/13/54	Love	7.70		
LN-338	Sublette	Approx. 10-27N-107W	Sp Not Known	2-inch pipe full C	Ss	Green River	Middle Eocene	tan soft limy shale	7/13/54	Love	8.4		
LN-339	Sublette	Approx. 7-27N-107W	Sp Sublette Spring	1/2 sec. ft. C	Ss	Green River	Middle Eocene	Not determinable	7/13/54	Love	9.0		
LN-340	Sublette	NW 4 33-36N-109W	Sp Red Spring	1 1/2-inch pipe full C	Cgl	Lowest Eocene	Lowest Eocene	Cgl	7/21/54	Love	7.3		
LN-341	Sublette	NE 4 32-36N-109W	Sp Deadhorse Spring	2-inch pipe full C	Cgl	Lowest Eocene	Lowest Eocene	Cgl	7/21/54	Love	7.4		
LN-342	Sublette	NW 4 8-35N-109W	Sp Not Known	2-inch pipe full C	Arkosic Ss	Wasatch	Lower Eocene	Arkosic ss	7/21/54	Love	7.5		
LN-343	Sublette	Approx. 11-35N-110W	Sp Not Known	1 1/2-inch pipe full C	Arkosic Ss	Wasatch	Lower Eocene	Not determinable	7/21/54	Love	7.9		
LN-344	Sublette	SW 4 10-35N-110W	Sp Not Known	2-inch pipe full C1	Arkosic Ss	Wasatch	Lower Eocene	Not determinable	7/21/54	Love	6.5		
LN-345	Sublette	NWNWSE 32-37N-111W	Sp Sargent Spring	3-inch pipe full C	Ss	Pass Peak fm.	Lower (?) Eocene	Not determinable	7/21/54	Love	7.5		
LN-346	Teton	NW 4 26-41N-116W	Sp Machine Shop	1 sec. ft. C	Al	Alluvial fan overlying Madison ls.	Pleist.	Water probably from Madison ls.	7/26/54	Love	7.7		
LN-347	Teton	SW 4 23-41N-116W	Sp Elk Refuge	1/2 sec. ft. C	Ls.	Madison ls.	Mississippian	Not determinable	7/26/54	Love	7.6		
LN-348	Teton	ENWNE 11-41N-116W	Sp Soucher Hill Spring	3-inch pipe full C	Probably Cambrian Ls.	Death Canyon ls.	Cambrian	Not determinable	7/26/54	Love	7.6		
LN-349	Teton	(unsurveyed) SWSWNE 4-43N-114W	Sp Not Known	1/2 sec. ft. C	Siltstone	Poko Arlie member of	Upper Triassic	Not determinable	7/27/54	Love	7.6		
LN-350	Teton	(unsurveyed) SWSWNE 5-43N-114W	Sp Unnamed	1-inch pipe full C	limy shale	Sundance	Middle Jurassic part of	Not determinable	7/27/54	Love	6.6		

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Ss, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief		J. D. Love		Project title and number						State (s)		Wyo.	
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)			
LM-366	Teton	NWNW 35-43N-116W	Sp Unknown	1 sec. ft. C	Pleistocene Gravel	Pleist.	Pleist.	Not known	8/4/54	Love	2		
LM-367	Sublette	25-38N-113W	Sp Unknown	1" pipe full C	Ss	Hoback	L. Eocene	Probably ss.	8/17/54	Love	3		
LM-368	Tet on	NE NE 33-39N-115W	Sp Unknown	1/2 sec. ft. C	Cgl	Camp Davis	L. Pliocene	Probably cgl.	8/17/54	Love	1		
LM-369	Teton	NW SE 1-39N-116W	Sp Unknown	2 1/2" pipe full C	Cgl.	Camp Davis	L. Pliocene	Probably cgl.	8/19/54	Love	< 1		
LM-370	Teton	25-44N-113W	Well Stanolind Water well	1" pipe full C	Ss	Bacon Ridge	U. Cret.	Probably ss.	8/20/54	Love	1		
LM-371	Sublette	20-32N-107W	Sp Unknown	1" pipe full C	Ss	Wasatch	L. Eocene	Probably ss.	8/29/54	Love	< 1		
LM-372	Sublette	18-32N-107W	Sp Marcel Tronquet	2" pipe full C	Dol.	Devonian	Devonian	Not known	8/29/54	Love	< 1		
LM-373	Sublette	SW cor. 9-32N-107W	Sp Steele Hot Spring	4" pipe full C	Ss	Wasatch	L. Eocene	Not known	8/29/54	Love	< 1		
LM-374	Sublette	Boulder 26-32N-108W	Sp Rearind Pond	2 sec. ft. Cl	Gravel	Pleist.	Pleist.	Gravel	8/29/54	Love	< 1		
LM-378	Sublette	Gorges 23-39N-111W	Well Well	1" pipe full C	LS	Madison	Miss.	LS.	9/5/54	Love	< 1		
LM-379	Sublette	SW Cor. 1-38N-110W	Sp Green River Hot Spring	5 sec. ft. C	Dol.	Phosphoria	Permian	Probably dol.	9/6/54	Love	1		
LM-380	Teton	SW NE 31-43N-115W	St Unknown	2" pipe full C	Ls.	See reverse side	See Reverse side	Not known	9/17/54	Love	1		
LM-381	Teton	SE NE 2-39N-116W	Sp Unknown	1 1/2" pipe full C	Gravel	Pleist.	Pleist.	Gravel and silt	9/22/54	Love	1		
LM-382	Teton	NW SE 34-41N-116W	Sp Soest	3 gal. per min. C	Ss	Bacon Ridge?	U. Cret.	Ss	9/24/54	Love	1		
LM-383	Teton	NW SW 35-43N-116W	W Curtis Pumps Water well	3000/g.p.d. C	Pumicite	Peewinot	M. Pliocene	Probably pumicite	9/9/54	Love	< 1		

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/19/55
(unofficial return)
12/29/54

Project Chief J. D. Love under N. M. Denson Project title and number Fuels 5 - 567M State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
382	Carbon	SESWSW 30-25N-81W	Sp Unknown	3" pipe full C	Ls Minnekahta	Permian	Probably pre C granite	10-10-54	Love	23	7.9
383	Carbon	NW NW 31-25N-81W	Sp Unknown	1 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	24	7.7
384	Carbon	NW NW 31-25N-81W	Sp Unknown	1 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre-C crystallines	10-10-54	Love	26 (22.5)	7.8
385	Carbon	NW NW 31-25N-81W	Sp Unknown	1 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	23	7.8
386	Carbon	NW NW 31-25N-81W	Sp Unknown	1 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	24	7.6
387	Carbon	NW NW 31-25N-81W	Sp Unknown	4" pipe full C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	23	7.9
388	Carbon	NW NW 31-25N-81W	Sp Unknown	4" pipe full C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-11-54	Love	23	7.8
389	Carbon	NW NW 31-25N-81W	Sp Unknown	1/2" pipe C1	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	22	8.1
390	Carbon	NW NW 31-25N-81W	Sp Unknown	1/2" pipe C1	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	22	8.1
391	Carbon	SE cor. NE 1/4 36-25-82	Sp Cayton	1/2 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	25	7.9
392	Carbon	SE cor. NE 1/4 36-25-82	Sp Do	1/2 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	23	8.0
393	Carbon	NE cor. SE 1/4 36-25-82	Sp Unknown	2" pipe full C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	27	8.1
394	Carbon	NE cor. SE 1/4 36-25N-82W	Sp Unknown	2" pipe full C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	22	7.8
395	Carbon	SW SW NW 1-24N-82W	Sp Head of Smith Cr.	1 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	14 (11.5)	7.8
396	Carbon	SW SW NW 1-24N-82W	Sp Do	1 sec. ft. C	Ss Tensleep	Penn. ?	Probably pre C crystallines	10-10-54	Love	14	7.8

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* - DUPLICATE RETURN
(over)

ANAL: 1/19/55
1 unofficial returns
12/29/54

State (s) Wyoming

pH

(over)

ANAL: 12/13/54

State (s) Wyoming

36

WATER SAMPLE DATA .

Project Chief J. D. Love

Project title and number Fuels 5-567M

State (s) Wyoming

[illegible]

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. D. Love

Project title and number

State (s) Wyoming[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief J. D. Love

Project title and number Wyoming Basins, F-105

State (s) Wyoming

[illegible]

(over)

State (s) Wyoming

pH
7.5

(over)

OFF. ANAL.: 6/1/53

Project title and number

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF. ANAL.: 7/13/55

Project Chief		Project title and number							State (s)			
J. D. Love									Wyoming			
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LW-477	Albany	SW SW NE 29-26N-75W	Sp		C		Unnamed	Eocene or Oligocene	3/30/55	Atkinson	3	8.8
LW-478	"	"	Sp		Cl		"	"	"	"	5	8.9
LW-479	"	NW SW NE 29-26N-75W	Sp		C		"	"	"	"	12	8.7
LW-480	"	C WL NE NE 29-26N-75W	Sp		Cl		"	"	"	"	7	7.8
LW-481	"	NE NW NE 29-26N-75W	Sp		Cl		"	"	"	"	3	7.0
LW-482	"	NE cor SE NW 29-26N-75W	Sp		Cl		"	"	"	"	9	8.5
LW-483	"	Se cor NE NW 29-26N-75W	Sp		Cl		"	"	"	"	7	7.8
LW-484	"	NE NE NW 29-26N-75W	Sp		Cl		"	"	"	"	2	9x 9.0
LW-485	"	SW SE 29-26N-75W	Sp		Cl		"	"	"	"	5	9.0
LW-486	"	29-26N-75W	Sp		Cl		"	"	"	"	5	8.2
LW-487	"	NE SW NE 29-26N-75W	Sp		Cl		"	"	"	"	10	8.9
LW-488	"	SE NW NE 29-26N-75W	Sp		Cl	2	"	"	"	"	14	7.9
LW-489	"	SE SW NE 29-26N-75W	Sp		Cl		"	"	"	"	14	8.4
LW-490	"	NW NW SE 29-26N-75W	Sp		Cl		"	"	"	"	14	7.9
LW-491	"	NE NW SE 29-26N-75W	Sp		Cl		"	"	"	"	8	7.8

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

OFF. ANAL: 7/5/53

OFF. ANAL: 7/5/53

Project title and number

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Ss, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

OFF. ANAL.: 8/2/55

Project title and number

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss); Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

104

ANAL. 10/28/55

[illegible]

105

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF. ANAL: 11/29/55

Project Chief <u>Love</u>		Project title and number _____							State (s) <u>Wyoming</u>				
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LW-564	Albany	NE NE 16-13N-76W	Sp	1/2" pipe	C	Ss?	Top of Morrison	Upper Jurassic		10/17/55	Love	4	7.8
LW-565	Carbon	NE SW 2-24N-82W	Sp	1" pipe	C	granite	PreЄ	PreЄ	Granite	10/20/55	Love	<1	7.6
LW-566	"	SE NE 35-25N-82W	Sp	Dug well	C	Claystone	Contact granite and North Park (?) fm.		Granite	"	"	<1	7.9
LW-567	"	CEL SE 1/4 26-25N-82W	Sp	1 1/2" pipe	C	Granite	PreЄ	PreЄ	Granite	"	"	3	8.3
LW-568	"	NE SE 19-25N-81W	Sp	1 sec ft	C	Ss	Tensleep	Pennsylvanian		"	"	10	8.1
LW-569	"	NE SE 19-25N-81W	Sp	1 sec ft	C	Ss	"	"		"	"	7	8.1
LW-570	"	NE SE 19-25N-81W	Sp	1" pipe	C	"	TOP Tensleep	"		"	"	6	8.1
LW-571	"	NE SE 19 25N-81W	Sp 75' S of -570	1" pipe	C	"	"	"		"	"	6	8.1
LW-572	"	SW SW 30-25N-81W	Sp	32,000 gpd	C	Ls	Minnekahta	Permian		"	"	21	8.1
LW-573	"	NW NW 31-25N-81W	Sp	57,000 gpd	C	Ss	Tensleep	Penn		"	"	27	8.2
LW-574	"	NW NW 31-25N-81W	Sp	1 sec ft	C	"	"	"		"	"	18	8.1
LW-575	"	NW NW 31-25N-81W	Sp	1 sec ft	C	"	"	"		"	"	20	8.4
LW-576	"	C EL 36-25N-82W	Sp Cayton	162,000 gpd	C	"	"	"		"	"	21	8.1
LW-577	"	NE NE SE 36-25N-82W	Sp	14,000 gpd	C	"	"	"		"	"	23	8.2
LW-578	"	SW SW NW 1-24N-82W	Sp	1 sec ft	C	"	"	"		"	"	1.4	8.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

OFF. ANAL: 11/29/55

Project title and number

State (s) Wyoming

PH

8.1

8.3

8.

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ADAL: 1-18-56

Project title and number 6901051

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 1-19-55

State (s) Wyoming

2	7.7
2	7.7

(over)

ANAL: 1-18-56

Project title and number

State (s) WYOMING

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF. ANAL: 2/13/56

Project Chief Love

Project title and number Fuels 6901051

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LW-662	Carbon	NW NW SW 34-25N-81W	Sp Mud	2 gpm C	Silt-stone	Chugwater Triassic	Indeterminate	1-3-56	Bailey	15	7.9
LW-663	"	"	"	"	"	"	"	"	"	10	7.5
LW-672	"	NE SE SE 16-20N-81W	" Lower Large Pass Creek, outlet #1	C	"	North Park Miocene-Pliocene	"	1-9-56	Brock	11	7.9
LW-673	"	"	" same but Large outlet #2	C	"	"	"	"	"	11	7.6
LW-674	Albany	NW NE 29 26N-75W	" -	1 gpm C	Ss	Wind River Eocene	"	1-13-56	Love	13	7.3
LW-675	"	100' N of 674	" -	3" pipe C	"	"	"	"	"	13	8.2
LW-676	"	75' N of 675	" -	1 1/2" pipe C	"	"	"	"	"	14	8.2
LW-677	"	NW NE 29 26N-75W	St -	6" pipe C	"	"	"	"	"	19	7.9
LW-678	"	SE SW 29 26N-75W	Sp -	1 gpm Cl	"	"	"	"	"	310	7.8
LW-679	"	"	"	"	"	"	"	"	"	410	8.1
LW-680	"	"	"	"	C	"	"	"	"	720	8.1
LW-681	"	"	"	"	Cl	"	"	"	"	2620	7.9
LW-682	"	"	"	1/2" pipe C	"	"	"	"	"	810	7.5
LW-683	"	"	"	"	Cl	"	"	"	"	3100	7.4
LW-684	"	"	"	1 gpm	"	"	"	"	"	762	7.4

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

UNOFF. ANAL: 2.13/5%

State (s) Wyoming

112

UNOFF. RES.: 7/13/55

[illegible]

* RUN TWICE; OTHER
ANALYSIS WAS 140ppb.

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UP OFF. ADAL: 7/6/55

Project Chief John F. Murphy (J. D. Love)

Project title and number

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	PH
MW-16	Fremont	16 37N-94W	W ?	? C1	? Wind River	Early Eocene	?	6/4/55	J. F. Murphy	<1	8.5
MW-17	"	NE SW 27 37N-94W	W -	Strong but undetermined	C	? Wind River	Early Eocene	"	"	5	7.2
MW-18	"	28 36N-93W	Creek Muskrat	Intermittent flow	C	Al	- Quaternary	"	"	3	7.5
MW-19	"	NE 22 33 36N-92W	W Davison	Unknown but poor	VM	Al(?)	- Quaternary(?)	"	"	20	7.6
MW-20	"	SE 9 36N-93W	Sp Muskrat	2 gpm	SM	Al(?)	- Quaternary(?)	"	"	120	7.8
MW-21	"	NW 1 36N-94W	W Grieve	20 gpm	C	?	Wind River Early Eocene	"	"	5	7.7
MW-22	"	NW 26 36N-94W	Sp Dry Cheyenne	Unknown	C	Al(?)	? Quaternary(?)	"	"	2	7.3
MW-23	"	NE 15 36N-93W	W -	50 gpm	C	Ar(?)	Wind River Early Eocene	"	"	4	7.9
MW-24	"	NE 15 36N-93W	W -	172 gpm	C	Ar(?)	Wind River Early Eocene	"	"	1	7.6
MW-25	"	NW 9 36N-93W	W Davison winter camp	40 gpm	C	?	Wind River Early Eocene	"	"	5	7.9
MW-26	"	Center 12 36N-93W	Seismograph - drill hole	-	VM	?	Wind River Early Eocene	"	"	12	8.2
MW-27	"	NE 36 36N-93W	Creek Muskrat	Intermittent flow	C	Al	- Quaternary	"	"	100	7.4
MW-28	"	34 36N-93W	Seismograph - drill hole	-	VM	?	Wind River Early Eocene	"	"	340	7.3
MW-29	"	NW 16 36N-92W	W -	Unknown	C	-	-	"	"	1	7.9
MW-30	"	36 36N-94W	W -	Strong but undetermined	C	-	-	"	"	<1	8.2

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

OFF. ANAL.: 8/5/55

Project title and number

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

115

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

LINEOFF RES: 8/10/55

Project Chief John T. Murphy Project title and number Laramie Field Office 6-90105 State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	PH
WM-33	Fremont	5-35N-93W	Seismo-graph	-	None	VM	-	Wind River	Eocene	July 1955	J. T. Murphy	2	7.3
WM-34	"	35-36N-93W	"	"	None	SM	-	"	"	"	"	170	7.3
WM-35	"	35-36N-93W	"	-	None	SM	-	"	"	"	"	26	7.4
WM-36	"	34-36N-93W	"	-	None	SM	-	"	"	"	"	1	7.3
WM-37	"	22-36N-93W	"	-	None	M	-	"	"	"	"	4	7.4
WM-38	"	25-36N-93W	"	-	None	C	-	"	"	"	"	8	7.4
WM-39	"	36-36N-93W	"	-	None	VM	-	"	"	"	"	< 1	7.1
WM-40	"	15-35N-93W	dry creek bottom	Conant	None	M	Al	-	Quaternary	"	"	33	7.2
WM-41	"	3-35N-93W	"	Conant	None	VM	Al	-	"	"	"	48	7.2
WM-42	"	36-36N-93W	Seismo-graph	-	NONE	M	-	Wind River	Eocene	"	"	< 1	7.4
WM-43	"	1-35N-93W	dry creek bottom	-	None	VM	Al	-	Quaternary	"	"	37	7.3
WM-44	"	35-36N-93W	"	-	None	VM	"	-	"	"	"	92	7.4
WM-45	"	33-36N-92W	"	-	None	VM	"	-	"	"	"	40	7.4
WM-46	"	18-44N-104W	Sp	-	1 gpm	C	T (?)	Wiggins formation	Oligocene (?)	"	"	1	6.9
WM-47	Hot Springs	West half 44N-100W	"	-	None	C	-	-	-	"	"	3	7.4

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

State (s) Wyoming

pH

7.3

7.5

(over)

FUELS BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

UNOFF. ADV. : 8/26/55

Project Chief J. D. Love (Murphy)

Project title and number 620105-1

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH			
MM-50	Niobrara	36-34N-67W	W	-	2 gpm	C	-	White River basal	Oligocene	Shale, Tuff, siltstone-ss of White R. and Arikaree	6-9-55	Mrak	33	7.7
MM-51	"	25-36N-65W	Trench	-	-	C	ss/sh	White R.	"	Sh & buffaceous claystone	6-21-55	"	2030	7.7
MM-52	"	30-35N-65W	W	-	2½ gpm	C	-	White River	"	"	6-29-55	"	33	8.1
MM-53	"	25-35N-66W	Sp	-	1½ gpm	C	shale	basal White R.	"	"	"	"	39	8.1
MM-54	"	35-35N-66W	Sp	-	¼ gpm	C	fractured shale	"	"	sh, tuff. clayst., siltst., cong.	7/1/55	"	39	8.2
MM-55	"	8-34N-66W	Sp	-	½ gpm	C	"	"	"	sh, tuffaceous claystone	7/2/55	"	56	7.7
MM-56	"	4-34N-66W	Sp	-	3½ gpm	C	shale	"	"	"	"	"	23	8.0
MM-57	"	2-33N-67W	Sp	-	25 gpm	C	Al	On basal Twr	"	"	7/7/55	"	16	7.6
MM-58	"	6-34N-64W	Sp	-	-	C	"	On lower Arikaree	Miocene	tuffaceous clayst., siltst., f-g ss	7/11/55	"	45	7.7
MM-59	"	32-35N-64W	W	-	2½ gpm	C	-	-	-	"	"	"	34	7.7
MM-60	"	20-35N-64W	Sp	-	22 gpm	C	Ss	Basal Twr	Oligocene	"	"	"	25	7.7
MM-61	"	3-35N-64W	W	-	8½ gpm	C	-	"	"	"	"	"	4	7.8
MM-62	"	18-36N-62W	W	-	-	C	shale	Pierre shale	Cretaceous	"	7/12/55	"	42	7.7
MM-63	"	5-35N-64W	Sp	-	4½ gpm	C	"	"	"	"	"	"	39	7.4
MM-64	"	11-35N-65W	Sp	-	1½ gpm	C	"	basal Twr	Oligocene	"	7/19/55	"	4	7.8

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA

LINOFF, ANNAL: 8/26/55

Project Chief J. D. Love (Murphy) Project title and number 690105-1 State (s) Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/25/55

Project Chief J. F. Murphy (Love)

Project title and number 690105

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
WM-75	Fremont	23-35N-93W	St -	Intermittent VM	Al -	Quaternary	-	8/4/55	Hillberry	12	7.3
WM-76	"	23-35N-93W	Sp -	Negligible SM	- -	-	-	"	"	6	7.3
WM-77	"	24-35N-93W	St -	Intermittent VM	Al -	Quaternary	-	"	"	23	7.3
WM-78	"	33?-36N-92W	St Conant	" SM	" -	"	-	"	"	32	7.6
WM-79	"	4-35N-92W	St " "	" SM	" -	"	-	"	"	12	7.0
WM-80	"	11-35N-92W	St " "	" VM	" -	"	-	"	"	35	7.5
WM-81	"	18-35N-91W	St " "	" VM	" -	"	-	"	"	58	7.6
WM-82	"	20-35N-91W	Sp -	2 gpm C	- -	"	-	"	"	21	7.9
WM-83	"	20-35N-91W	Sp -	- M	- Wind River	Early Eocene	-	"	"	1	7.4
WM-84	"	30-35N-91W	" -	- M	- "	"	-	"	"	21	7.4
WM-85	"	SW 27 2N-4E	W -	None C	- -	-	-	July 55	Dawson	2	7.6
WM-86	"	29-44N-10E	Sp -	40 gph C	- -	Tertiary	Volcanic cg.	"	Hillberry	21	7.5
WM-87	Albany	11-12N-76W	Sp -	less than 1 gpm C	- -	-	-	8/7/55	Sexton	23	7.9
WM-88	"	20-13N-76W	Sp -	" C	- -	-	-	"	"	10	7.8

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief		Project title and number								State (s) Wyoming				
Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation						
MW-89	Carbon	SW NE 21 28N-79W	Sp	-	Fills 1" pipe full	C	-	-	-	-	Aug. 1955	Cronberg	49	7.7
MW-90	"	SE NE 20 28N-78W	Sp	-	Fills 2" pipe full	C	-	-	-	-	do.	do.	26	7.6
MW-91	Fremont	SE 11 32N-93W	Sp	-	-	C	-	-	-	-	do.	Ferguson	1	7.1
MW-92	"	SW 12 32N-93W	Sp	-	-	C	-	-	-	-	do.	do.	2	7.2
LW-516	Uinta	36-14N-113W	Sp	-	Flows 6" pipe	C	-	-	-	-	June 15 1955	Stainbrook	6	8.0
LW-517	Sweet-water	12N, 105W	Sp	-	Flows 2" pipe full	C	-	-	-	-	June 1955	do.	6	7.9
LW-518	-	-	Sp	-	Flows 6" pipe full	C	-	-	-	-	8/1/55	do.	21	7.2
LW-519	Teton	-	Sp	-	-	C	-	-	-	-	Aug. 1955	Imeson	21	7.3
LW-520	"	-	Sp	-	-	C	-	-	-	-	do.	do.	21	7.5
LW-521	"	-	Sp	-	-	SM	-	-	-	-	do.	do.	21	8.2
LW-522	"	-	Sp	-	-	Sm	-	-	-	-	do.	do.	1	7.6
LW-523	"	-	Sp	-	-	C	-	-	-	-	do.	do.	21	7.4
LW-524	"	-	Sp	-	-	C	-	-	-	-	do.	do.	21	7.8
MW-93	Albany	NW 33 14N-76W	W	-	pumps 1300 gpm	C	-	-	-	-	do.	Sexton	4	7.5
MW-94	"	SE 9 12N-76W	Sp	-	Fills 1/4" pipe	C	-	-	-	-	do.	do.	8	7.6

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 12/24/55

Project Chief John Murphy, Norman Privrasky

Project title and number Big Piney 889

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow/(gpm)	Clarity3/	Type 4/	Formation	Age					
PW-1	Sublette	1-28N-114W	W	Cretaceous #1	3 gpm	C	*	*	*	-	6/15/55	Privrasky	21 51	7.7
PW-2	"	2-27N-113W	S	-	less than 1 gpm	C	Ar	Knight	Eocene	-	7/9/55	"	5	8.1
PW-3	"	29-27N-112W	W		5 gpm	C	*	*	*	-	8/26/55	"	21	8.5
PW-4	"	7-28N-112W	S		1/2 gpm	C	Ar	Knight	Eocene	-	9/7/55	"	8	8.3
PW-5	"	15-28N-113W	S		7 gpm	C	"	"	"	-	"	"	2	7.9
PW-6	"	29-28N-113W	S	Tiptop	2 gpm	C	"	"	"	*	"	"	21	7.9
WM-95	Fremont	29-33N-90W	Drill hole	-	-	SM	-	-	-	-	9/55	Ferguson	72	7.5
WM-96	"	10-32N-94W	"	Ana #5	-	VM	-	-	-	-	"	"	15	7.6
WM-97	"	10-32N-94W	"	Ana #8	-	VM	-	-	-	-	"	"	11	7.4
WM-98	"	10-32N-94W	"	Ana	-	VM	-	-	-	-	"	"	32	7.3
WM-99	Albany	SW 35 13N-76W	W	-	-	C	-	-	-	-	"	Sexton	31	7.7
WM-100	Fremont	SE 19 28N-91W	Sp	-	-	C	-	-	-	-	7/55	Ferguson	21	7.3
WM-101	"	NE NW SW 21-28N-91W	Sp	-	-	C	-	-	-	-	"	"	21	7.2
WM-102	"	NW SE 21 28N-91W	Sp	-	-	C	-	-	-	-	"	"	5	7.1
WM-103	"	SE NW 22 28N-91W	Sp	-	-	C	-	-	-	-	"	"	2	7.6

* Information yet to be obtained.

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (3s), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

BNAL: 10/24/55

Project title and number

State (s) Wyoming

pH
7.8
7.3
7.7
6.7
7.3
7.3

(over)

UNOFF. ANAL: 11/23/55

Project title and number Lenore Fuels 550

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 1/27/56

Project title and number

State (s) Wyoming

pH

7.7
7.4
7.4
7.7

(over)

ANAL: 10/28/55

Project title and number Big Piney Project 889

State (s) Wyoming

pH
8.4
7.8
7.0
7.5
7.3

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 10/11/55

Project Chief Laura W. McGrew

Project title and number Whalen-Wheatland EU-2

State(s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
McW-1-55	SE SW Pierre	4-26N-66W	Sp Warm Spgs.	About 5 gpm C	Ls Hartville	Penn.		July 1955	McGrew Whalen and NE	9	7.9
Mc-21A-55	Goshen	14-25N-65W	Sp	About 1/16 gpm C	Al	Recent		"	"	7	7.8
Mc-23-55	Platte NWSW	25-25N-66W	Sp Cottonwood Falls	About 5 gpm C	Cgl Gering	Early Miocene		"	Eugen West	6	7.9
Mc-35-55	" SE NW	35-25N-66W	Sp	About 2 gpm C	"	"		"	Eugen West	8	7.9
Mc-36-55	" SE NW	10-24N-66W	Sp	About 1 gpm C	"	"		"	Antelope Gap	6	7.6
Mc-71-55	" SWSW	4-26N-64W	W	- C	Ss Arikaree	"		Aug. 1955	Casler Hill	28	7.7
Mc-73-55	"	15-26N-64W	W	- C	Ss(?) Arikaree (?)	Early Miocene(?)		"	Casler Hill	29	7.7
Mc-75-55	" NWSW	12-23N-66W	W	- C	Ss Arikaree	Early Miocene		"	Casler Hill	22	7.7
Mc-76-55	Goshen	15-24N-65W	W	- C	"	"		"	"	7	8.0
Mc-77-55	"	19-24N-64W	W	- C	Siltstone Brule	Oligocene		"	"	11	7.5
Mc-78-55	"	30-25N-63W	W	- C	"	"		"	"	29	7.7
Mc-79-55	"	1-24N-65W	St Cherry Creek	About 2 gpm C	Ss Arikaree	Early Miocene		"	"	3	8.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 3/2/55

Project title and number

Poison Basin Area

State (s) Wyoming

pH

8.4

7.84

8.14

123

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

051. APR 11/24/55

Project Chief George E. Prichard

Project title and number Baggs area 6908293

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	Se (ppb)
			Type 1/	Name	Flow (gpm)	Clarity 3/	Type 4/	Formation	Age						
PW5-200	Carbon	SE SW 31 13N-92W	Air-drilled prospect	ed hole	?	CL to SM	Ss	Browns Park	Miocene	Qal covers surface but bedrock is arkose	7/26/55	Prichard & Donnelly	250	7.5	15
PW5-201	"	SE SE 31 13N-92W	"		?	CL to SM	Ss	"	"	"	"	"	1030	7.3	150
PW5-202	"	"	"			SM	SS	"	"	"	"	"	1250	7.8	30
PW5-203	"	"	"			CL	SS	"	"	"	"	Donnelly	10800	7.5	125
PW5-204	"	"	"			SM	SS	"	"	"	"	"	1320	7.7	125
PW5-205	"	SW SW 31 13N-92W	"			SM	SS	"	"	"	"	"	32	7.5	8
PW5-206	"	"	"			SM	SS	"	"	"	"	"	135	7.4	15
PW5-207	"	SW NW 5 12N-92W	"			SM	SS	B	"	"	"	"	197	7.5	20
PW5-208	"	NE NE 10 12N-92W	"			SM	SS	"	"	"	"	"	29	7.7	15
PW5-209	"	"	"			SM	SS	"	"	"	"	"	270	8.2	150
PW5-210	"	XX NE NW 3-12N-92W	"			SM	SS	"	"	"	"	"	6	7.9	5
PW5-211	"	NW NW 3 12N-92W	"			CL	SS	"	"	"	8/2/55	"	3	7.8	5
PW5-212	"	SW SW 3 12N-92W	"			CL	SS	"	"	"	8/12/55	"	11	8.4	<3
PW5-213	"	"	"			SM	SS	"	"	"	"	"	4	7.8	<3
PW5-214	"	NW NW 10 12N-92W	"			SM	SS	"	"	"	"	"	6	7.7	10

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

OFF. ANAL: 11/29/55

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

120

State (s) Wyoming

pH
7.7
8.0
7.7
7.3
7.9
7.7
7.5

(over)

WATER SAMPLE DATA

ANAL: 10/28/55

Project Chief Ernest I. Rich

Project title and number Hiland Project 6203283

State (s) Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 10/31/55

Project Chief Ernest I. Rich

Project title and number Hiland Project - 6908983

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation	Age					
HPR-14	Natrona	19-36N-86W	Windmill			C	Unknown	Twdr.	Eocene	Sandstone	10/10/55	E. Rich	1	7.8
HPR-15	"	30-36N-87W	"			C	"	"	"	"	"	"	1	7.7
HPR-16	"	2-36N-88W	"			C	"	"	"	"	"	"	2	7.8
HPR-17	"	10-36N-88W	"			C	"	"	"	"	"	"	28	7.7
HPR-18	"	6-36N-88W	"			C	"	"	"	"	"	"	13	7.2
HPR-19	"	17-36N-88W	"			C	"	"	"	"	"	"	<1	8.1
HPR-20	"	23-31N-83W	X Sp		less than 1 gpm	C	X Ar	X Twdr	X Oligocene	X "	X 10/13/55	"	9	7.9
HPR-21	"	30-26N-86W	Windmill			C	Unknown	Twdr	Eocene	"	10/14/55	"	2	7.0
HPR-22	"	23-36N-89W	"			C	"	"	"	"	"	"	3	7.6
HPR-23	"	12-35N-88W	"			C	"	"	"	"	"	"	<1	7.9
HPR-24	"	7-35N-87W	"			C	"	"	"	"	"	"	10	7.7
HPR-25	"	7-37N-86W	"			C	"	"	"	"	"	"	1	9.7
HPR-26	"	32-37N-88W	"			C	"	"	"	"	"	"	22	8.0

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA .

State (s) Wyoming

134

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/7/55

Project Chief C. S. Robinson Project title and number Devils Tower, Wyoming State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
W-1	Crook	12-53N-66W	Sp -	unknown C	ss-sh Sundance	Jurassic	ss-sh	7/9/54	W.J. Mapel	1	8.1 ✓
W-2	"	11-53N-66W	Sp -	1 1/2 gpm Cl	" Fault Sundance-Morrison	"	"	7/11/54	"	4	8.2 ✓
W-3	"	13-53N-66W	Sp -	7 1/2 gpm C	ss Spearfish	Triassic	"	7/12/54	"	12	7.3 ✓
W-4	"	10-53N-66W	W -	none C	" Sundance	Jurassic	"	7/12/54	"	2	8.1 ✓
W-5	"	10-53N-66W	W -	none C	"	"	"	7/12/54	"	4	8.3 ✓
W-6	"	23-53N-66W	Sp -	1/2 gpm C	"	"	"	7/12/54	"	3	7.9 ✓
W-7	"	29-53N-66W	W -	none C	"	"	"	7/13/54	"	12	7.5 ✓
W-8	"	4-52N-65W	W -	none C	"	"	"	7/13/54	"	3	7.8 ✓
W-9	"	33-53N-65W	W -	none C	"	"	"	7/13/54	"	2	7.7 ✓
W-10	"	29-53N-65W	W -	none C	"	"	"	7/13/54	"	2	8.0 ✓
W-11	"	19-54N-65W	W -	Artesian well C flow unknown	unknown Spearfish ?	Triassic?	unknown	7/14/54	"	2	7.9 ✓
W-12	"	3-54N-65W	Sp -	± 1 gpm C	ss-sh Sundance	Jurassic	"	7/15/54	"	5	7.6 ✓
W-13	"	3-54N-65W	W -	none C	"	"	"	7/15/54	"	5	7.7 ✓
W-14	"	3-54N-65W	W -	none C	"	"	"	7/15/54	"	6	7.9 ✓
W-15	"	23-55N-65W	W -	none C	ss Lakota	Cretaceous	ss	7/15/54	2	4	8.1 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ADAL: 1/7/55

Project Chief C. S. Robinson

Project title and number Devils Tower

State (s) Wyoming, Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
W-16	Crook, Wyoming	8-52N-65W	Sp -	10 gpm C	ss Sundance	Jurassic	ss-sh	7/16/54	W. J. Mapel	3	7.5
W-17	"	7-53N-65W	Sp -	unknown C	ss-sh	"	"	7/19/54	"	5	8.1
W-18	"	32 - "	W -	none C	ss	"	"	7/20/54	"	2	7.9
W-19	"	32 - "	W -	none C	"	"	"	7/21/54	"	5	7.7
W-20	"	11-52N-65W	Sp -	1/2 gpm C	ss-sh	"	"	7/22/54	"	1	7.7
W-21	"	13 - "	W -	none C	ss	"	"	7/22/54	"	1	8.0
W-22	"	23-53N-65W	W -	none C	ss-sh	Spearfish Triassic	"	7/22/54	"	2	7.9
W-23	"	5-52N-64W	Sp -	unknown C	siltstone Sundance	Jurassic	"	7/23/54	"	2	7.7
W-24	"	24-53N-65W	Sp -	± 1 gpm C	ss	"	"	7/25/54	"	5	7.9
W-25	"	15-52N-64W	W -	none C	"	Lakota Cretaceous	ss	7/25/54	"	< 1	7.5
W-26	"	34-53N-64W	Sp -	unknown C	"	Sundance Jurassic	ss-sh	7/27/54	"	1	7.8
W-27	"	34 - "	Sp -	2 gpm C	alluvium			7/28/54	"	5	7.6
W-28	"	7 - "	Sp -	3 gpm C	ss Sundance	Jurassic	ss-sh	7/29/54	"	3	8.0
W-29	"	27 - "	W -	none C	ss-sh	Morrison?	"	7/29/54	"	< 1	7.6
W-30	"	27 - "	W -	none C	"	Sundance	"	7/29/54	"	2	7.9

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
... WATER SAMPLE DATA ...

UNOFF. ANAL. MARCH 17, '55

Project Chief C. S. Robinson

Project title and number Devils Tower, Wyoming

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
W-31	Crook, Wyo.	22-53N-64W	Sp.	-	$\frac{1}{2}$ - 1	C	ss	Lakota	Cret.	sandstone	Aug. 54	Mapel	< 1
W-32	"	6-53N-66W	"	-	71	Cl	"	"	"	"	"	Robinson	21
W-33	"	18-53N-66W	W	-	none	C	"	Morrison	Jurassic	sandstone and sh.	"	"	6
W-34	"	17-53N-66W	Sp	-	71	Cl	sh	"	"	"	"	"	7
W-35	"	2-53N-65W	"	-	5	C	ss	Sundance	"	sandstone	"	Mapel	9
W-36	"	17-53N-64W	"	-	10	"	"	"	"	"	"	"	4
W-37	"	31-54N-64W	"	-	6	"	"	"	"	"	"	"	5
W-38	"	35-54N-64W	"	-	$1\frac{1}{2}$	"	"	"	"	"	"	"	3
W-39	"	35-54N-64W	"	-	$1\frac{1}{2}$ -2	"	"	"	"	"	"	"	2
W-40	"	10-53N-64W	"	-	2	"	"	"	"	"	"	"	6
W-41	"	28-53N-64W	W	-	none	"	"	"	"	"	"	"	2
W-42	"	33-53N-64W	So	-	+10	"	"	"	"	"	"	"	3
W-43	"	32-54N-64W	"	-	71	"	"	"	"	"	"	Bergandahl	7
W-44	Campbell Wyo.	36-55N-71W	"	Soda Sp.	3-5	"	unknown	Lebo sh.	Paleocene	sandstone, sh.	"	"	< 1
W-45	Crook, Wyo.	18-54N-65W	"	-	1	"	ss	Lakota	Cret.	sandstone	"	Mapel	3.3

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF. ANAL. MARCH 17 '56

Project Chief C. S. Robinson Project title and number Devils Tower, Wyoming State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
1-46	Crook, Wyo.	18-54N-65W	W -	none C	ss Fall River	Cret.	sandstone	Sept. 54	Mapel	4	7.7 ✓
1-47	"	18-54N-65W	" -	" "	" "	"	"	"	"	2	7.2 ✓
1-48	"	34-54N-66W	Sp -	±2 Cl	" "	"	"	"	"	< 1	7.1 ✓
1-49	"	33-54N-66W	W -	none C	" "	"	"	"	"	2	7.3 ✓
1-50	"	20-53N-66W	Sp -	71 Cl	" Lakota	"	"	"	Robinson	5	7.4 ✓
1-51	"	34-54N-66W	" -	±1 C	Base of talus, phonolite plug (Missouri Buttes)			"	"	2	7.3 ✓
1-52	"	33-54N-66W	" -	±1 "	Base of talus, phonolite plug (Missouri Buttes)			"	"	15	7.6 ✓
1-53	"	8-54N-65W	" -	±2 Cl	ss Sundance	Jurassic	sandstone	"	Mapel	5	7.7 ✓
1-54	"	6-54N-65W	" -	1/2 C	ss, sh. Fuson	Cret.	ss and sh.	"	"	24	8.1 ✓
1-55	"	21-54N-66W	W -	- C	" "	"	"	"	"	8.5	7.8 ✓
1-56	"	21-54N-66W	" -	- C	ss Lakota	"	sandstone	"	"	1	7.7 ✓
1-57	"	32-55N-66W	" -	- C	" Newcastle	"	"	"	"	2	7.7 ✓
1-58	"	17-52N-66W	Sp -	1 Cl	" Sundance	Jurassic	"	"	"	2	7.2 ✓
1-59	"	34-54N-66W	" -	1 C	ss, sh Fuson	Cret.	ss and sh	"	Robinson	33	7.8 ✓
1-60	"	26-54N-66W	W -	- C	" Morrison	"	"	"	"	4	7.2 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 3/16/55

Project Chief C. S. Robinson

Project title and number Devils Tower, Wyoming

State (s) Wyoming-Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
W-61	Crook Wyo.	9-55N-65W	Sp -	± 1 C	Ss	Fall River Cret.	Sandstone	Sept. '54	Robinson	15	7.9 ✓
W-62	"	10-55N-65W	" -	± 1 Cl	Ss	Lakota	"	"	"	14	7.8 ✓
W-63	"	1-54N-67W	Well -	- C	Ss	Fall River	"	Sept. '54	Mapel	< 1	8.1 ✓
W-64	"	1-54N-67W	Sp -	± 1 C	Ss	"	"	"	"	< 1	7.8 ✓
W-65	"	11054N-66W	Sp -	± 2 C	Ss	"	"	"	"	6	8.1 ✓
W-66	"	34-57N-64W	Well -	- C	Ss	"	"	"	Robinson	18	8.0 ✓
W-67	"	22-56N-64W	Sp Hanson	10gals/hr. Cl	Ss & Sh	Lakota	"	"	"	6	8.2 ✓
W-68	"	30-56N-64W	" -	" Cl	Ss	Fuson or Lakota	"	"	"	8	8.0 ✓
W-69	"	19-56N-64W	" -	" Cl	Sh & Ss	Fuson	"	"	"	4	8.0 ✓
W-70	"	20-56N-64W	Well -	- Cl	Ss	Fall River	"	"	"	2	8.4 ✓
W-71	"	20-56N-64W	Sp -	10gals/hr. Cl	Ss	"	"	"	"	25	8.2 ✓
W-72	"	30-56N-64W	Sp -	2gals/hr. C	Ss	"	"	"	"	8	8.0 ✓
W-73	"	17-56N-64W	Well Pearson	- C	Ss	"	"	"	"	38	7.7 ✓
W-74	"	6-53N-66W	Well Hogue	- C	Sh	Fuson	"	Sandy shale	Oct. '54	3	7.8 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/2/54

Project Chief Stephens, James G.

Project title and number Saratoga, Wyoming F-830

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
WSW-1	Carbon	SW $\frac{1}{4}$ Sec. 36 T18N, R85W	Sp	--	estimate 5	C	Al	Browns Park	Miocene	not determinable	9 July 54	Stephens & Bergin	21	7.5
WSW-2	"	SE $\frac{1}{4}$ Sec. 36 T18N, R85W	R	--	-----	C-waves stir up shore areas	-----	Browns Park	"	" "	9 July 54	"	15	8.0
WSW-3	"	SW $\frac{1}{4}$ Sec. 16 T17N, R85W	Sp	--	estimate 2	C	Contact Ss	Niobrara	Cretaceous	water seepage thru conglomerate	12 July 54	"	7	7.6
WSW-4	"	SW $\frac{1}{4}$ Sec. 17 T17N, R85W	Sp	--	estimate 3	C	Al gravel	Undated conglomerate	Tertiary	seepage thru sandstone and gravel	"	"	7	7.0
WSW-5	"	SW $\frac{1}{4}$ Sec. 20 T17N, R85W	Sp (sulphur)	--	estimate 2	C	Al	Cloverly?	Cretaceous	not determinable	"	"	1	7.1
WSW-6	"	SE $\frac{1}{4}$ Sec. 19 T17N, R85W	Sp	Iron sp	estimate 4	C	Ss	Cloverly	Cretaceous	not determinable	"	"	3	7.0
WSW-7	"	NW $\frac{1}{4}$ Sec. 20 T17N, R85W	Sp	--	estimate 6	C	Ss	Undated conglomerate	Tertiary	Ss	"	"	7	7.5
WSW-8	"	NE $\frac{1}{4}$ Sec. 33 T17N, R86W	Sp	--	estimate 2	SM	Al	North Park?	Pliocene	not determinable	"	"	26	7.2
WSW-9	"	NW $\frac{1}{4}$ Sec. 34 T17N, R86W	Sp	--	estimate 3	C	Al	"	"	" "	"	"	16	7.3
WSW-10	"	NE $\frac{1}{4}$ Sec. 27 T17N, R86W	Sp	--	estimate 3	C	Ss	"	"	" "	"	"	10	7.4
WSW-11	"	NE $\frac{1}{4}$ Sec. 21 T17N, R86W	Sp	--	estimate 10	C	?	"	"	" "	"	"	9	7.4
WSW-12	"	SE $\frac{1}{4}$ Sec. 16 T17N, R86W	Sp	--	estimate 8	C	?	"	"	" "	"	"	7	7.4
WSW-13	"	NW $\frac{1}{4}$ Sec. 19 T17N, R86W	St	--	?	SM	perennial	"	"	" "	"	"	19	7.9
WSW-14	"	NW $\frac{1}{4}$ Sec. 35 T17N, R86W	Well	Paul Boden	?	C	congl.	Browns Park	Miocene	" "	"	"	6	7.5
WSW-15	"	NW $\frac{1}{4}$ Sec. 35 T17N, R86W	Seep	"	Seep	Cl	Al	"	"	" "	"	"	-1	7.1

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM), Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/2/54

Project Chief Stephens, James G.

Project title and number Saratoga, Wyoming F-830

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
WSW-16	Carbon	W ₂ Sec. 4 T16N, R86W	Sp	--	estimate 1	C	Al	North Park ?	Pliocene	not determinable	12 July 54	Stephens & Bergin	2
WSW-17	"	W ₂ Sec. 31 T17N, R86W	Sp	--	estimate 6	C	Ss	"	"	ss	"	"	8
WSW-18	"	SE ₄ Sec. 36 T17N, R87W	Sp	--	estimate 8	C	Ss	"	"	ss and conglomerate	"	"	9
WSW-19	"	NW ₄ Sec. 36 T17N, R87W	Sp	--	estimate 8	C	Al	"	"	not determinable	"	"	13
WSW-20	"	NW ₄ Sec. 13 T17N, R84W	Sp	"Hobo Pool"	estimate 20	C	Fault?	Browns Park ?	Miocene	" "	13 July 54	"	1
WSW-21	"	S ₂ Sec. 12 T17N, R84W	Sp	--	estimate 15	C	Fault?	"	"	" "	"	"	3
WSW-22	"	SW ₄ Sec. 8 T16N, R87W	Sp	--	estimate 3	C	Tuffaceous ss	North Park?	Pliocene	" "	"	"	9
WSW-23	"	SE ₄ Sec. 27 T16N, R88W	Sp	--	estimate 3	C	ls	"	"	" "	"	"	3
WSW-24	"	NW ₄ Sec. 22 T16N, R88W	Sp	--	estimate 4	C	ls?	"	"	" "	"	"	2
WSW-25	"	SW ₄ Sec. 15 T16N, R88W	Sp	--	estimate 3	C	limey ss	"	"	" "	"	"	3
WSW-26	"	NW ₄ Sec. 28 T16N, R88W	Sp	--	estimate 3	C	ls	"	"	" "	"	"	4
WSW-27	"	NW ₄ Sec. 9 T15N, R88W	Sp	--	seep	C	ls	"	"	" "	"	"	4
WSW-28	"	on line Sec. 8 & 17 T15N, R88W	Sp	--	estimate 3	C	gravel	"	"	" "	"	"	9
WSW-29	"	SE ₄ Sec. 2 T15N, R89W	Sp	--	estimate 1	C1	Al	"	"	" "	"	"	3
WSW-30	"	NE ₄ Sec. 28 T16N, R89W	Sp	--	estimate 5	C	ls	"	"	" "	"	"	12

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/2/54

Project Chief Stephens, James G.

Project title and number Saratoga, Wyoming F-830

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Ago			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uran- ium (ppb)
WSW-31	Carbon	NE $\frac{1}{4}$ Sec. 15 T16N, R85W	Sp	--	6	C	Al	North Park ?	Pliocene	not determinable	14 July 54	Stephens & Bergin	19
WSW-32	"	W $\frac{1}{2}$ Sec. 11 T16N, R85W	Artesian W	--	15	C	depth unknown	?	?	" "	"	"	1
WSW-33	"	NE $\frac{1}{4}$ Sec. 20 T16N, R85W	Sp	--	7	C	Pediment gravel	North Park ?	Pliocene	" "	"	"	21
WSW-34	"	NW $\frac{1}{4}$ Sec. 22 T16N, R85W	Sp	--	Seep	Cl	"	"	"	" "	"	"	1
WSW-35	"	N $\frac{1}{2}$ Sec. 33 T16N, R85W	Sp	--	2	C	"	Pre-G	--	" "	"	"	-1
WSW-36	"	SE $\frac{1}{4}$ Sec. 33 T16N, R85W	Sp	--	2	C	joint system	"	--	" "	"	"	3
WSW-37	"	NE $\frac{1}{4}$ Sec. 17 T16N, R84W	W	--	--	C	--	Browns Park	Miocene	" "	"	"	-1
WSW-38	"	N $\frac{1}{2}$ Sec. 23 T15N, R85W	Sp	--	2	C	Joint	schists	pre-G	" "	"	"	1
WSW-39	"	SE $\frac{1}{4}$ Sec. 7 T15N, R84W	R	--	--	Cl	--	--	--	" "	"	"	8
WSW-40	"	SW $\frac{1}{4}$ Sec. 1 T15N, R84W	Sp	--	1	C	Al	North Park (?)	Pliocene	" "	"	"	55
WSW-41	"	Center, Sec. 13 T14N, R82W	Sp	Big Spring	2	SM	fault?	--	pre-G	" "	"	"	-1
WSW-42	"	NW $\frac{1}{4}$ Sec. 23 T17N, R83W	W	--	--	C	argillaceous ss	North Park ?	Pliocene	" "	16 July 54	"	6
WSW-43	"	SE $\frac{1}{4}$ Sec. 33 T17N, R82W	W	--	--	C	"	"	"	" "	"	"	6
WSW-44	"	W $\frac{1}{2}$ Sec. 15 T17N, R83W	W	--	--	C	tuffaceous ss	North Park	"	" "	"	"	16
WSW-45	"	SE $\frac{1}{4}$ Sec. 11 T17N, R84W	W	--	--	C	Al	--	--	" "	"	"	-1

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 ✓ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 ✓ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 ✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief Stephens, James G.

Project title and number Saratoga, Wyo. F-830

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Type4/ Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	P.H.	
WSW 46	Carbon	Sec. 7? T. 18 N. R. 84 W.	W		?	C	?	?	?	Not determinable	8-2-54	Bergin	6	7.5
WSW 47	"	Sec. 18? T. 18 N. R. 84 W.	Sp Pick Ranch	est. 10gpm	Cl	Platte Riv. stream terrace? gravel	Al	Quaternary.	"	"	"	5	7.6	
WSW 48	"	Sec. 26? T. 18 N. R. 85 W.	Sp	est. 7 gpm	Cl	Tbp?	Al	Miocene	"	"	"	6	7.8	
WSW 49	"	NE 1/4 sec. 5, T. 17 N. R. 85 W.	(Artesian) W Four Bar Ranch	?	C	?	?	?	"	"	"	3	7.9	
WSW 50	"	"	Seep	est. 2 gpm	Cl	Tbp?	Al	Miocene	"	"	"	3	7.6	
WSW 51	"	NW 1/4 sec. 18, T. 17 N. R. 84 W.	Seep	est. 1 gpm	SM	Tbp	Tuff ss?	"	"	"	"	11	7.4	
WSW 52	"	SE 1/4 sec. 26, T. 17 N. R. 84 W.	W Frank Schilt Ranch	?	C	Tbp	?	"	"	"	"	19	7.7	
WSW 53	"	SE 1/4 T. 17 N. sec. 26 R. 84 W.	Sp	est. 5 gpm	SM	Tbp	calcareous ss	"	"	"	"	16	7.4	
WSW 54	"	Sec. 24? T. 18 N. R. 84 W.	W Wm. N. Eaton Ranch	?	C	Tbp	?	"	"	"	"	5	7.8	
WSW 55	"	Sec. 24? T. 18 N. R. 84 W.	Sp	est. 35gpm	C	Tbp?	ls	"	"	"	"	5	7.8	
WSW 56	"	NW 1/4 sec. 25, T. 17 N. R. 84 W.	W Reilly Allen Ranch	?	C	Tbp	?	"	"	"	"	1	7.8	
WSW 57	"	NE 1/4, sec. 9 T. 16 N. R. 84 W.	Sp Patton Ranch	est. 20gpm	C	Tbp	ls	"	"	"	"	80	7.7	
WSW 58	"	SW 1/4, sec. 31 W (house) T. 16 N., R. 83 W.	W Throwbridge? Ranch	?	C	Tbp	?	"	"	"	"	5	8.0	
WSW 59	"	SW 1/4, sec. 31 W T. 16 N. R. 83 W.	(Dairy barn) "	?	C	Tbp?	?	"	"	"	"	24	7.5	
WSW 60	"	NW 1/4, sec. 6 W. T. 15 N. R. 83 W.	(irrigation) "	?	C	Tbp	sandy clay	"	"	"	"	49	7.6	

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55
(unofficial returns)
11/19/54 by
some of them

Project Chief Stephens, James G.

Project title and number Fuels 830 - Crooks Gap

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
NOW-1	Fremont	SW $\frac{1}{4}$ 16-28N-93W	Seep Woods Gulch Pond	Cl	Landslide scar	Wasatch Eocene	Arkose	8/17/54	Stephens & Bergin	<1	6.1
NOW-2	"	NW $\frac{1}{4}$ 17-28N-93W	Sp -	20 gpm C	Al	"	"	"	"	<1	6.8
NOW-3	"	SE $\frac{1}{4}$ 18-28N-93W	Sp -	4 gpm C	Al	"	"	"	"	<1	6.9
NOW-4	"	NW $\frac{1}{4}$ 18-28N-93W	St Cottonwood Cr	40 gpm C	-	"	"	"	"	2	7.7
NOW-5	"	NW $\frac{1}{4}$ 8-28N-93W	Sp -	5 gpm C	Al	"	"	"	"	3	7.2
NOW-6	"	SW $\frac{1}{4}$ 5-28N-93W	W Sinclair O&G Camp	- C	Well	1000' deep Wasatch?	"	"	"	<1	9.3
NOW-7	"	NW $\frac{1}{4}$ 8-28N-93W	Seep -	1 gpm C	Al	Wasatch	"	"	"	<1	6.9
NOW-8	"	SE $\frac{1}{4}$ 8-28N-93W	Sp Nancy Creek	25 gpm C	Ss	"	"	"	"	<1	7.0
NOW-9	"	NE $\frac{1}{4}$ 16-28N-93W	St Woods Gulch	40 gpm C	-	"	"	"	"	1	7.8
NOW-10	"	SW $\frac{1}{4}$ 2-28N-93W	Seep -	1 gpm Cl	Al	"	"	"	"	<1	7.4
NOW-11	"	SE $\frac{1}{4}$ 3-28N-93W	St O'Brian Creek	10 gpm C	--	"	"	"	"	5	8.1
NOW-12	"	SE $\frac{1}{4}$ 2-28N-93W	Seep Boggy Springs	1 gpm Cl	Al	Miocene	Not determinable	"	"	3	7.6
NOW-13	"	NW $\frac{1}{4}$ 12-28N-93W	Seep -	2 gpm C	Al	Miocene?	Not determinable	"	"	2	7.9
NOW-14	"	NE $\frac{1}{4}$ 11-28N-93W	Seep -	2 gpm Cl	Al	Wasatch Eocene	Arkose	"	"	<1	7.8
NOW-15	"	SW $\frac{1}{4}$ 13-28N-93W	Seep -	1 gpm Cl	Al	"	"	"	"	<1	7.4

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APAL: 11/3/55
(Unofficial release)
11/19/54 for song of (there)

Project Chief Stephens, James G.

Project title and number Fuels 830 - Crooks Gap

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
MCW-16	Fremont	SE $\frac{1}{4}$ 14-28N-94W	Seeps Head of Haypress Creek	2 g.p.m. C1	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	7.2
MCW-17	Fremont	SE $\frac{1}{4}$ 11-28N-94W	R Haypress Creek	--- C1	---	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	9.2
MCW-18	Fremont	NE $\frac{1}{4}$ 11-28N-94W	Sp Haypress Creek	5 g.p.m. C	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	7.2
MCW-19	Fremont	SW $\frac{1}{4}$ 2-28N-94W	Seep ---	1 g.p.m. C1	A1	Wasatch?	Eocene?	Arkose	8/18/54	Stephens & Bergin	7.8
MCW-20	Fremont	NW $\frac{1}{4}$ 10-28N-94W	R Soap Holes Creek	--- C	A1	Fort Union?	Paleocene?	Not determinable	8/18/54	Stephens & Bergin	9.0
MCW-21	Fremont	SE $\frac{1}{4}$ 14-28N-92W	Seep ---	1 g.p.m. C1	A1	Wasatch?	Eocene?	Arkose	8/18/54	Stephens & Bergin	7.7
MCW-22	Fremont	SE $\frac{1}{4}$ 14-28N-92W	Sp ---	6 g.p.m. C	A1	?	?	?	8/18/54	Stephens & Bergin	7.4
MCW-23	Fremont	SE $\frac{1}{4}$ 15-28N-92W	Seep ---	1 g.p.m. C1	A1	Wasatch?	Eocene?	Arkose	8/18/54	Stephens & Bergin	7.6
MCW-24	Fremont	2-27N-92W	Seep ---	Very little C1	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	7.4
MCW-25	Fremont	3-27N-92W	Sp ---	1 g.p.m. C	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	7.5
MCW-26	Fremont	11-27N-92W	Sp Green Mtn. Lodge	2 g.p.m. C	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	7.8
MCW-27	Fremont	11-27N-92W	St ---	40 g.p.m. C	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	10
MCW-28	Fremont	1-27N-92W	Sp ---	30 g.p.m. C	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	3
MCW-29	Fremont	2-27N-92W	Sp ---	5 g.p.m. C	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	10
MCW-30	Fremont	1-27N-92W	Seep ---	1 g.p.m. C1	A1	Wasatch	Eocene	Arkose	8/18/54	Stephens & Bergin	7.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 11/31/55
(Unofficial returns)
11/19/54 for some of these

Project Chief Stephens, James G.

Project title and number Fuels 830 - Crooks Gap

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/	Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
WCW-31	Fremont	SE $\frac{1}{4}$ 13-28N-91W	Sp	--	3 g.p.m.	C	A1	P-C	P-C	Not determinable	8/19/54	Stephens & Bergin	7.0
WCW-32	Fremont	NW $\frac{1}{4}$ 19-28N-90W	Sp	--	6 g.p.m.	C	A1	Contact? Tm & P-C		Not determinable	8/19/54	Stephens & Bergin	7.4
WCW-33	Fremont	? 23-27N-91W	Seep	--	1 g.p.m.	C1	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.3
WCW-34	Fremont	? 22-27N-91W	Sp	--	2 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.2
WCW-35	Fremont	? 22-27N-91W	Sp	--	4 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.6
WCW-36	Fremont	? 21-27N-91W	St	--	20 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.3
WCW-37	Fremont	? 21-27N-91W	St	--	20 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.0
WCW-38	Fremont	? 17-27N-91W	Sp	--	5 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.0
WCW-39	Fremont	? 01-27N-91W	St	--	3 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.2
WCW-40	Fremont	? 18-27N-91W	St	--	80 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.3
WCW-41	Fremont	37-27N-93W	Sp	--	25 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.4
WCW-42	Fremont	37-27N-93W	Seep	--	1 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.8
WCW-43	Fremont	67-27N-93W	Seep	--	1 g.p.m.	C1	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.1
WCW-44	Fremont	67-27N-92W	Sp	--	10 g.p.m.	C	A1	Wasatch	Eocene	Arkose	8/19/54	Stephens & Bergin	7.2

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz., sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/15/55
(unfinal returns 11/19/54
for some of these)

Project Chief James G. Stephens

Project title and number Grooks Gap area, Wyoming

F-830

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	PH			
MCN 45	Freemont	SW $\frac{1}{4}$ sec.24 T28N, R93W	Seep	-	1 gpm	Cl	A1	Wasatch	Eocene	Arkose	8/24/54	Stephens	19	7.1
MCN 46	"	NW $\frac{1}{4}$ sec.25(?) T28N, R93W	Seep	-	1 gpm	C	A1	"	"	"	"	"	2	7.2
MCN 47	"	NW $\frac{1}{4}$ sec.24 T28N, R93W	St	-	45 gpm	C	A1	"	"	"	"	"	148	7.2
MCN 48	"	NW $\frac{1}{4}$ sec.24 T28N, R93W	Seep	-	1 gpm	Cl	A1	Fort Union	Paleocene	not determinable	"	"	1	7.7
MCN 49	"	NE $\frac{1}{4}$ sec.23 T28N, R93W	St	-	120 gpm	Cl	A1	Wasatch	Eocene	Arkose	"	"	32	7.5
MCN 50	"	NE $\frac{1}{4}$ sec.11 T28N, R93W	Seep	1	$\frac{1}{2}$ pt. pm	Cl	A1	"	"	"	8/25/54	"	<1	7.2
MCN 51	"	NW $\frac{1}{4}$ sec.22 T28N, R92W	Sp	-	8 gpm	C	A1	"	"	"	"	Bergin	<1	7.6
MCN 52	"	SE $\frac{1}{4}$ sec.22 T28N, R92W	Seep	-	1 pt. pm	SM	A1	"	"	"	"	"	6.5	7.3
MCN 53	"	SE $\frac{1}{4}$ sec.22 T28N, R92W	Sp	-	4 gpm	Cl	A1	"	"	"	"	"	9	7.7
MCN 54	"	NW $\frac{1}{4}$ sec.27 T28N, R92W	Sp	-	10 gpm	C	A1	"	"	"	"	"	5.5	7.2
MCN 55	"	SE $\frac{1}{4}$ sec.22 T28N, R92W	Sp	-	25 gpm	C	A1	"	"	"	"	"	21	7.1
MCN 56	"	SE $\frac{1}{4}$ sec.22 T28N, R92W	Pond	-	-	C	A1	"	"	"	"	"	15	7.2
MCN 57	"	NW $\frac{1}{4}$ sec. 9 T28N, R92W	Seep	-	$\frac{1}{2}$ gpm	C	A1	PG	-	not determinable	8/26/54	"	24	7.4
MCN 58	"	SE $\frac{1}{4}$ sec.24 T28N, R93W	Seep	-	1 gpm	C	A1	Wasatch	Eocene	Arkose	"	"	21	7.1
MCN 59	"	NE $\frac{1}{4}$ sec.25 T28N, R93W	Sp	-	15 gpm	Cl	A1	"	"	"	"	"	8	7.1

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 3/28/55

Project Chief James G. Stephens

Project title and number Crooks Gap Area

F-830

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH			
62	Fremont	sec. 29 T28N R90W	Sp	-	1 gpm	Cl	Al	Wasatch?	Eocene	Arkose	9/2/54	Stephens & Bergin	2	7.4
63	"	sec. 34? T28N R90W	Sp	-	4 gpm	C	Al	Wasatch	Eocene	Arkose	"	"	4	7.4
64	"	sec. 35? T28N R90W	"	-	5 gpm	C	Al	"	"	"	"	"	60	8.3
65	"	sec. 35? T28N R90W	"	-	3 gpm	C	Al	"	"	"	"	"	4	7.9
66	Carbon	sec. 2? T27N R90W	seep	-	less than 1 gpm	C	Al	"	"	"	"	"	< 1	7.7
67	"	sec. 2? T27N R90W	"	-	less than 1 gpm	Cl	Al	"	"	"	"	"	3	8.1
68	"	sec. 1? T27N R90W	Sp	-	10 gpm	C	Al	"	"	"	"	"	8	7.7
69	Fremont	sec. 34? T27N R90W	seep	-	less than 1 gpm	C	Al	"	"	"	"	"	28	7.9
70	"	sec. 26? T27N R90W	"	-	less than 1 gpm	Cl	Al	"	"	"	"	"	10	7.4
71	"	sec. 26? T27N R90W	Sp	-	2 gpm	Cl	Al	"	"	"	"	"	2	7.6
72	"	sec. 25? T27N R90W	"	-	4 gpm	C	Al	"	"	"	"	"	4	7.8
73	"	SW 1/4 sec. 23 T28N R92W	"	-	10 gpm	C	Al	"	"	"	9/8/54	Bergin	< 1	8.4
74	"	NE 1/4 sec. 26 T28N R92W	"	-	5 gpm	C	Al	"	"	"	"	"	4	7.7
75	"	NE 1/4 sec. 15 T28N R92W	"	-	3 gpm	C	contact	Cloverly & Thermopolis Cret.		not determinable	9/9/54	"	< 1	7.8
76	"	NE 1/4 sec. 15 T28N R92W	"	-	18 gpm	C	contact	Sundance & Hugget?	Jurassic	"	"	"	2.8	8.2

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNCAF. ANAL. RES: 3/12/55

Project Chief Stephens, James G.

Project title and number Crooks Gap, Wyoming

5-56703

State (s)

Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
WCW 77	Fremont	NW 1/4 Sec. 28	T 28N; R 92 W Sp	10 gpm C	Arkosic ss	Wasatch Eocene	Arkose	10-14-54	M. J. Bergin	< 1	8.3
WCW 78	-do-	NE 1/4 Sec. 30	? 20 gpm								
	-do-	T 28 N; R 92 W St	Homestead	Cl	Al	-do-	-do-	-do-	-do-		7.4
	-do-	NE 1/4 Sec. 30	? 4 gpm								
WCW 79	-do-	T 28 N; R 92 W Sp	Homestead	Cl	Al	-do-	-do-	-do-	-do-	< 1	7.8
	-do-	W 1/2 13									
WCW 80	-do-	T 27 N; R 93 W Sp	--	2 gpm C	Al	-do-	-do-	-do-	-do-	16	8.1
WCW 81	-do-	E 1/2 14									
	-do-	T 27 N; R 93 W Sp	--	3 gpm C	Al	-do-	-do-	-do-	-do-	11	8.4
	-do-	In Red Desert	5/283								
WCW 82	-do-	3 mi. S of WCW Sp	81	2 gpm	Cl	Al	-do-	-do-	-do-	< 1	7.8
	-do-	SE 1/4 Sec. 10									
WCW 83	-do-	T. 28N; R. 92W Sp	--	20 gpm C	Al contact	Cloverly, Morrison or Sundance	Cretaceous or Jurrassic	not determinable	9-14-54	2	7.8
WCW 84	-do-	SE 1/4 Sec. 10									
	-do-	T. 28N; R. 92W Sp	--	15 gpm C	Al	Cloverly	Cretaceous	-do-	-do-	5	7.9
	-do-	SE 1/4 Sec. 11	Seep								
WCW 85	-do-	T. 28 N; R. 93 W	--	3 gpm C	Al contact	Wasatch on Ft. Union	Eocene	Arkose	10-19-54	J. G. Stephens 2	8.5

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF. AN. RES: 8/4/55

Project Chief J. C. Stephens

Project title and number Crooks Gap

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
SK-1	Freemont	NE 1/4 24 29N-100W	Sp -	3 C	Gneiss	p-G	p-G gneiss	6/28/55	Stephens and Knox	1	7.3
SK-2	"	SE 1/4 21 28N-98W	Sp -	5 C	Meta	"	"	"	"	1	7.4
SK-3	"	NW 1/4 24 28N-98W	Sp Upper Korson Sp	10 C	Granite gneiss	Sweetwater granite?	?	"	"	6	7.7
SK-4	"	NW 1/4 21 28N-97W	Sp -	3 C	"	"	"	"	"	5	7.6
SK-5	"	NW 1/4 11 28N-97W	Sp Lady- smith	9 C	"	"	"	"	"	1	7.3
SK-6	"	SW 1/4 30 29N-96W	Sp Mud	3 C	Ss	Eocene? Eocene?	Ss	"	"	14	7.7
SK-7	"	SW 1/4 21 29N-96W	Sp Barras	20 C	Ss	"	"	"	"	11	7.8
SK-8	"	NE 1/4 15 29N-95W	Sp Warm	40 C	Ss	"	"	"	"	4	7.7
SK-9	"	SE 1/4 35 29N-95W	Sp Happy	25 C	Ls	Madisa??	Mss	?	"	8	7.6
SK-10	"	SE 1/4 24 31N-98W	Sp -	60 C	Ss	Triassic Red	Tr	6/29/55	"	20	7.8
SK-11	"	SE 1/4 30 30N-97W	Sp Mud	5 C	Ss	?	Pa-Tr	"	"	20	7.9
SK-22	"	NW 1/4 26 30N-98W	Sp Gravel	75 C	Ss	Derby?	Dev?	"	"	5	7.8
SK-13	"	NW 1/4 35 30N-98W	Sp Dila- baugh	45 C	Cgl	?	Cambrian?	Conglomerate?	"	9	7.7
SK-14	"	SW 1/4 34 30N-98W	Sp -	35 C	Ss	?	G, C	"	"	2	7.7
SK-15	"	NW 1/4 28 30N-98W	Sp Chalk	10 C	Ss	Asnden or Tertiary?	Pa or Ter- tiary?	"	"	6	7.7

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF. AM. RES: 8/4/55

Project Chief J. G. Stephens

Project title and number Crooks Gap

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
SK-16	Fremont	SW 1/4 19 30N-98W	St	-	80	C	Ss	?	Pa - Tr ?	Ss	6/29/55	Stephens and Knox	2	7.7
SK-17	"	SW 1/4 31 30N-96W	Sp	Jackson	5	C	Ss	?	Cretaceous	Ss	"	"	4	8.0
SK-18	"	NW 1/4 23 30N-96W	R	Antelope Springs	?	C	Ss or granite ?	?	pre-C or Miocene	Ss and granite	"	"	11	9.6
SK-19	"	SE 1/4 11 29N-94W	W	-	?	Cl	Ss		Miocene	Ss	6/30/55	"	1	7.5
SK-20	"	NE 1/4 13 30N-95W	Sp	-	3	C	Ss		"	Ss	"	"	8	7.7
SK-21	"	SE 1/4 31 31N-95W	Windmill	Slide	30	C	Ss	White R. or Miocene	Oligocene or Miocene	Ss	"	"	8	7.7
SK-22	"	SE 1/4 15 31N-95W	"	Gov't Meadows	5	C	Ss	White R.	Oligocene	Ss	"	"	11	7.6
SK-23	"	SE 1/4 32 32N-94W	Lake	Findlay	?	M	Ss		Miocene	Ss	"	"	6	7.3
SK-24	"	SW 1/4 34 32N-94W	Sp	Elkhorn	10	C	Ss	White R.	Oligocene	Ss	"	"	2	7.5
SK-25	"	NE 1/4 9 31N-92W	Sp	-	15	C	Granite		Pre-Cambrian	Granite	"	"	36	7.8
SK-26	"	SW 1/4 24 31N-93W	Sp	Tin Cup	10	C	"		"	"	"	"	2	7.6
SK-27	"	SW 1/4 29 31N-92W	Sp	-	15	C	"		"	"	"	"	19	7.4
SK-28	"	NW 1/4 28 32N-90W	Sp	West Diamond	15	C	Ss	White R. or Miocene	Oligocene or Miocene	Ss	"	"	9	7.7
SK-29	"	SE 1/4 22 32N-90W	Sp	Big Diamond	35	C	Ss	"	"	"	"	"	21	7.9
SK-30	"	NW 1/4 25 32N-90W	Sp	East Diamond	15	C	Ss	Miocene	Miocene	"	"	"	5	7.8

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF: APAL. REG: 8/4/63

Project Chief J. G. Stephens

Project title and number Crooks Gap

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
SA-31	Netrona	NW 1/4 29 32N-89W	Sp Lamoreaux Cabin	10 C	Ss	Miocene	Ss	6/30/55	Stephens and Knox	8	7.7
SA-32	"	SW 1/4 7 31N-89W	Sp Cold	10 C	Granite	pre-Cambrian	Granite and ss	"	"	5	7.4
SA-33	Fremont	NE 1/4 16 31N-89W	Sp -	4 C	"	"	"	"	"	33	7.7
SA-34	Carbon	NE 1/4 6 28N-88W	Windmill -	? M	Ss	Miocene	Ss	7/1/55	"	18	7.4
SA-35	"	SW 1/4 10 28N-89W	" -	? M	"	"	"	"	"	9	7.1
SA-36	Fremont	NW 1/4 7 29N-91W	" -	? Cl	Granite	Pre-Cambrian	Granite	"	"	1	8.8
SA-37	"	SW 1/4 22 30N-90W	Sp -	1 C	"	"	"	7/5/55	"	45	6.7
SA-38	Netrona	NE 1/4 7 30N-89W	Windmill -	4 C	Ss	Pliocene-Miocene	Ss	"	"	30	7.6
SA-39	"	SW 1/4 27 31N-89W	Sp -	8 C	Cgl	"	Cgl	"	"	8	7.5
SA-40	"	SW 1/4 27 31N-89W	Sp Sage Hen	45 C	"	"	"	"	"	5	8.2
SA-41	Fremont	NW 1/4 24 31N-90W	Sp -	? Cl	Ss	Miocene	Ss and granite	"	"	13	7.3
SA-42	"	NE 1/4 32 31N-91W	Sp Black Rock	4 Cl	Ss	"	Ss	"	"	8	7.4
SA-43	"	Rongis NW	Seep -	1 C	"	Wasatch	Eocene	7/11/55	"	5	7.5
SA-44	"	Rongis NW	R on Lost Creek	- C	"	"	"	"	"	13	8.6
SA-45	"	Rongis NW	Sp -	2 C	"	Fort Union	Paleocene	"	"	3	7.5

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 8/31/55

Collect Chief J. C. Stephens

Project title and number Crooks Gap

State (s) Wyoming

PH
7.4
7.6
8.2
7.1
7.4
7.5
7.4
8.2
7.9

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/23/55

Project Chief James D. Vine

Project title and number Central Wyoming

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
W4-14	Carbon	(2) 1,26N,80W	R		None	C	shale	Steele	Cretaceous	Steele shale & White River fm.	8/18/54	Denson & Vine	4
W4-16	"	22,28N,80W	R		5 gpm	C	arkose	Wind River	Eocene	White River fm. & Wind River fm.	"	"	1
W4-17	"	34,28N,81W	Sp		30 gpm	C	arkose	Base of White River	Oligocene	White River fm.	8/19/54	"	4
W4-18	"	34,28N,81W	Sp		3 gpm	C	"	"	"	"	"	"	7
W4-19	"	36,28N,78W	St	Little Medicine Box	55 gpm	C	arkose & Tuff	White River fm.	Oligocene	White River fm.	"	"	11
W4-20	Albany	E1 24,26N,74W	Sp		1 gpm	C	granite	Sherman granite	pre-Cambrian	pre-Cambrian granite	8/20/54	"	< 1
W4-21	"	16,26N,73W	Sp		3 gpm	C	"	"	"	"	"	"	5
W4-22	Converse	W32,32N,71W	W			C	Tuffaceous Ss	White River	Oligocene	Tuffaceous SS of White River fm.	"	"	155
W4-23	Converse	SE 28,32N, 71W	W		2 gpm	C	Tuffaceous Ss	White River	Oligocene	"	"	"	17
W4-24	"	SE 1, 31N, 71W	W		3 gpm	C	"	"	"	"	"	"	105
W4-25	"	NE 14, 31N, 71W	W			C	"	"	"	"	"	"	< 1
W4-26	"	"	W		4 gpm	"	"	"	"	"	"	"	< 1
W4-27	"	SW 13, 31N, 71W	W			"	"	"	"	"	"	"	110
W4-28	"	S 1/2 18, 32N, 71W	W			"	"	"	"	"	"	"	5
W4-29	"	SE 35, 32N, 73W	W		4 gpm	"	"	"	"	"	"	"	38

pH
9.5
7.4
7.7
7.5
8.1
7.0
7.0
7.7
7.6
8.0
8.4
7.6
7.5
7.9
7.5

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

V = On station map and only

(over)

ANAL: 2/23/55

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/7/55
(unfinal results)
1/4/55

Project Chief		H. D. Zeller		Project title and number				Gas Hills		State (s)		Wyoming		7/4/5	
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)					
SW-2	Fremont	SE SW SE 33-33N-92W	R	Sherlock Reservoir		M	clay(bentonite by snore)	Wind River	L. Eocene		8/12/54	Soister, Koogler, Hyden		11	
SW-6	"	NW NE NW 32-32N-91W	R			M		Wind River	L. Eocene		8/12/54	"		16	
SW-10	"	NW SW SW 35-33N-91W	Sp	(seep)		C	Cgl & SS	Wind River	L. Eocene	Ss and Cgl	8/13/54	"		3	
SW-11	"	SE NE SE 10-33N-90W	Sp		0.25 gpm	C	Ss	Nugget or Sundance	Jurassic	Ss (?)	8/17/54	"		2	
SW-12	Natrona	SW SE 31-32N-87W	St	Dry Creek	Approx. 40-50 gpm	C	?	Unnamed	Miocene	Tuffs (?), Ss, Marlstone(?) & Schist	8/22/54	"		< 1	
SW-13	"	C SE 22-32N-88W	St	Branch of Dry Cr.	Approx. 15 gpm	C	?	Unnamed	U. & M. Eocene		8/22/54	"		< 1	
SW-14	"	NW NE SE 29-32N-87W	Sp		±3 gpm	C	?	Unnamed (over pc)	Miocene		8/22/54	"		2	
SW-15	"	NW NW 28-32N-87W	Sp		±5 gpm	C	?	Unnamed	M. & U. Eocene	Tuffaceous(?) sediments + HBDE, Schist	8/22/54	"		< 1	
SW-16	"	NW NE SE 21-32N-87W	Sp		4 gpm	C	?	Unnamed	M. & U. Eocene	"	8/22/54	"		< 1	
SW-17	"	SW SE 3-32N-87W	St	Head of Casper Cr.	±8 gpm	C	?	Intrusive	Eocene Tertiary	Tuffaceous(?) sediments + Phonolite	8/22/54	"		< 1	
SW-18	"	SW SE 5-32N-87W	Sp		(seep)	C	Ss(?)	Intrusive	Tertiary	SS, limestone(?), & quartz latite	8/22/54	"		2	
SW-57	Fremont	SW SE SW 31-33N-89W	Seep		(seep)	Cl	?	White R.	Oligocene		8/17/54	Zeller, Mc-		33	
SW-59	"	SW SE SE 34-33N-90W	Seep	Gas Springs	seep	Cl	?	Thermopolis	L. Cret.		8/17/54	"		1	
SW-60	"	SW NE SE 10-33N-90W	Seep		seep	Cl	Ss ? Cgl	Alluvium over Quaternary	Cloverly or		8/17/54	"		8	
SW-61	"	NW SW SW 2-33N-90W	Seep		seep	Cl	Ss Cgl	Morrison Frontier	Cret.-Jur. Upper Cret.		8/17/54	"		5	

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/3/54

Project Chief H. D. Zeller Project title and number Gas Hills Project F-831 State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
ZM-2	Fremont	SE NW NW 1-34N-91W	Sp Sulphur Spring	slight - a few bubbles Cl	ss	Mesa Verde	U. Cretaceous Unknown	7/8/54	Zeller, Soister, McDowell, Kingle	<1	7.5 ✓
ZM-3	"	SW NE SW 13-34N-91W	W Roberts Sheep Camp	- C	-	Alluvium over Quaternary over Cody sh.	U. Cretaceous	7/8/54	"	1	7.8 ✓
ZM-4	"	NW NE SE 3-33N-91W	W Pipe Line Muskrat Cr.	- C	-	Alluvium over Quaternary over Cody sh.	U. Cretaceous	7/8/54	"	120	7.8 <u>Build</u>
ZM-5	"	SE SE NE 5-33N-90W	R Reid Reservoir	- C	-	"	"	7/8/54	"	5	7.9 ✓
ZM-6	"	NW NW NE 28-33N-90W	Sp Willow Spring	6 gpm C	ss	Alluvium over Quaternary over Wind River	L. Eocene	7/8/54	"	19	7.6 ✓
ZM-7	"	SW NE SW 27-33N-91W	W George Homestead	- Cl	-	Alluvium over Quaternary over Cody sh.	U. Cretaceous	7/9/54	"	90	7.7 ✓
ZM-8	"	SE SE NW 36-33N-91W	R -	- Cl	-	"	"	7/9/54	"	11	7.2 ✓
ZM-9	"	SE NE NW 1-32N-91W	R -	- M (buff)	-	Alluvium over Quaternary over Wind River	L. Eocene	7/9/54	"	7	7.2 ✓
ZM-10	"	NW SW SW 34-33N-90W	W Branch Willow	- C	-	Wind River	L. Eocene	7/9/54	"	1	8.2 ✓
ZM-11	"	NW SE SE 22-33N-90W	X Sp. Draw Lucky Mc Reservoir	- SM	-	"	"	7/9/54	"	40	6.6 ✓
ZM-12	"	NE NE NE 11-32N-90W	Sp Cameron	10 gpm C	ss	White River	Oligocene	7/9/54	"	13	8.0 ✓
ZM-13	"	NE NE SW 30-33N-89W	R -	- SM	-	Alluvium over Quaternary over Wind River	L. Eocene	7/9/54	"	13	7.4 ✓
ZM-14	"	NE SE SE 28-33N-89W	St West Canyon Cr.	3 gpm C	-	Wind River	Lower Eocene	7/9/54	"	17	8.1 ✓
ZM-15	"	NW SW NW 18-33N-89W	Sp -	1 gpm C	ls-sh	Sundance	Jurassic	7/9/54	"	22	7.8 ✓
ZM-16	"	NE SE SW 8-33N-89W	Sp Iron Springs Reservoir	10 gpm C	rusty ss conglomerate	Wind R.	L. Eocene	7/9/54	"	270	3.9 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/3/54

Project Chief H. D. Zeller

Project title and number Gas Hills Project F-831

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
ZM-19	Fremont	NW NW NW 7-33N-89W	Sp Medicine Spring	pint pm C	sh Frontier J. Cretaceous		7/9/54	Zeller, Soister, McDowell,	2	7.3 ✓
ZM-20	"	SW NE NW 34-35N-91W	W Love ranch	- C	ss Alluvium over Wind R. Quaternary over Lower Eocene		7/9/54	Koogle	4	7.9 ✓
ZM-21	"	NW NW SE 33-34N-89W	Sp Near E. Canyon Cr.	1 gpm C	cg Wind River Lower Eocene		7/12/54	"	3	7.9 ✓
ZM-22	"	NE NE NW 14-33N-89W	R -	- SM	- Wind River Lower Eocene		7/12/54	"	6	7.5 ✓
ZM-23	"	SE NE SE 26-33N-89W	Sp Middle Fork Sp.	seep C	ss Unnamed U. & M. Eocene		7/12/54	"	5	7.5 ✓
ZM-24	"	NW SW NW 31-33N-88W	Sp Sage Hen Creek Sp.	5 gpm C	ss-cg Unnamed U. & M. Eocene		7/12/54	"	5	7.5 ✓
ZM-25	"	NW SE SW 19-33N-88W	Sp McKenzie Spring	4 gpm C	ss-cg Wind River? Eocene		7/12/54	"	2	7.7 ✓
ZM-26	"	SW SW NE 8-33N-88W	Sp SP. near Cyclone Pk.	1 gpm C	granite pre-Cambrian pre-Cambrian		7/12/54	"	<1	6.9 ✓
ZM-27	"	SE NW NE 7-33N-88W	Sp -	1 gpm C	sst Unnamed Cambrian		7/12/54	"	1	7.8 ✓
ZM-28	"	SW NW SW 6-33N-88W	Sp Little Cross L Sp.	2 gpm C	sst Alluvium over Phosphoria Permian		7/12/54	"	<1	9.2 ✓
ZM-29	"	NE SWSW NE 25-34N-89W	Sp Collins Spring	seep C	- Wind River Lower Eocene		7/12/54	"	5	8.1 ✓
ZM-30	Natrona	NE NW NW 26-34N-89W	Sp -	1/2 gpm C	ss Wind River Lower Eocene		7/12/54	"	8	7.6 ✓
ZM-31	Fremont	NE SE NE 14-32N-91W	Sp Coyote Spring	pint pm C	ss Alluvium over Wind River Quaternary over Eocene		7/14/54	"	47	7.8 ✓
ZM-32	"	NW SE SE 18-32N-90W	Seep Wild Horse Spring	- C	ss Unnamed U. & M. Eocene		7/14/54	"	2	8.0 ✓
ZM-33	"	SW SW SW 26-32N-91W	R Mud Springs	- C	- Unnamed U. & M. Eocene		7/14/54	"	5	9.0 ✓

Reservoir

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 9/7/54

Project Chief H. D. Zeller

Project title and number Gas Hills F-831

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppm)	pH
ZM-47	Fremont	NW SE NE 7-33N-89W	Sp Arrowhead Spring	2 gpm C	Ss	Frontier	Upper Cretaceous	8/9/54	Zeller, McDowell	2	7.1 ✓
ZM-48	"	NE SW NW 8-33N-89W	Sp Big Tree	1/4 gpm C	Ss	Wind River	Lower Eocene	8/9/54	"	26	3.3 ✓
ZM-49	"	SW SE SE 4-33N-89W	Seep E. Canyon Creek	- C	Cg	Wind River	Lower Eocene	8/9/54	"	22	7.3 ✓
ZM-50	"	NW NW SW 32-34N-89W	Sp Pipe Line E. Canyon Cr.	1/4 gpm C	Cg-ss	Cody shale	Upper Cretaceous	8/9/54	"	33	7.4 ✓
ZM-51	Matrona	NW SW NE 22-33N-89W	Seep Nostrum Seeps	- (SM)	-	Wind River	Lower Eocene	8/10/54	"	310	7.7 ✓
ZM-54	Fremont	NE SE NE 21-33N-89W	Seep W. Canyon Cr. Spur	- C	Ss	Wind River	Lower Eocene	8/11/54	"	120	7.6 ✓
ZM-55	"	NW SE SW 8-33N-89W	R Iron Springs	- (Cl)	Ss-cgl	Wind River	Lower Eocene	8/11/54	"	72	7.2 ✓
ZM-56	"	SE NE NE 9-33N-89W	Seep E. Canyon Agate Sp.	- C	Ss-cgl	Wind River	Eocene	8/12/54	"	11	7.2 ✓
SM-1	"	SE SW SW 2-33N-92W	R E. Horseshoe Reservoir	- M	Ss-cgl ?	Wind River	Lower Eocene	8/12/54	Soister, Koogler, Hyder	8	7.7 ✓
SM-23	"	NW NW SE 36-33N-92W	Sp At Barber Reservoir	Seep C	Ss ?	Wind River	Lower Eocene	8/12/54	"	6	8.2 ✓
SM-4	"	SESW NW 22-32N-92W	Sp -	4 gpm C	Ss-cgl ?	Unnamed (100' or less below Thr)	U. & M. Eocene	8/12/54	"	4	7.6 ✓
SM-5	"	SW SE SE 32-32N-91W	Sp at head of Spring Cr.	Seep (Cl)	-	Unnamed	U. & M. Eocene	8/12/54	"	7	7.5 ✓
SM-7	"	SW NW SW 6-31N-91W	Sp -	Seep C	-	White River	Oligocene	8/12/54	"	7	7.4 ✓
SM-8	"	SW SE SW 26-32N-92W	Sp at head of Cottonwood	8-10 gpm Cl	Ss-cg ?	White River	Oligocene	8/12/54	"	13	8.2 ✓
SM-9	"	NE NE NW 5-32N-91W	Sp draw	seep SM to M	Ss & cg	Wind River	Lower Eocene	8/12/54	"	19	7.9 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

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4/5/55

Project Chief H. B. Zeller

Project title and number Gas Hills F-831

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/	Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/	Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
ZM-63	Fremont	SW NW NE 4-33N-89W	Seep	None	Seep SM rusty	Cgl.	Wind River	Lower Eocene		8/24/54	McDowell Hyden	22
ZM-62	Fremont	SE NE NE 6-33N-89W	Seep	None	Seep C	Shale	Cody shale	Upper Cretaceous		8/23/54	McDowell Hyden	1
ZM-64	Fremont	NW SE NW 22-33N-90W	Seep	None	Seep SM rusty	Ss	Wind River	Lower Eocene		9/1/54	Zeller Koogle	1500
ZM-65	Fremont	SE NW SE 23-33N-90W	W	None	30 original 5 present C	Ss	Alluvium over Quaternary over Cloverly	Jur.-Cretaceous		9/1/54	Zeller Hyden	26
ZM-66	Fremont	NW SE NW 22-33N-90W	Seep	None	Seep Cl	Ss	Wind River	Lower Eocene		9/1/54	Zeller Koogle	1100
ZM-77	Natrona	NE SW NW 22-33N-89W	Seep	None	Seep Cl	Alluvial Clay	Alluvium over Wind River	Quaternary over Lower Eocene		9/10/54	Zeller, Soister, Hyden	37
SN-19	Natrona	NE 7-32N-87W	Stream by spring	None	2-4 approx. C	Silt, clay	Unnamed (near Tert. plug)	M. & U. Eocene	phonolite, silt, clay	8/22/54	Soister	21
SN-20	Natrona	SE SE 1-32N-88W	Spring	None?	7-8 approx. C	vogesite	Unnamed (water runs thru vogesite)	U. & M. Eocene	vogesite, silt, clay	8/22/54	Soister	21
SN-21	Natrona	SE SE NW 1-32N-88W	Seep	None?	Seep M	silt, clay sand	Unnamed	U. & M. Eocene	quartz latite lava & sand, silt, clay	8/22/54	Soister	21
SN-22	Fremont	SE SE SE 16-33N-91W	St	Muskra Creek	6 approx. C	sand	Alluvium over Wind River	Quaternary over L. Eoc.	sand & gravel	8/31/54	Soister Koogle	49
SN-23	Fremont	NE SW SE 26-33N-91W	W	In Coyote Cr. Alluvium	2 C	Sand Gravel	Alluvium over Cody shale	Quaternary over U. Cretaceous	sand and gravel	8/31/54	Soister Koogle	104
SN-24	Fremont	NW SE SE 21-32N-91W	Seep	None	Seep C	Gravel & Ss	Wind River	Lower Eocene	Sandstone, clay, silt & pediment gravel	9/22/54	Zeller Soister	3
SN-25	Fremont	SW NW SW 21-32N-91W	Seep	None	Seep Cl	Ss, cgl. clay	Morrison	Jurassic	Sandstone, clay, silt & conglomerate	9/22/54	Zeller Soister	50
SN-78	Fremont	NE SW NW 8-33N-89W	Sp	Big Tree	4 C	Ss	Wind River	Lower Eocene		9/28/54	Zeller Hyden	22
SN-79	Fremont	NE 23-37N-89W	W	Enloe Well	- C	Ss?	Wind River	Lower Eocene		9/28/54	Zeller	2

pH
7.3
8.3
2.9
7.8
3.0
7.6
7.2
7.4
7.2
7.8
7.7
8.0
7.8
3.3
7.6

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 2/24/55

Project title and number

Gas Hills F-831

State (s) Wyoming

pH
8.4

(over)

WATER SAMPLE DATA .

H. D. Zeller

Project title and number Gas Hills Project F-831

State (s) Wyoming

[illegible]

PH

7.6

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

OFF. AD. RES: 7/27/55

Project title and number Gas Wells

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF. AM. RES. 8/4/58

Project Chief H. D. Zeller

Project title and number Gas Hills

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
122	Patrona	SE SE SW 27-35N-89W	Sp -	Seep	C	Ss	Wind River	Early Eocene	Ss	7/7/55	Zeller McDowell	1	6.9
123	"	NE SW SE 36-33N-89W	Sp Asbell	10 gpm	C	Ss	M. Eocene, Middle unnamed marl- Late Eocene		-	7/8/55	"	4	7.3
124	"	CSL 10-32N-89W	Sp -	5 gpm	Cl	Qal over Ss	stone, Ss, cg marlstone, unnamed ss & cg	"	-	"	"	4	7.1
125	"	SE SW SW 20-32N-89W	Sp Lamoreaux cabin	Seep	C	"	Congl. & ss unnamed	Miocene	-	"	"	3	6.8
126	Fremont	NW NE SW 25-32N-90W	Sp East Diamond	5 gpm	C	"	"	"	-	"	"	6	7.2
127	"	SW SE SE 22-32N-90W	Sp Big Diamond	20 gpm	C	"	"	"	-	"	"	24	7.5
128	"	SW SW NW 28-32N-90W	Sp West Diamond	5 gpm	C	"	"	"	-	"	"	12	7.2
129	"	NE SE NE 26-33N-90W	Seep Vitro Pit	Seep	Cl	Siltstone	Wind River	Early Eocene	"	7/9/55	Zeller	1500	7.0
1	"	SE NE SE 8-33N-92W	Sp Peralta Spring	3 gpm	C	Qal over Ss?	Qal over Twdr ?	Quaternary Early Eocene	-	6/28/55	Zeller, Soister, MacDiar.	6	7.3
2	"	NE NW SE 26-32N-95W	Seep -	Seep	Cl	Siltstone ?	Unnamed	Middle & late Eocene	-	"	"	6	7.2
3	"	NW NW SW 17-32N-91W	Sp In Cottonwood Creek	0.25 gpm	C	Qal over Blk sh.	Qal over Frontier	Quat. over U. Cret.	Ss, Cg. mainly	6/29/55	"	9	7.6
4	Patrona	NE NE NW 4-32N-89W	Sp Nearhead of W. Canyon in one of several Creek	1-2 gpm	C	Siltstone and ss ?	White River	Oligocene	-	6/30/55	Zeller, Sois. McDo, MacDi.	1	7.3
7	"	SW NW SE 5-32N-88W	Sp -	± 15 gpm	C	Graywacke	Unnamed	Late and Middle Eocene	Weathered volcanic rocks mainly	"	"	1	7.0
8	"	SW SE NE 6-32N-88W	Seep Above Boyle Res.	Cld not determine Boggy area	C	Cg and Ss ?	Qal(?) over unnamed	Quat. over L&M Eocene	Probably cg. and weathered volcanics	"	"	1	6.6
9	Fremont	SE NW NE 25-33N-91W	Pond Puddle Springs	Seeps forming pond	C	Qal over Siltstone and clay	Wind R.	Early Eocene	Probably siltstone, ss, & claystone	7/6/55	Soister, MacDiamid	570	7.3

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 9/9/55

Project Chief H. D. Zeller

Project title and number Gas Hills F-231

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
PW-4	Fremont	SW SE SW 31-33-39W	Seep -	(Seep) Cl	Siltstone White River	Oligocene	6/30/55	Zeller, Sois. McD, MacD	45	8.6
PW-5	"	NE NE NE 11-32N-90W	Sp Cameron Sprgs	Several springs total $\pm$ 12 gpm	" "	"	6/30/55	"	14	8.4
PW-10	"	NE NE NE 13-32N-91W	Pond in prospect pit	-	Cl Coarse ar. sandstone	Wind River Lower Eocene	7/7/55	Soister MacDiarmid	18	8.2
PW-11	"	N $\frac{1}{2}$ -SW SW 23-32N-91W	" -	-	Cl Boulder cgl	Unnamed (?) Middle Eocene (?)	7/8/55	"	80	8.0
PW-12	"	NW SE SE SE 20-32N-91W	Seep Muskrat Cr. Channel	(Seep) Cl	Coarse ar. sandstone	Wind River Lower Eocene	7/18/55	"	14	8.3
PW-13	"	SE NW SW 35-32N-92W	Sp -	$\pm$ 1 gpm	Cl Tuff. siltstone?	White River Oligocene	7/19/55	"	3	8.4
PW-14	"	NW SE NE 31-32N-92W	Sp -	4-5 gpm. 3 or 4 similar sps nearby	C Cgl	Unnamed Miocene	7/19/55	"	4	8.2
PW-15	"	C SW NE 33-34N-92W	Art. W	McKenzie artesian well 3-4 gpm	C	? ? ?	7/28/55	"	< 1	8.4
PW-16	"	SW NW NW 35-35N-93W	St Conant Creek	+ 120 gpm	C Sand & gravel	(Alluvium) Wind R. Quaternary	7/28/55	"	31	8.2
ZW-135	Natrona	SW SW SE 13-34N-89W	W Little Antelope	C	ss?	Wall Creek (?) of Cody Upper Cretaceous	7/14/55	McDowell	53	8.1
ZW-136	"	SW SW NE 25-34N-89W	Sp Collins Sp	5 gpm	C Ss	Wind River Lower Eocene	7/14/55	"	< 1	8.1
ZW-137	Fremont	NW SE SE 26-33N-94W	Sp McAlester Camp Sp	2 gpm	C SS	" "	7/19/55	Zeller	80	7.9
ZW-138	"	NW SE SE 26-33N-94W	Sp Sulfur Sp	20 gpm $\frac{1}{2}$	C Ss(?)	Chugwater Triassic	7/21/55	McDowell	8	8.0
ZW-139	"	E $\frac{1}{2}$ 19 32N-93W	Sp Findlay Sp	10 gpm $\pm$	C	"	7/21/55	Zeller	11	8.2
ZW-140	"	SW NW SE 34N-89W	Sp -	1 gpm	Cl ss-sh	Wind R. Cody Eocene-Cretaceous	7/29/55	McDowell	53	8.0

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 9/22/55

Project Chief H. D. Zeller

Project title and number GAS WELLS F-331

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 2/	Date collected	Collector	Uranium (ppb)	pH
-115	Fremont	NW NW SE 33-34N-89W	Sp Cunningham Sp	1 gpm C	Cgl Wind River Early Eocene	-	7/29/55	Zeller McDowell	48	7.6
-118	"	NE SE SE 3-32N-94W	Sp Poston	3 gpm C	Ss Qal Chugwater Quaternary Triassic	-	8/10/55	Zeller	68	7.5
-119	"	NW NE SW 3-32N-94W	Sp Moone	15 gpm C	Ss M & U Eocene Unnamed	-	8/10/55	Zeller	4	7.6
-150	"	NE NW SE 3-32N-94W	Seep -	- Cl	Al Qal Eocene Quaternary M & L Eocene	-	8/10/55	Zeller	4	7.5
-151	"	NW NW SW 4-32N-94W	Sp Cogswell	10 gpm C	Ss M & U Eocene Unnamed	-	8/10/55	Zeller	10	7.7
-152	"	NE NE SW 4-32N-94W	Sp Barrel	10 gpm + C	Ss "	-	8/10/55	Zeller	5	7.7
-154	"	SW SE SE 13-32N-95W	Sp -	2 gpm + C	Ss "	-	8/10/55	Zeller	7	7.5
-166	Natrona	NW SW NE 13-33N-89W	Seep -	- C	? ? ?	-	8/13/55	McDowell	4	7.7
-167	Fremont	SW NE NW 31-35N-91W	St Muskrat at Love Ranch	20 gpm + C	Al Alluvium Quaternary	-	8/16/55	Zeller	18	8.0
-169	"	SE NW SE 28-33N-89W	R Canyon Cr. R	- Cl	- -	-	8/18/55	McDowell	8	7.4
-170	Natrona	NW NE SW 7-33N-88W	Seep Holiday Homestead	- C	Al Alluvium Quaternary	-	8/18/55	McDowell	10	7.5
-171	"	NE SW SW 19-33N-88W	Seep -	- C	- M & U Eocene	-	8/18/55	McDowell	6	7.5
-171-17	Fremont	NW NE NE 17-31N-92W	Pool -	Seeps Cl	? Unnamed Miocene	Cg & Ss (?)	8/2/55	Soister MacDiarmid	6	7.6
-18	"	SE 1 32N-91W	Drill Hole Jack #1 Claim (Hole below water table)	C	Ss & Cg Wind River Early Eocene	"	8/3/55	Soister MacDiarmid	320	7.6
-19	"	SW NW NW 16-33N-91W	R Near head of Ohio Draw	- M	Qal Quaternary Wind River Early Eocene	-	8/16/55	Soister MacDiarmid	1	7.0

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
 WATER SAMPLE DATA

Project Chief Zeller

Project title and number Gas Hills 6908313

State (s) Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

State (s) Wyoming

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.

Qts. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

WATER SAMPLE DATA .

Project Chief John F. Murphy

Project title and number F-550 Laramie

State (s) Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Ernest I. Rich Project title and number Hiland F-898 State(s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	U (ppb)	pH
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation	Age					
HPR-56-29	Natrona	NE NE 32-32N-82W	Sp		3-5 gpm	C	Al			Probably Twdr ss.	8-9-56	Rich	40	8.1
HPR-56-30	do.	SW 2-31N-83W	Sp		<1 gpm	C	Al			do.	10-9-56	Rich	3	8.
HPR-56-31	do.	NW SW 34-32N-83W	St		2 gpm	C	Cgl	Twr	Olig		10-10-56	Rich	6	8.2
HPR-56-32	do.	SW NW 29-32N-82W	Sp		2 gpm	C	ss	Twdr	Eoc.		do.	Rich	4	8.0
HPR-56-33	do.	NE NW 31-32N-84W	Artesian water from seis. shot hole		2 gpm	C	cgl	Twr	Olig.		10-11-56	Rich	.2	7.1
HPR-56-34	do.	SE SW 20-32N-82W	Sp		5 gpm	C	al				10-12-56	Rich	8	8.0
HPR-56-35	do.	NW NE 29-32N-82W	Sp		5 gpm	C	al				10-12-56	Rich	14	8.
HPR-56-36	do.	NW SW 4-31N-84W	Sp		<1 gpm	C	T	Tm	Mid-Miocene		10-14-56	Rich	34	7.
HPR-56-37	do.	NW 12-28N-77W	Sp		2 gpm	C	Ls	Madison	Penn		10-24-56	Schulte	16	7.

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM), Color, if any.
Qz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
..... WATER SAMPLE DATA

Project Ch... J. R. Gill

Project title and number Regional synthesis F-469a

State (s) Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

WATER SAMPLE DATA

Ernest I. Rich

Hiland project 7908983

Project title and number

Hiland project 7908983

State (c) Wyoming

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FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Erneat I. Rich Project title and number Hiland F-898 State(s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	U (ppb)	pH
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation	Age					
PR56-19	Natrona	SW SE 5-30N-83W	W		Unknown	C	Ar	Twr	Oligocene	Unknown	7-14-56	Rich	13	7.8
PR56-20	do.	SE SW 6-31N-84W	R		less than 1 gpm	C	T	Twr	do.	alternating tuff tuffaceous silt and ss	do.	do.	4	7.0
PR56-21	do.	NE NW 22-31N-84W	R		do.	C	T	Twr	do.	do.	do.	do.	2	7.0
PR56-22	do.	SW SW 22-31N-83W	W		5 gpm	C	Ar	Twdr	Lower Eocene	Arkosic ss	7-16-56	do.	<1	7.4
PR56-23	1/ do.	NE 4-31N-83W	drill hole		3 gpm	C	T	Twr	Oligocene	tuff. silt and ss	do.	do.	8	8.4
PR56-24	do.	NW NE 28-32N-84W	Sp		less than 1 gpm	C	Ar	Twdr	Eocene	Arkosic ss	7-25-56	do.	3	7.1
PR56-25	2/ do.	NE 4-31N-83W	drill hole		Unknown	Cl	Tuff ss	Twr	Oligocene	Tuff ss and siltstone	do.	do.	42	9.0
PR56-26	2/ do.	do.	do.		do.	C	do.	do.	do.	do.	7-25	do.	140	9.1
PR56-27	2/ do.	do.	do.		do.	C	Cl	do.	do.	do.	do.	do.	9	8.4
PR56-28	2/ do.	do.	do.		do.	C	do.	do.	do.	do.	do.	do.	610	7.8
		1/	Sample HPR-56-23 collected from artesian well resulting from exploratory drilling.											
		2/	Samples HPR-56-25 through 28 collected by drillers from exploration drilling on Phyl claims. Water from water table - contamination unknown.											

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.
Qr. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Laura W. McGrew

Project title and number Whalen-Wheatland

F-2

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH		
MC-W-1-56	Goshen	24-27N-64W	W		C	Ss	Arikaree	Early Miocene		June 1956	McGrew	7	7.6
2-56	do.	32-27N-64W	W		C	Ss	do.	do.		do.	do.	3	7.5
3-56	do.	33-27N-64W	W		C	Ss	do.	do.		do.	do.	16	7.4
4-56	do.	22-27N-64W	W		C	Ss	do.	do.		do.	do.	7	7.4
5-56	do.	21-27N-64W	W		C	Ss	do.	do.		do.	do.	1	7.6
6-56	do.	9NW-27N-64W	W		C	Ss	do.	do.		do.	do.	1	7.7
7-56	do.	11NW-27N-64W	Sp	none	about 1 gpm	C	Ss(?)	Arikaree (?)	Early Miocene(?)	do.	do.	1	7.0
8-56	do.	E 1/2 11-27N-64W	Sp	none	about 2 gpm	C	do.	do.	do.	do.	do.	8	7.4
9-56	do.	12-27N-64W	W		C	Ss	Arikaree	Early Miocene		do.	do.	65	7.5
10-56	do.	24-27N-65W	Sp	none	less than 1 gpm	Cl	Ss	do.	do.	do.	do.	21	7.4
11-56	do.	25-27N-65W	Sp	none	do.	C	Ss	do.	do.	do.	do.	29	8.2
12-56	do.	23-27N-65W	Sp	none	about 1 gpm	C	Cgl	Arikaree (?)	Early Miocene(?)	do.	do.	16	7.7
13-56	do.	18-27N-64W	W		C	Ss	Arikaree	Early Miocene		July 1956	do.	20	7.6
14-56	do.	31-28N-64W	Sp	Woodworth	at least 5 gpm	C	Ss(?)	Arikaree (?)	Early Miocene(?)	do.	do.	13	7.7
15-56	do.	30-28N-64W	Sp	none	at least 5 gpm	C	do.	do.	do.	do.	do.	9	7.4

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz, sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

WATER SAMPLE DATA

Project Chief Laura W. McGrew

Project title and number	Whalen-Wheatland	F-2
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State (s) Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Ernest I. Rich

Project title and number Hiland 6908983

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
HPR 56-1	Natrona	SE 36-36 N-86 W	Sp	10	C	ss	Twdr	Eocene		6-5-56	Rich	< 1	7.4
56-2		NW NW 23 32 N 84 W	Sp	100	C	ss	Twdr	Eocene		6-6-56		2	7.4
56-3		C 23 32 N 84 W	Sp	10	C	ss	Twdr	Eocene		6-6-56		< 1	6.2
56-4		NE NE 24 31 N 84 W	R	10	C	unknown	Probably Twr			6-6-56		2	6.9
56-5		NW 20 31 N 82 W	W	10	C	Kmv	Kmv	Cretaceous		6-6-56		< 1	8.1
56-6		SE SE 23 32 N 85 W	Sp	10	C	Ar	Twdr	Eocene		6-11-56		< 1	7.2
56-7		NE SW 24 32 N 85 W	Sp	50	C	Ar	Twdr	Eocene		6-11-56		< 1	7.1
56-8		NE NE 34 32 N 85 W	Sp	10	C	Cgl	Twdr	Eocene		6-11-56		2	7.1
56-9		SW NE 35 32 N 85 W	Sp	10	C	T	Twr	Oligocene		6-12-56		6	7.1
56-10		NW NE SW 36 32 N 85 W	Sp	< 5	C	T	Twr	Oligocene		6-12-56		5	7.1
56-11		SE NE 36 32 N 85 W	Sp	100	C	T	Twr	Oligocene		6-12-56		2	7.1
56-12		NW SW 31 32 N 85 W	Sp	20	C	T	Twr	Oligocene		6-12-56		7	7.2
56-13		SW SW 1 31 N 84 W	Sp	100	C	T	Twr	Oligocene		6-13-56		< 1	7.1
56-14		NE SW 2 31 N 84 W	Sp	25	C	T	Twr	Oligocene		6-13-56		3	8.0
56-15		SE SW 36 32 N 84 W	Seep	?	C	T	Twr	Oligocene		6-13-56		1	7.6

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief H. D. Zeller

Project title and number

Gas Hills

F-831

State (s)

Wyoming

[illegible]

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

(8)

Project Chief L. W. McGrew

Project title and number Whalen-Wheatland Fu-2

State (s) Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppm)
Mc-W1 58	NW SW Platte	6 T. 22 N R. 69 W.	Well	--	ss and Cgl	Middle or late Miocene		July, 1958	Square Rock L. W. McGrew	11
Mc-W2 58	SE NE Platte	10 T. 22 N R. 70 W.	W	--	Al	Quaternary		"	Square Rock	8
Mc-W3 58	NE NW	35 T. 24 N R. 69 W.	W	--	ss and Cgl	Middle or late Miocene		"	Hightower	10
Mc-W4 58	NE NW	24 T. 22 N R. 69 W.	Sp	--	Al or Cgl	Quaternary or late Oligocene		"	Richman Hills	10
Mc-W5 58	NE SW	11 T. 21 N R. 70 W.	Sp	--	Al	Quaternary		Aug, 1958	Natuck SW	< 1
Mc-W6 58	NE SW	32, T. 22 N R. 68 W.	W	--	Cgl	late Oligocene		"	Richman Hills	3
Mc-W7 58	SW NW	29, T. 22 N R. 68 W.	W	--	"	"		"	Richman Hills	1
Mc-W8 58	NE NE	16, T. 21 N R. 68 W.	W	--	"	"		"	Richman Hills	3

8.2
8.6
7.9
8.1
7.4
8.0
7.7
7.7

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 ✓ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 ✓ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 ✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

Richman Hills
Square Rock
Natuck SW
Hightower

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APAL: 3/28/55

Project Chief E. R. Landis

Project title and number Cimarron Area 56703

State (s) Colorado and Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow 2/ (gpm) Clarity 3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
10-14	Crowley	32-21S-59W	Sp	-	.1	M	Sand	Ogallala	Pliocene?	-	10/3/54	Landis	8
15	Baca	1-31S-45W	W	-	2-5	C	Sand	Dakota or Ogallala	Cretaceous or Pliocene	-	10/7	"	12
16	Baca	1-31S-45W	W	-	2-5	C	SS	Dakota	Cretaceous	-	10/7	"	2
17	Baca	32-36S-43W	W	-	1300	C	Ss	Dakota	Cretaceous	-	10/7	"	6
18	Baca	15-30S-42W	W	-	5-10	C	Ss?	Dakota	Cretaceous	-	10/7	"	15
19	Stanton (Kansas)		W	-	5?	C	Ss?	Dakota	Cretaceous	-	10/7	"	<1
20	Baca	30-30S-45W	W	-	5+	C	Ss	Dakota	Cretaceous	-	10/13	"	20
21	Baca	21-30S-45W	St	Bear Creek	1-2	C	Al and Ss	Dakota	Recent & Cretaceous	-	10/13	"	2
22	Baca	33-29S-43W	St	House Creek	10	C	Al and Ss	Dakota	Recent & Cretaceous	-	10/13	"	7
23	Baca	10-29S-42W	St	Buffalo Creek	slightly cloudy	C	Al and Ss	Dakota	Recent & Cretaceous	-	10/13	"	<1
24	Baca	3-30S-42W	St	Bear Creek	25	C	Al and Ss	Dakota	Recent & Cretaceous	-	10/13	"	6
25	Stanton (Kansas)	15-29S-43W	St	Bear Creek	25	C	Al and Ss	Dakota	Recent & Cretaceous	-	10/13	"	2
26	Baca	3-30S-42W	W	-	5+	C	Ss	Dakota	Cretaceous	-	10/13	"	9
27	Baca	29-32S-46W	W	-	2-5	C	Ss	Dakota	Cretaceous	-	10/14	"	2
28	Baca	28-33S-43W	W	-	3	C	Ss	Dakota	Cretaceous	-	10/13	"	11

pit

7.9

8.1

8.1

8.2

7.9

8.1

8.0

8.1

8.0

7.4

7.8

8.0

8.2

7.9

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APAL: 3/28/55

Project Chief E. R. Landis Project title and number Cimarron Area - 56703 State (s) Colorado and Kansas

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation	Age					
10-29	Baca	5-32S-42W	W	-	2-5	C	Sand	Ogallala or Dakota	Pliocene or Cretaceous	-	10/14/54	Landis	7	8.0
30	Baca	19-33S-42W	W	-	2-5	C	Sand	Dakota	Cretaceous	-	10/14	"	14	8.0
31	Morton (Kansas)	10-31S-42W	W	-	2-5	C	?	Morrison or Permian	Jurassic or Permian	-	10/15	"	1	8.3
32	Morton	16-31S-42W	W	-	2-5	C	Sand?	Ogallala	Pliocene	-	10/15	"	9	8.1
33	Morton	18-31S-43W	W	-	2-5	C	Ss	Cockrum	Cretaceous	-	10/15	"	8	8.0
34	Morton	9-32S-43W	W	-	5+	C	Ss	Cockrum	Cretaceous	-	10/15	"	18	8.5
35	Morton	28-32S-41W	W	-	2-3	C	Ss and siltstone	?	Permian	-	10/15	"	28	8.0
36	Baca	5-31S-41W	St	Sand arroyo	1-2	M	Al and Ss	& Dakota	Recent & Cretaceous	-	10/15	"	16	8.0
37	Morton	30-31S-39W	W	-	2-5	C	Sand?	Ogallala	Pliocene?	-	10/16	"	12	8.4
38	Morton	30-31S-39W	W	-	2-5 (25)	C	Sand & gravel	Ogallala	Pliocene?	-	10/16	"	12	8.1
39	Morton	34-32S-40W	W	-	2-5	C	Sand & Gravel	Ogallala	Pliocene?	-	10/16	"	12	8.2
40	Baca	6-28S-46W	St	Two Buttes Creek	-	Cl	Al & Ss	Dakota, Cheyenne	Recent Cretaceous	-	10/17	"	2	8.0
41	Prowers	20-27S-45W	W	-	2-5	C	?	Al, Ogallala, or Dakota	Recent, Pliocene, or Cretaceous	-	10/17	"	5	8.0
42	Prowers	27-27S-45W	St	Two Buttes Creek	5-10	C	Al & Ss	See Reverse Side		-	10/17	"	4	8.0
43	Prowers	7-27S-46W	W	-	2-5	slightly cloudy	Ss?	Dakota?	Cretaceous	-	10/17	"	41	7.5

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APAL: 3/28/55

Project Chief E. R. Landis Project title and number Cimarron Area -5703 State (s) Colorado and Kansas

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LC-44	Prowers	2-25S 4-27S-45W	W	-	1-3	C	Al and/or Ss	and/or Dakota	Recent and/or Cretaceous	-	10/17	Landis	18	8.1
45	Prowers	4-27S-44W	St	N. Butte Creek	-	SM	Al & Ss	Dakota	Recent & Cretaceous	-	10/17	"	1	7.4
46	Baca	5-29S-46W	W	-	2-25	C	Ss	Dakota	Cretaceous	-	10/18	"	6	8.0
47	Baca	32-28S-44W	W	-	2-25	C	Ss	Dakota	Cretaceous	-	10/18	"	8	8.1
48	Baca	32-28S-44W	W	-	100?	C	Ss	Dakota	Cretaceous	-	10/18	"	6	8.0
49	Baca	27-29S-44W	W	-	1500	C	Ss	Cheyenne	Cretaceous	-	10/18	"	11	8.1
50	Baca	1-28S-46W	R	Two Buttes	?	slightly cloudy		See Reverse Side		-	10/18	"	3	7.7
51	Baca	1-28S-46W	W	-	2-5	C	Ss	"Big Sandy" stone"	Triassic?	-	10/18	"	4	8.2
52	Prowers	13-26S-47W	St	Clay Creek	10+	C	Al & Ss	Dakota	Recent & Cretaceous	-	10/19	"	6	7.9
53	Prowers	21-26S-47W	W	-	2-5	C	Al and/or Ss	and/or Dakota	Recent and/or Cretaceous	-	10/19	"	10	8.3
54	Prowers	7-25S-46W	St	Clay Creek	10+	C	Al & Ss	Dakota	Recent and Cretaceous	-	10/19	"	7	8.0
55	Baca	10-34S-46W	W	-	100+?	C	SS	Cheyenne	Cretaceous	-	10/20	"	4	8.1
56	Morton (Kansas)	5-34S-42W	W	-	2-5	C	Sd?	Ogallala	Pliocene?	-	10/20	"	20	8.2
57	Morton	6-34S-42W	R	-	-	C	Al and Sd	Ogallala	Recent & Pliocene	-	10/20	"	29	7.9
58	Morton	16, 17, 20 21-35S-42W	W	-	306	C	Sd and gravel	Ogallala	Pliocene?	-	10/21	"	12	8.5

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

UNOFF: 4/1/55

Project Chief H. M. Denson

Project title and number 567 - Reconnaissance for uranium

State (s) Colorado-Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity3/		Aquifer Type 4/ Formation		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
24-1	Larimer	NE 34-12N-69W	Sp.		point/min.	C	Tuff	White Riv.	Oligocene	Tuff	Sept. 1, 1954	Denson	48 8.1 ✓
24-2	"	NE 19-12N-68W	"		7 gpm	"	"	"	"	"	"	"	41 7.9 ✓
24-3	Weld	N ¹ / ₂ 7-11N-66W	Well		5 gpm	SM	ss(?)	Laramie	U. Cret.	Olig. Tuff	Sept. 2	"	30 8.1 ✓
24-4	"	SW ¹ / ₄ 1 11N-67W	Sp.		5 gpm	C	Tuff	White Riv.	Olig.	Tuff	"	"	2 8.1 ✓
24-5	"	NE ¹ / ₄ 27 11N-65W	Well		4 gpm	C	"	"	"	"	Sept. 3	"	10 8.4 ✓
24-6	"	SW ¹ / ₄ 34-11N-64W	"		2 gpm	C	"	"	"	"	"	"	10 8.1 ✓
24-7	"	NW 11 10N-64W	"		"	"	"	"	"	"	"	"	8 8.7 ✓
24-8	"	NW 29 7N-57W	"		1 gpm	"	ss	Fox Hills	U. Cret.	sandstone	"	"	5 8.3 ✓
24-9	"	SE 16 7N-57W	"		2 gpm	"	(?)	Pierre	U. Cret.	unknown	Sept. 4	"	5 8.4 ✓
24-10	"	C7 8N-57W	"		Hard to pump	Rusty	Tuff	White Riv.	Olig.	Tuff	"	"	21 8.3 ✓
24-11	"	NW 13 10N-59W	"		Pressure tank	C	"	"	"	"	"	"	13 8.3 ✓
24-12	Powder River		"		3 gpm	"	ss	Hell Creek	Cret.	sandstone	Sept. 13	"	41 8.4 ✓
24-13	"	SW 16 5S-54E	"		10 gpm	"	"	Hell Creek(?)	Cret.	"	"	"	41 8.1 ✓
24-14	Carter	NW 14 23-61E	"	Carter Ranch	5 gpm	"	"	Ludlow	Paleocene	arikaree tuff	Sept. 14	Gell & Denson	10 8.3 ✓
24-15	Carter	NW 17 33-62E	Sp.	Capitol Rock	1 qt. pm	"	"	"	"	"	Sept. 15	"	10 8.1 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/16/55

Project Chief E. R. Landis

Project title and number Cimarron Area 5-56703

State (s) Colorado & Oklahoma

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Age		Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
89	Baca	10-34S-50W	St	E. Carrizo Cr.	2-5	C	Al and Ss	& Mo-Recent & rison, Dak., Cretaceous	-	10/26	Landis	11	8.1
90	Baca	15-34S-50W	St	W. Carrizo Cr.	25+	C	Al & Ss	Cheyenne & Mo-Recent & rison, Dak., Cretaceous	-	10/26	"	6	7.9
91	Baca	31-33S-50W	St	W. Carrizo Cr.	100+	C	Al & Ss	Cheyenne do.	do.	10/27	"	8	7.9
92	Baca	12-35S-50W	St	Carrizo Cr.	25-50	C	Al & Ss	do.	do.	10/27	"	6	8.1
93	Cimarron (Okla.)	4-5N-1E	St	Cimarron River	100+	C	Al	Recent	-	10/27	"	25	8.0
94	do.	11-5N-2E	St	do.	100+	C	Al	Recent	-	10/27	"	13	8.3
95	Baca (Colo.)	10-29S-49W	St	Two Buttes Creek	3	C	Al	Recent	-	10/28	"	6	7.8
96	Bent	19-26S-51W	St	Rule Cr.	2-3	C	Al & Ss	& Dak. Recent & Cheyenne Cretaceous	-	10/28	"	14	7.9
97	Las Animas	34-28S-51W	Sp	-	?	C	Ss	Cheyenne Cretaceous	-	10/28	"	50	8.1
98	Bent	23-23S-52W	St	Purgatoire River	25+	C	Al	Recent	-	10/30	"	32	8.1
99	Bent	6-26S-51W	St	Rule Cr.	15+	C	Al	Recent	-	10/30	"	28	8.0
100	Bent	15-27S-51W	St	Hackberry Creek	2	slightly cloudy	Al	Recent	-	10/30	"	6	7.7
101	Cimarron (Okla.)	5-5N-5E	W	-	2-5	C	Al	Recent	-	11/2	"	26	8.2
102	Baca (Colo.)	29-30S-46W	W	-	100+?	C	Ss	Cheyenne Cretaceous	-	11/4	"	4	8.1
103	Las Animas	15-33S-51W	St	Chaco Creek	3	slightly cloudy	Al & Ss	& Dakota, Recent & Cheyenne Cretaceous	-	11/4	"	2	7.9

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 3/4/55

Project title and number

State (s) Colorado - Utah

pH

7.6	✓
8.2	✓
8.3	✓
8.2	✓
7.7	✓
8.4	✓
8.1	✓
7.8	✓

(over)

Colo. and ANAL:
Wyoming 9/2/54

State (s) Wyoming

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF. AD. RES: 3/11/55

Project Chief E. R. Landis

Project title and number Cimarron Area - 56703

State (s) Kansas and Colorado

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow (gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LK-211	Wallace	6-13S-38W	W	--	1-2	C	Al	--	Recent		9-19-54	ERL	11	7.6
LK-212	Logan	4-13S-36W	W	--	2	C	Al	--	Recent		9-20-54	ERL	40	7.8
LC-1	Cheyenne	20-14S-44W	W	--	500?	C	Ss and gravel	Ogallala	Plio.?		9-25-54	ERL	6	7.9
LC-2	Cheyenne	22-14S-46W	W	--	2-5	C	Ss and gravel	Ogallala	Plio.?		9-25-54	ERL	3	7.9
LC-3	Cheyenne	6-16S-45W	W	--	2-5	C	Ss and gravel	Ogallala	Plio.?		9-25-54	ERL	16	7.7
LC-4	Kiowa	25-18S-44W	W	--	2-5	C	?	Ogallala?	Plio.?		9-25-54	ERL	88	7.8
LC-5	Kiowa	22-18S-48W	W	--	500?	C	Ss and gravel	Ogallala	Plio.?		9-27-54	ERL	3	8.3
LC-6	Kiowa	1-19S-47W	W	--	1	C	Ss?	Codell	Cret.		9-27-54	ERL	40	7.8
LC-7	Kiowa	13-18S-46W	W	--	2	C	Ss?	Codell	Cret.		9-27-54	ERL	2	8.2
LC-8	Kiowa	8-18S-44W	W	--	2-5	C	Ss?	Codell	Cret.		9-27-54	ERL	1	8.4
LC-9	Kiowa	29-18S-51W	W	--	?	C	Ss and gravel?	Ogallala?	Plio.?		9-27-54	ERL	11	7.5
LC-10	Lincoln	18-9S-54W	Sp	--	?	C	Ss and gravel	Ogallala	Plio.?		10-1-54	ERL	3	7.7
LC-11	Lincoln	5-11S-56W	W	--	2-5	C	Ss and gravel	Ogallala	Plio.?		10-1-54	ERL	4	7.7
LC-12	Lincoln	22-15S-55W	W	--	2-5	C	Ss and gravel	Ogallala	Plio.?		10-1-54	ERL	38	8.0
LC-13	Kiowa	9-18S-50W	W	--	5	C	Ss and gravel	Ogallala	Plio.?		10-2-54	ERL	28	8.2

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ADAL: 3/4/55

Project Chief W. J. Hail Project title and number Asphaltites F-934 State (s) Kansas and Missouri

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
HK-1-W	Bourbon, Kansas	33-23S-25E	St Little Osage River	0 Cl			Pennsylvanian Ls and Sh.	9-14-54	Hail	2	8.1
HK-2-W	Bourbon, Kansas	22-25S-25E	St Marmaton River	10 Cl			Pennsylvanian Ls and Sh.	9-15-54	Hail	1	8.0
HM-1-W	Vernon, Missouri	25-34N-30W	Stock Res. ---	0 Sm			Pennsylvanian Ss and Sh.	9-17-54	Hail	<1	7.2
HM-2-W	Barton, Missouri	23-33N-33W	St Wood Creek	0 M			Pennsylvanian Ss and Sh.	9-18-54	Hail	<1	7.7
HM-3-W	Vernon, Missouri	13-34N-32W	St Little Wood Cr.	0 M			Pennsylvanian Ss, Sh and Ls.	9-18-54	Hail	<1	7.8
HM-4-W	Vernon, Missouri	18-35N-33W	St Dry Wood Creek	0 Cl			Pennsylvanian Ss, Sh and Ls	9-20-54	Hail	6	8.0
HM-5-W	Vernon, Missouri	3-34N-33W	St Dry Wood Creek	0 C			Pennsylvanian Ss, Sh and Ls	9-20-54	Hail	3	7.8
HM-6-W	Vernon, Missouri	24-35N-33W	St Dry Wood Creek	0 Cl			Pennsylvanian Ss, Sh and Ls	9-21-54	Hail	10	8.0
HM-7-W	Vernon, Missouri	1-35N-33W	St Marmaton River	0 Cl			Pennsylvanian Ss, Sh and Ls	9-21-54	Hail	3	7.8
HM-8-W	Vernon, Missouri	21-37N-33W	St Little Osage Creek	0 Cl			Pennsylvanian Ss, Sh and Ls	9-21-54	Hail	4	7.9
HM-9-W	Vernon, Missouri	8-37N-32W	St Pryor Cr.	0 M			Pennsylvanian Ss, Sh and Ls	9-21-54	Hail	<1	7.4
HK-3-W	Linn, Kansas	29-21S-24E	St Little Sugar Creek	0 Cl			Pennsylvanian Ss, Sh and Ls	9-22-54	Hail	<1	7.9
HK-4-W	Linn, Kansas	16-20S-24E	St Merai des Cygne River	20 Sm			Pennsylvanian Ss, Sh and Ls	9-22-54	Hail	<1	7.6
HM-10-W	Hickory, Missouri	22-38N-23W	St Hagies Creek	0 Cl			Pennsylvanian Ls.	9-23-54	Hail	<1	7.4
HM-11-W	Hickory, Missouri	13-36N-24W	St Little Weaybleau Creek	0 Cl			Pennsylvanian Ls.	9-23-54	Hail	4	7.7

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL. 3/28/55

Project Chief E. R. Landis

Project title and number Cimarron Area 56703

State (s) Kansas & Oklahoma

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow / (gpm)	Clarity 3/	Type 4/	Formation	Age					
LC-59	(Kansas) Morton	2-34S-40W	W	-	200	C	Sd. and gravel?	Ogallala	Pliocene?	-	10/21	Landis	7	8.1
60	Morton	35-32S-40W	W	-	2+	C	Al	-----	Recent	-	10/21	"	7	8.3
61	Stevens	29-31S-38W	St	Cimarron River	-	C	Al	-----	Recent	-	10/21	"	7	7.9
62	Stevens		W	-							10/21	"	8	8.3
63	Texas (Okla.)	34-5N-17E	W	-	300+	C	Sd and gravel?	Ogallala	Pliocene?	-	10/21	"	5	8.5
64	Texas	13-3N-15E	St	Beaver River	5-10	C	Al	-----	Rcent	-	10/21	"	7	8.3
65	Texas	26-3N-17E	St	Beaver River	25+	C	Al	-----	Recent	-	10/22	"	7	8.3
66	Texas	11-1N-18E	W	-	2-5	C	Al & Ss	Cloud Chief	Recent & Permian	-	10/22	"	6	8.0
67	Texas	11-1N-18E	W	-	2-5	C	Ss?	Cloud Chief	Permian	-	10/22	"	11	8.0
68	Texas	26-2N-17E	W	-	?	C	Ss	?	Triassic or Permian	-	10/22	"	8	8.1
69	Texas	35-3N-15E 16A	W	-	2-5	C	Sd?	Ogallala	Pliocene?	-	10/22	"	11	8.1
70	Texas	31-3N-15E	W	-	536	C	Sd and gravel	Ogallala	Pliocene?	-	10/22	"	8	8.2
71	Texas	22-3N-13E	St	Beaver River	25+	C	Al	-----	Recent	-	10/22	"	7	7.9
72	Texas	25-4N-12E	W	-	3	C	Sd ?	-----	Triassic red beds	-	10/22	"	41	7.9
73	Texas	19-4N-11E	W	-	40	C	?	Ogallala and/or redbeds	Pliocene? and/or redbeds	-	10/22	"	1	8.0

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* Change as per
Landis 6/27/55

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF. AN. RES.: 2/12/55

Project Chief Holly C. Wagner

Project title and number Kansas Pennsylvanian Oil and Gas-466 State (s) Kansas + OKLA.

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Type 4/ Aquifer Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
WK4-1	Clay	NW 1/4 Sec. 4 T7S-R3E	St		C	Sh	Wellington shale Permian	7-29-54	C. K. Bayne and Kenneth Walters	1	8.6
WK4-2	Clay	SE 1/4 Sec. 33 T6S-R3E	Sp	350 gpm	C	Sh	do- -do-	-do-	-do-	1	7.9
WK4-3	Cloud	NE 1/4 Sec. 13 T8S-R1W	St		C	Ss	Dakota sandstone Cretaceous	-do-	-do-	1	7.9
WK4-4	Cloud	NE 1/4 Sec. 13 T8S-R1W	W		C	Ss	Dakota sandstone -do-	-do-	-do-	1	8.3
WK4-5	Lincoln	SE SWSW Sec. 4 T10S-R7W	St		Sm	Ss	-do- -do-	8-10-54	Warren Hodson	8	8.1
WK4-6	Lincoln	NESWSW Sec. 4 T10S-R7W	W		C	Ss	-do- -do-	-do-	-do-	9	8.1
WK4-7	Logan	SE NW Sec. 34 T15S-R37W	St	Chalk Creek 3 gpm	C		Calcareous Ogallala Tertiary Arkosic ss fm Pliocene	9-8--54	C. R. Johnson	5	8.0
WK4-8	Logan	SWNW Sec. 14 T11S-R34W	W	430 gpm	C	-do-	-do- -do-	-do-	-do-	1	8.2
WK4-9	Logan	SE SW Sec. 18 T15S-R37W	W	4 gpm	C	-do-	-do- -do-	-do-	-do-	1	8.2
WK4-10	Ottawa Co. Okla.	SWNE Sec. 22 T. 29N-R24E	Sp	Five mile Creek 25 gpm	C	Cherty ls	Boone ls Miss.	8-27-54	A. L. Hornbaker	3	8.1
WK4-11	Cherokee	CWL Sec. 17 T35N-R25E	W	2 gpm	C	Ls	-do- Miss.	9-21-54	-do-	2	8.3
WK4-12	Douglas	SENE Sec. 30 T14S-R18E	W	15 gpm	C	Ss	Tonganoxie Pennsylvanian ss member of Stranger-Virginilian	10-10-54	H. G. O'Conner	<1	8.6
WK4-13	Cherokee	NENE Sec. 36 T33S-R23E	W	3 gpm	C	Ss	Bluejacket Penna-Des ss of Cherokee gp Moinesian	9-23-54	A. L. Hornbaker	<1	8.3
WK4-14	Labette	CWL Sec. 4 T35S-R18E	St	Snow Creek still pool- none	Cl	Sh	Bandera sh -do-	-do-	-do-	2	7.7
WK4-15	-do-	NENWNE Sec. 9 T35S-R18E	W	2-3 gpm	C	Ss	Bandera ss member of Bandera sh -do-	-do-	-do-	2	7.7

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief Henry L. Barryhill, Jr.

Project title and number F813 Geologic map of Allegany Co., Md. State (s) Maryland, Penna.

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
AyM1	Allegany		drainage tunnel	Hoffman	10+SeA?	M			Coal measures Sedimentary	6/27/55	de Witt	.4
AyM2	"		spring	?	5± gpm	C	Cgl ss	Pottsville Penn	ss	6/27/55	"	.3
AyM3	"		stream	Warrior Run	?	Cl			ss, siltstone, shales	6/27/55	"	.6
AyM4	"		spring	?	5+ gpm	C	Ls	Tonoloway Silurian	Ls	6/27/55	"	.7
AyM5	"		stream	Peavine Run	undet.	C			ss, siltstone, shale & ls	6/27/55	"	.2
AyM6	"		W. S. of	Evitts Cumberland Creek		C				6/27/55	"	.1
AyM7	"		spring		150 gpm	C	ls	Wills Creek Silurian	ls & calc. shale	6/28/55	"	.3
AyM8	"		spring	Warm Spring	10 gpm	C	ls	Keyser Devonian?	ls	6/28/55	"	.1
AyM9	"		stream	Flintstone Creek	undet.	C			ss, sn and some ls	6/28/55	"	<.1
AyM10	"		spring	White Sulphur	5 gpm	C	siltstone	Jennings romney Devonian	siltstone & shale	6/28/55	"	<.1
AyM11	Bedford (Pa.)		well	Murphy Spring	5 gpm	C	ss & cgl	Jeenings Devonian	ss & cgl	6/28/55	"	<.1
AyM12	Allegany		stream	15 mile creek	undet.	C			ss, siltstone, and shale	6/28/55	"	<.1
AyM13	"		well domestic	Town Hill Hotel	30 gpm	C	ss	Pocono Mississippian	ss, siltstone, and shale	6/28/55	"	<.1
AyM14	"		well domestic		undet.	C	ss and siltstone	Hampshire Devonian	ss, siltstone, sh., red	6/28/55	"	.9
AyM15	"		stream	Sideling Hill Cr	undet.	C			ss, siltstone, and shale	6/28/55	"	<.1

See the accompanying map for location of samples AyM1 to AyM15.

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

* Washington analyses

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/23/55

Project Chief J. R. Gill

Project title and number Dakota Lignite 5-56703

State (s) Mont., N. Dak., & S. Dak.

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)			
39	Stark	NW 11 139N, 92W	W	-	3gpm	C	SS	Tongue River	Paleocene	SS	Oct 14 54	J. R. Gill	1
40	Stark	SW 16 139N, 91W	W	-	3gpm	C	SS	Tongue River	Paleocene	SS	Oct 15	"	2
45	Stark	SW 19 137N, 92W	Sp	-	5gpm	C	"	"	"	"	Oct 16	"	2
50	Hettinger	SE 3 136N, 94W	W	-	3gpm	C	"	"	"	"	Oct 16	"	3
52	"	SW 9 136N, 93W	Sp	-	1qt/min	C	"	"	"	"	Oct 17	"	28
72	"	NE 6 135N, 94W	W	-	3gpm	C	"	"	"	"	Oct 18	"	1
73	"	NW 12 135N, 95W	W	-	2gpm	C	"	"	"	"	Oct 18	"	11
75	Slope	NE 19 135N, 98W	Sp	-	1gpm	C	T	Chadron	Oligocene	SS-T	Oct 21	"	8
76	"	"	Sp	-	1gpm	C	T	"	"	SS-T	Oct 21	"	6
88	"	NW 36 132N, 102W	W	-	3gpm	C	SS	Tongue River	Paleocene	SS	Oct 23	"	8
89	"	NE 1 133N, 101W	Sp	-	1/2gpm	C	SS-T	White River	Oligocene	SS-T	Oct 23	"	4
90	"	NE 36 134N, 101W	Sp	-	4gpm	C	SS-T	"	"	SS-T	Oct 23	"	3
92	McKinsey	Alexander	WS	-	-	C	SS	Tongue River	Paleocene	SS	Oct 25	"	< 1
377	Carter, Mont.	NW NE 24, 1N 5E	Sp	?	4gpm	C	SS	Fort Union	Paleocene	SS	Oct 5	"	2
566	Harding S. Dak.	SW 15 21, SE	Sp	Pine Tree	3ppm	C	SS	Tongue River	Paleocene	SS	Oct 11	"	3

pH

7.9 ✓

8.5 ✓

7.8 ✓

7.7 ✓

7.9 ✓

4.2 ✓

7.8 ✓

8.1 ✓

8.0 ✓

7.8 ✓

8.5 ✓

8.1 ✓

8.8 ✓

8.2 ✓

8.1 ✓

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qts. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/23/55

Project Chief J. R. Gill

Project title and number Dakota Lignite 5-56703

State (s) Mont., N. and S. Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
GM 321	Carter	NW 27 1N, 61E	W ?	19+/mi C	SS	Qal.	Recent	Sept 17 54	J. R. Gill	<1
322	Fallon	NE 14 21N, 60E	W Colbo	1.5gpm CL	SS	? - thin	?	Sept 18	"	<1
323	"	NE 20 1N, 61E	W ?	3gpm C	SS	- thin		"	"	7
326	Harding	NE 20 17N, 2E	Sp ?	3gpm C	SS	Arikaree	Miocene	Sept 21	"	5
340	"	NW 31 17 N., 1E	Sp -	1pt/m C	SS	"	"	"	"	11
374	Carter	SE 4 2S, 62E	W Turbi- ville	2gpm C	SS	Hell Creek	Upper Cretaceous	Oct 1	"	5
375	"	"	Sp "	1pt/m C	SS	Ludlow	Paleocene	Oct 1	"	30
GND 11	Adams N. Dak.	SE 19 132 N, 98W	W -	pt/m C	SS	Tongue River	Paleocene	Oct 2	"	5
GND 17	Adams N. Dak.	SE 24 131N, 97W	W Wolf Butte	1gpm CL	SS	Sentinel Butte Sh.	"	Oct 3	"	<1
GND 18	"	SE 23 130N, 97W	W Bucyrus	2gpm CL	SS	Tongue River	"	"	"	31
GND 19	Grant	16 130N, 90W	ST Timber Creek	5gpm C	SS	Tongue River Cannonball	"	"	"	4
GND 25	Hettinger	SW 22 135N, 91W	W Ruff	2gpm C	SS	Tongue River	"	Oct 4	"	1
GM 325	Fallon Mont.	61E 31 NE 23E	Sp -	1pt/m C	Clinker	"	"	Sept 18	"	2
GM 341	Carter Mont,	SW 13 1N, 58E	Sp Martin	3ppm C	SS	Ludlow	"	Sept 23	"	9
GND 20	Grant N. Dak.	3 131N, 90W	W -	2gpm C	SS	Tongue River	"	Oct 4	"	<1

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS

WATER SAMPLE DATA

LUFF: 4/1/55

Project Chief W. M. DensonProject title and number 567 - Reconnaissance for uraniumState (s) Montana-S. Dakota-Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow/(gpm) Clarity3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
24-16	Carter	SW 10 43-60E	Sp.	1 gal/pm Cl	ss Fox Hills U. Cret.	Arikaree, tuff	Sept. 15	Gell - Denson	3	8.5
24-17	"	NW 8 43-60E	"	1 qt/pm C	" " "	" "	"	" "	7	8.5
24-18	"	C29 1S-56E	" mud	1 qt/pm "	" Ludlow Paleocene	" "	"	"	21	8.0
24-19	Harding	SW 18 10N-1E	"	4 gpm "	" Arikaree Miocene	" "	Sept. 16	" "	11	8.2
24-20	"	3 16N-2E	"	10 gpm "	" White Riv. Oligocene	Chadron & Arikaree	"	" "	6	8.6
24-21	Carter	NW 27 23-61E	" Lantis	2 gpm "	" Arikaree Miocene	Arikaree, tuff	Sept. 17	" "	12	8.7
24-22	"	? 23-61E	" ?	? "	" " "	" "	"	" "	10	8.8
24-23	"	? ?	Well A. B. Thompson	2 gpm "	" Hell Creek U. Cret.	sandstone	"	Denson	3	8.2
24-24	Powder River	NE 11 8S-48E	" A. H. Gay	1 gpm "	" Fort Union Paleocene	"	"	"	41	8.6
24-25	Campbell		water system Gillette	- "	" "	"	Sept. 18	"	41	8.3
24-26	Converse	CSL 13 31N-70W	Well C. T. Howrey	- "	Ar. alluvium Recent	"	"	"	30	8.1
24-27	"	NW 13 31N-70W	Well Jim Puckett	- "	Tuff White River Oligocene	"	"	"	100	8.3
24-317	Carter Co. mint	NW 14 33-61E	Sp.	2 gpm "	ss Hell Creek U. Cret.	ss, claystone	Sept. 11	Gell	3	8.2
24-318	"	C 12 33-61E	"	3 gpm C	" Fort Union(?) Paleocene	ss, tuff	"	"	10	8.3
24-319	"	C 6 23-59E	St. Boxelder	100 gpm S.M.	" Drains Hhe-Kp		Sept. 13	"	3	8.2

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

Qtz. sandstone (3s), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

**FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA**

ANAL: 1/4/55
(Official results: 12/2/59)

Project Chief Robert J. Dunham

Project title and number Chadron Arch, WFAEC 5-56703

State(s) Nebraska, S. Dak.

Sample No.	County	Location Sec., T., R.	Source of sample		Condition of water		Aquifer			Lithology of rocks in intake area if determinable 4/	Date collected	Collector
			Type 1/	Name	Flow 2/(gpm)	Clarity 3/	Type 4/	Formation	Age			
D2-W1	Shannon S. Dak.	2-35N-46W	Stock pond	-	-	Clear	-	-	-	Altered Niobrara marl	6/29/54	Dunham
D2-W2	"	"	"	-	-	"	-	-	-	"	"	"
D14-W	"	16-35N-47W	Stream	-	none, a pool	Slightly muddy	-	-	-	Niobrara and Shannon Springs shale	7/9/54	T. Kehn
D15-W	"	16-35N-47W	Seep	-	negligible	Cloudy	-	-	-	Top Ardmore bentonite	"	Dunham
D17-W	Dawes Nebraska	8-34N-46W	Stream	White River	-	Cloudy	-	-	-	Arikaree & White R. clays & ss., & Pierre shale	7/10/54	"
D20-W	"	13-34N-48W	Stock pond	-	-	Clear	-	-	-	White River clays	7/10/54	"
D24-W	"	28-35N-48W	Stock pond	-	-	Clear	-	-	-	Upper Pierre shale	7/12/54	"
D27-W	"	23-35N-48W	"	-	-	Clear	-	-	-	"	7/12/54	"
D32-W	Sheridan Nebraska	19-35N-45W	"	-	-	Muddy	-	-	-	Altered and unaltered Niobrara marl	7/16/54	"
D43-W	Shannon S. Dak.	29-36N-46W	Spring	-	0.3 gal/min	Clear	mudstone	Brule or Chadron	Oligocene	Clay, mudstone, siltstone	7/24/54	"
D49-W	Dawes (Nebr.)	35-35N, 48W	Stock pond	-	-	Clear	-	-	-	Nobridge Pierre sh.	7/29/54	"
D48-W	"	32-35N-47W	Stream	White River	-	Muddy	-	-	-	Same as D17-W, plus lower Pierre	7/28/54	"
D5-W	Sioux (Nebr.)	From Orella S 1.3 mi. the W 3 mi.	Stream	-	-	Cloudy	-	-	-	Chadron clay	6/2/54	T. Kehn
		3-33N-53W										

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify).
 Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary.
 Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any.
 Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify).

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APAL: 3/2/55

Project Chief R. J. Dunham

Project title and number

State (s)

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
D128W	Daves	25,34N,48W	L	-	M		Chadron clay & altered high Pierre sh.	8/10/54	RJD	6	7.8
D163W	"	27,34N,47W	W	Pump 2.8 gal/min	C	Q	"loess	8/21/54		28	8.1
D174W	"	8,34N,47W	L		M		pc and ps pb	8/27/54		13	8.4
D181W	"	34,35N,47W	St	Beaver Cr.	None	V. M.	K Niobrara & Carlile	8/27/54		9	7.7
D192W	"	26,35N,47W	Hx L		C.		Carlile and maybe some Niobrara	8/27/54		11	7.4
D224W	"	2,33N,48W	W	-	C	Qal on Brule	Brule siltst.	9/8/54		20	8.0
D226W	"	9,33N,48W	W		C	Brule	" "	9/10/54		25	8.4
K66-1-W	Shannon Co., S.D.	12,35N,46W	W L	None	C	Kpg	K Gregory shale	9/13/54	TMK	2	8.2
K67-1-W	"	13,35N,46W	L	"	C	Kn	K Niobrara	9/13/54		10	7.6
K68-1-W	"	8,35N,45W	L	"	C	Qc on Kpg	Q Chadron	9/13/54		3	7.6
K69-1-W	"	1,35N,46W	W	Pump 3-5 gpm	C	Qdk alluvium	K Gregory	9/13/54		23	8.6
K70-1-W	"	35,36N,46W	W	Pump 2-5 gpm	C	Siltstone	Chadron silt near base	9/13/54		20	8.2
K71-1-W	"	5,35N,45W	W	Pump 2-3 gpm	C	"	"	9/13/54		12	8.3
K72-20-W	"	33,36N,47W	Seep	app. 1 gpm	C	Sh	Sharon Springs Sh	9/24/54		320	3.1

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/24/55

Project Chief J. R. Gill

Project title and number Dakota Lignite 567 (5-56703)

State (s) North Dakota & S. Dak.

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer Type 4/	Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
			Type 1/	Name	Flow (gpm)	Clarity3/							
GND93	McKinney	14-149N-99E	Sp	-	5 gpm	C	Ss	Fort Union	Paleocene	Ss	Oct. 26, 54	J.R. Gill	<1
96	Doon	S 27E 149N-96W	Sp	-	10 gpm	C	Ss	"	"	"	Oct. 27	"	<1
107	do.	SW36-147N-96W	W	-	3 gpm	Cl	"	"	"	"	"	"	<1
108	do.	do.	S	-	2 gpm	C	"	"	"	"	"	"	<1
109	do.	SE3-146N-96W	Sp	-	1/2 gpm	C	"	Arikaree or Wh. R.	Oligocene	SS-T	"	"	2
110	do.	do.	St	-	10 gpm	Cl	"	"	"	SS-T	"	"	<1
111	Stark	SE27-137N-93W	W	-	5 gpm	C	"	Fort Union	Paleocene	SS	Oct. 29	"	6
112	do.	do.	W	-	3 gpm	Cl	"	"	"	"	"	"	1
113	do.	SE21-137N-97W	Sp	-	1/2 gpm	C	"	"	"	"	"	"	2
114	do.	NE18-137N-97W	Sp	-	1/2 gpm	C	"	White R.	Oligocene	SS-T	"	"	1
130	Golden Valley	1.5 mi. W. Sentinel Butte	W	SW 21 140N-104W	2 gpm	Cl	"	Tongue R.	Paleocene	SS	"	"	8
143	Slope	SE22-22N-52E 137N-104W	Sp	XXXX XXXX	3 gpm	Cl	"	"	"	"	Oct. 30	"	4
ESD-566A	Harding	NW22-T22N-5E	Sp	Pine Tree	3 gpm	C	SS	"	"	"	"	"	1
													2

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 9/8/55

Project Chief		Project title and number		State (s)								
R. C. Kepferle		6904693 Dakota Lignites		N. and S. Dakota								
Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH	
ND5-16	Harding S. Dak.	EB 1/2 15 22N-5E	Sp -	3 C	ss-coal	Paleocene	Ft. Union mbr. below	sandstone, shale, coal	7-20-55	Chisholm	<1	8.8
ND5-17	Billings N. Dak.	SW 1/2 29 137N-100W	Sp - -	1/2 C	"	"	Ludlow Sentinel Butte	"	7-28-55	Kepferle	13	8.6
ND5-18	Slope N. Dak.	SW 1/2 31 136N-102W	W? -	1/2 E	"	"	Tongue River	"	7-29-55	"	8	9.2
ND5-19	Harding S. Dak.	SW NE 1/4 20-22N-5E	Sp -	1/2 C-Brn	"	"	Ludlow	"	"	"	<1	9.3
ND5-20	"	NW SE NE 1/4 20-22N-5E	Sp -	5 C	"	"	"	"	"	"	32	9.1
ND5-21	"	SE SE NE 1/4 20-22N-5E	Sp -	1/2 C	"	"	"	"	"	"	<1	8.9
ND5-22	"	NW 1/2 21 22N-5E	Sp -	1/2 C-rusty	"	"	"	"	"	"	<1	9.0
ND5-23	"	8-22N-4E	Sp Stearns #1	1/2 C	Ss	"	"	"	8-3-55	Chisholm	<1	8.8
ND5-24	"	"	Sp Stearns #2	1/2 C	"	"	"	"	"	"	50	8.9
ND5-25	"	"	Sp Stearns #3	1/2 C	"	"	"	"	"	"	<1	8.9
ND5-26	"	SW 1/2 10 22N-5E	Sp -	1 1/2 C	"	"	"	"	8-4-55	Kepferle	3	8.2
ND5-27	"	SW 1/2 23 22N-5E	Sp -	1/2 Cl	coal-ss	"	"	"	8-5-55	Chisholm	34	8.4
ND5-28	Slope N. Dak.	SW 1/2 10 136N-100W	Sp -	1/2 C-brnsh	"	"	Sentinel Butte sh.	"	8-8-55	Kepferle	5	8.5
ND5-29 a	Harding S. Dak.	EB 1/2 27 22N-5E	Sp Cabin	1/6	"	"	Ludlow	"	"	Chisholm	13	8.7
ND5-30 a	"	SE 1/2 22 22N-5E	Sp Long Tree	1/6 C	"	"	Tongue River	"	"	"	3	8.3

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 ✓ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 ✓ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 ✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 3/28/55

Project Chief E. R. Landis

Project title and number Cimarron Area 56703

State (s) Oklahoma and Colorado

Sample No.	County	Location Sec. T. R.	Source of sample Type 1/ Name.		Condition of water Flow / (gpm) Clarity 3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
LC-74	Texas (Okla.)	2-3N-10E	W	-	2-5	C	Sd and gravel?	Ogallala	Pliocene?	-	10/22	Landis	-15	8.3
75	Cimarron	12-4N-7E	W	-	70 to 90	C	Sd	Ogallala	Pliocene?	-	10/22	"	7	8.2
76	Cimarron	15-3N-5E	W	-	153	C	Sd?	Ogallala	Pliocene?	-	10/23	"	6	8.5
77	Cimarron	25-2N-6E	W	-	2-5	C	Al	-	Recent	-	10/23	"	5	8.0
78	Cimarron	31-2N-8E	W	-	2-5	C	Sd?	Ogallala	Pliocene?	-	10/23	"	6	8.2
79	Baca (Colo.)	2-30S-50W	St	Freezeout Creek	-	C	Al and Ss	& Dakota Cheyenne	Recent & Cretaceous	-	10/24	"	5	8.1
80	Baca	31-29S-50W	W	-	2-3	C	Al	-	Recent	-	10/24	"	35	8.1
81	Las Animas	2-30S-51W	W	-	2-3	C	Al	-	Recent	-	10/24	"	10	7.9
82	Baca	28-31S-50W	W	-	2-5	C	Al and/or Ss	and/or Dakota	Recent and/or Cretaceous	-	10/24	"	12	8.0
83	Baca	26-31S-48W	W	-	100?	C	Ss	Dakota or Cheyenne	Cretaceous	-	10/25	"	20	8.0
84	Baca	10-32S-50W	W	-	5-10	C	Ss	Dakota or Cheyenne	Cretaceous	-	10/25	"	10	8.2
85	Las Animas	26-32S-52W	St	-	-	Cl	Al and Ss	& Dakota	Recent & Cretaceous	-	10/25	"	<1	7.6
86	Las Animas	9-33S-52W	Sp	-	?	C	Ss	Dakota	Cretaceous	-	10/25	"	1	8.0
87	Las Animas	14-33S-52W	St	Tecolote Creek	?	Sm	Al and Ss	& Dakota	Recent & Cretaceous	-	10/25	"	<1	7.7
88	Baca	27-33S-50W	St	E. Carrizo Creek	10+	C	Al and Ss	& Dakota	Recent & Cretaceous	-	10/26	"	9	8.2

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 2/14/55

Project title and number 5-56703

State (s) Oklahoma-Kansas

17

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

ANAL: 7/12/55

State (s) South Dakota, N. Dak., Wyo.

* ANAL: 10/11/55

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

APM: 3/28/55

Project Chief J. R. Gill

Project title and number Dakota Lignite 567

State (s) S. Dakota, Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)
550-507	Harding	1W4, 21N, 5E	St Bull Cr.	stagnat Cl	? Drains Tongue River Ludlow Paleocene	ss-sh	Sept. 1	J. R. Gill	26 8.5
550-508	"	W 1/2 34, 22N, 5E	R Schlei-chart	100x200 yds dia		ss	"	"	39 8.4
" 509	"	W27 "	Spr Devils Canyon No. 1	2 gal/min C	ss Tongue Riv.	ss	"	"	15 8.4
" 510	"	NE28 "	R Devils Canyon	stagnat Cldy	Tongue Riv. Ludlow	ss	"	"	<1 8.1
" 511	"	W 22 "	Spr Picnic	2 gal/min C	ss Tongue Riv. Ludlow	ss	"	"	15 8.7
307	Carter	C33 2S, 61E	Spr Dallanger	1 gal/min C	ss Arikaree Miocene	Tuff	Sept. 6	"	11 8.3
308	"	W 31 "	R Maverick	200x500 yds dia Cl	Drains Arikaree Hell Creek	Runoff ss-Tuff	"	"	3 7.8
309	"	C36 2S 61E	Spr McClary	1 qt/min Cl	ss-coal Ludlow Paleo	ss-Tuff	Sept. 8	"	2 8.4
310	"	B 2 27, 2S 62E	W Plum Creek	5 gal/min C	Qal " "	ss	"	"	12 8.7
311	"	SE 15, 2S 61E	W Pendleton	5 gal/min C	ss Tfl " "		"	"	3 8.1
312	"	C17, 2S 61E	R Slick Creek	200x300 yds dia	Arikaree Ludlow "	runoff's sp in ss-Tuff	"	"	33 8.3
313	"	C4 2S 61E	W Carter	5 gal/pm C	ss Ludlow Paleocene		"	"	4 8.2
314	"	SW5 1S 61E	W Snow Creek	" C	ss Ludlow "		"	"	4 8.4
315	"	W15 1N, 60E	W Mill iron	"	ss Ludlow U. Cret.		"	"	75 8.5
316	"	SW2 2S, 56E	Sp -	5 gal/min C	ss Hell Creek "		"	"	<1 8.0

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 2/23/80

Project Chief Roy C. Kepferle

Project title and number South Dakota Black Shales WPAEC 5-56703 State (s) South Dakota-Nebraska

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rock in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	
KSD-1	Pennington, S.D.	SE 1/4 sec. 35, T38, R14E	W F. Olic	C	Al	Brule	Oligocene	Siltstone-claystone Al.	7/18/54	R. C. Kepferle	55
KSD-2	"	NE 1/4 NW 1/4 sec. 1 T4S, R14E	Sp	1/2 gal per min. C	"	"	"	ss, claystone, siltstone, Al.	7/16/54	"	5
KSD-3	"	SE NW 1/4 sec. 12 T2S, R8E	W F. Heller	C	"	Niobrara	U. Cretaceous	Shales, ss, Al.	7/22/54	"	38
KSD-4	Custer S.D.	W NE SW sec. 23 T3S, R8E	W	C	"	"	"	"	7/23/54	"	38
KSD-5	Lyman, S.D.	NE NW SE sec. 10 T10N, R72W	Sp E. Blum	1/2 gal/p.m. C	"	Pierre & Glacial	and Pleist.	"	8/5/54	"	5
KSD-6	Gregory, S.D.	NE 1/4 sec. 17 T9N, R65W	W U.S.	Cl	"	?	?	"	8/9/54	"	2
KSD-7	Knox, Nebr.	W 1/4 NW 1/4 SW 1/4 sec. 30 T33N, R8W	W S. Zooback	C	ss	?	?	Ls	8/10/54	"	<1
KSD-8	"	"	W	C	Al	Niob.	U.K.	Ls	"	"	2
KSD-9	Bon Homme S.D.	SE 1/4 SE 1/4 sec. 14 T92N, R61W	Sp M. Boeckman	3 gpm C	Ls	"	"	Ls	8/13/54	"	5
KSD-10	Custer, S.D.	W 1/4 NW 1/4 SW 1/4 sec. 9 T3S, R8E	W H. Hasslestrom	C	ss	Fall River (?)	Cretaceous	Al, ss, shale	8/19/54	"	<1
KSD-11	"	SE sec. 17 T3S, R8E	W	C	"	?	"	"	"	"	15
KSD-12	"	NE 1/4 SE 1/4 SW 1/4 sec. 20 T3S, R8E	W	C	"	?	"	"	"	"	1
KSD-13	Shannon, S.D.	SE 1/4 sec. 27 T37N, R44W	W Indian Reservation	C	"	?	"	"	8/21/54	"	7
KSD-14	Custer, S.D.	NW 1/4 sec. 18 T4S, R9E	W	Cl	Al	Verikaree(?) Rosebud(?)	Oligocene Miocene	Al., ss	8/25/54	"	<1
KSD-15	Pennington, S.D.	NW 1/4 sec. 4 T1N, R14E	(WS) Sp City of Wasta	C	Al	Pierre	Cretaceous	Shale, Al.	8/26/54	"	.6

- 1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF. ANAL. RES. : 3/12/55

Project Chief Roy C. Kepferle

Project title and number S.Dak.black shales lot 3016

State (s) S.Dak.-Nebr.

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
KSD-46W	Nance Nebr.	CNW 1/4, Sec. 4 T16N-R5W	W	C	Al(?)		SS-Al	10-2-54	Kepferle	9	7.9
KSD-47WS	Lyman S. Dak.	SW 1/4, Sec. 33 T10N-R72W	Seep	Sm	Sss	Bijou	Mioc.	10-6-54	-do-	3	7.9
KSD-48WS	Todd S. Dak.	SE 1/4, Sec. 4 T39N-R28W	W	Cl	Tuff. siltstone	Brule	Olig.	10-8-54	-do-	14	8.3
KSD-49WS	Washabaugh S. Dak.	SW 1/4, Sec. 31 T42N-R39W	W	C	-do-	Brule	Olig.	10-12-54	-do-	7	8.4
KSD-50W	-do-	NE 1/4 Sec. 33, T42N-R36W	W	C	-do-	-do-	-do-	10-12-54	-do-	7	8.3
KSD-51W	-do-	NE 1/4 NW 1/4, Sec. 25 House well T40N-R39W	W	C	-do-	-do-	-do-	10-13-54	-do-	13	8.7
KSD-52W	-do-	-do-	W	C	-do-	-do-	-do-	-do-	-do-	9	8.7
KSD-53W	Shannon S. Dak.	SW cnr. 34 T38N-R41W	W	C	-do-	Rosebud	Mioc.	10-14-54	-do-	7	8.2
KSD-54W	Washabaugh S. Dak.	NW 1/4 Sec. 15 T40N-R40W	W	C	-do-	Brule	Olig.	-do-	-do-	14	8.7
KSD-55W	-do-	SW 1/4SW 1/4 Sec. 30 T43N-R37W	Sp	C	Tuff. siltstone alluvium	-do-	-do-	10-15-54	-do-	9	8.0
KSD-56W	-do-	NW 1/4NE 1/4 Sec. 4 T42N-R38W	Sp	1/2 gal/min. C	-do-	-do-	-do-	-do-	-do-	5	8.3
KSD-57W	Meade S. Dak.	E 1/2 Sec. 28 T8N-R12E	W	C	-do-	-do-	-do-	10-16-54	-do-	16	8.2
KSD-58W	Cedar Nebr.	SW cnr. Sec. 26 T32N-R1W	W	C	Glacial drift(?)	Pleist.	Gravel. Shale	10-2-54	-do-	9	7.9
KSD-59W	Meade S. Dak.	NW 1/4SE 1/4 Sec. 8 T4N-R8E	Seep	SM	Shale	Pierre	U.Cret.	10-18-54	-do-	25	7.8
KSD-60W	Pennington S. Dak.	NE 1/4SE 1/4 Sec. 18 T1N-R11E	Sp	4/5gpm C	Al-Shale	Brule	Olig.	10-18-54	-do-	13	8.5

Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

OFF. ANAL: 11/29/55

Project Chief J. R. Gill

Project title and number Regional Synthesis 149

State (s) South Dakota, North Dakota & Wyoming

Sample No.	County	Location Sec. T., R.	Source of sample		Condition of water		Aquifer		Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
			Type 1/	Name	Flow (gpm)	Clarity3/	Type 4/	Formation						
SD5-3	Perkins	SW 34 18N-16E	W		1 pt-15 sec	C	Sss	Ludlow	Paleocene		8-31-55	Gill and Denson	1	8.1
SD5-4	"	SE 8 18N-11E	W		1 pt - 5 sec	C	"	"	"		"	Gill	<1	8.2
DN5-33	Wichita		W	Chris Jassmann		C	"	Arikaree	Miocene		9-10-55	Denson	9	7.8
DN5-34	Stark	NW NE 34 138N-97W	W					Twr. Brule (?)	Oligocene		9-23-55	Denson	18	8.4
DN5-35	"	SW SE 18 138N-96W	W			C	Sss	"	"		9-30-55	Denson	<1	7.8
DN5-36	"	SE NE 2 138N-97W	W	Frank Outcrop		C	"	Sentinel Butte sh	Paleocene		10-1-55	"	2	8.3
DN5-37	"	SE NE 4 137N-97W	W	Louie Brown		C	"	"	"		10-2-55	"	40	8.0
DN5-38	"	SW SW 18 137N-97W	W					"	"		"	"	<1	8.0
DN5-39	"	SE SW 5 137N-97W	W	Frank Heck				"	"		10-4-55	"	5	8.5
DN5-40	"	SW NW 28 138N-97W	Seep	Andrew Obritch	1 pt/min	C	Sss	Brule	Oligocene		19-8-55	"	13	8.2
DN5-41	"	"	Seep	"	"	C	"	"	"		"	"	17	8.6
DN5-42	"	SE NW 28 138N-97W	W	"		C	"	Chadron	"		"	"	19	8.6
DN5-43	Billings	NE NE 5 137N-100W	W			C	"	Sentinel Butte	Paleocene		10-12-55	Gill and Denson	14	8.3
DN5-44	"	NW SE 28 137N-100W	Sp		1 pt/30	C	"	"	"		"	"	7	7.9
DN5-45	Stark	NE NE 18 137N-97W	W	Leo Fritterer		C	"	Brule	Oligocene		10-13-55	"	13	7.7

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

UNOFF: 4455

Project Chief H. M. Denson

Project title and number 567 - Reconnaissance for uranium

State (s) Wyoming + COLORADO

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (pph)	
54-28	Converse	NW13-31N 70W	W Jim Puckett	- C	Tuff	White River	Olig	Tuff	Sept. 18	Denson	100
54-29	"	NEL13-31N 70W	W Burke	Pump	"	"	"	"	"	"	198
54-30	"	" " "	"	"	"	"	"	"	"	"	186
54-31	"	NWC13 " "	" Puckett	5 g/p/m	"	"	"	"	"	"	7
54-32	Platte	SW 27 SW 14	"	3 g/p/m	"	"	"	"	"	"	27
54-33	"	SW 14 SW 14	Well Moffit	5 g/p/m	"	"	"	"	"	See Trench SW 215	21
54-34	"	SW 6 SW 6	34-26-68 " Stoneking	5 g/p/m	"	"	"	"	"	"	13
54-35	"	SW 6 SW 6	66-27-68 " Garwood	-	"	"	"	"	"	"	75
54-36	"	10-26-68	" Peppers	5 g/p/m	"	Ark(?)	Miocene	"	"	"	11
54-37	"	SW 36 SW 36	"	4 g/p/m	"	Ark(?)	"	"	"	"	19
54-38	"	SW 17 SW 17	"	pumped	"	White River	Olig	"	"	"	11
54-39	"	"	WS	tapwater	"	"	"	"	"	"	9
54-40	Laramie	"	Well	10 g/p/m	"	Ark(?)	Miocene	"	"	"	4
54-41	"	"	WS	-	"	"	"	"	"	"	3
54-42	Jefferson	"	"	-	"	Laramie(?)	U. Cret.	ss	Sept. 19	"	1

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 ✓ Estimated flow in gallons per minute; use second-foot (cubic feet per second) if necessary
 ✓ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 ✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 1/3/55

Project Chief Wm. Hail

Project title and number Fuels 934 - Asphaltite

State (s) Wyoming and Montana

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name	Condition of water Flow 2/(gpm) Clarity3/	Aquifer Type 4/ Formation Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)		
HW-1-W	Sublette Wyoming	36-39N-110W	Sp	-----	Hundreds	C	Sh. SS Phosphoric Permian	7/23/54	W. Hail	4 7.6	
HW-2-W	Sublette Wyoming	14-38N-110W	St	Green River	Thousands	C	SS, Sh, Ls, Granite etc.	7/23/54	W. Hail	1 7.1	
HW-3-W	Fremont Wyoming	4-1S-1W	St	Little Wind R.	Thousands	C	Meta. Icn. and Paleo.	7/25/54	W. Hail	3 7.7	
HW-4-W	Fremont Wyoming	26-33N-99W	Sp	-----	20	C	Sh. Ss. Morrison Jurassic	7/27/54	W. Hail	3 8.31	
HW-5-W	Matrona Wyoming	2-33N-88W	St	Landon Creek	10	C	Ss, Ls, Sh. Paleozoic through Jurassic	7/30/54	W. Hail	4 7.50	
HW-6-W	Matrona Wyoming	1-40N-80W	St	S. Fork Powder River	1	C	Ss, Sh. Cretaceous	8/3/54	W. Hail	10 7.6	
HW-7-W	Crook Wyoming	13-54N-62W	St	N. Red-water Creek	100	C	Jurassic Ss, Sh. Gypsum.	8/5/54	W. Hail	5 7.8	
HW-8-W	Campbell Wyoming	34-55N-77W	St	Powder R.	Thousands	VM	Ss, Sh, Silts, Etc. Cret. and Tertiary	8/8/54	W. Hail	3 7.1	
HW-9-W	Big Horn Wyoming	19-49N-90W	St	Paintrock Creek	400	C	Pre-C Granite and Paleozoic and Mesozoic sediments.	8/10/54	W. Hail	13 7.7	
HW-10-W	Big Horn Wyoming	1-52N-91W	St	Trapper Creek	150	C	Pre-C Granite and Paleozoic sediment	8/11/54	W. Hail	1 8.0	
HW-11-W	Big Horn Wyoming	6-52N-92W	St	Potato Draw	5	C1	Sh, Ss. Cretaceous and Jurassic	8/13/54	W. Hail	13 7.2	
HW-12-W	Big Horn Wyoming	27-55N-93W	St	Crystal Creek	25	C	Ss, Sh. Mesozoic	8/13/54	W. Hail	41 7.7	
DMT-1-W	Carbon Montana	20-7S-24E	Sp	-----	Hundreds	C	Ss Chugwater Triassic	Not Known	8/14/54	W. Hail	3 8.2
HW-13-W	Fremont Wyoming	7-6N-2W	St	Coal Creek	10	C1	Ss, Sh. Triassic	8/17/54	W. Hail	5 7.6	
HW-14-W	Carbon Wyoming	14-28N-83W	St	Canyon Creek	100	C	Ss, Sh, Volcanic rocks Miocene or Oligocene	8/19/54	W. Hail	6 7.2	

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

3/ Clear (C), Cloudy (C1), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

Project Chief, C. S. Robinson

Project title and number Devils Tower, Wyoming - Montana

State (s) Wyoming, Montana

Sample No.	County	Location Sec. T. R.	Source of sample Type 1/ Name	Condition of water Flow 2/ (gpm) Clarity 3/	Aquifer Type 4/ Formation	Age	Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)		
W-54a	Crook	6-54N-65W	Sp	-	C	Ss	Base Fall R.	Lower Cretaceous	Sandstone-shale	5/20/55	Mapel	
W-55a	"	21-54N-66W	W	-	C	Ss	"	"	"	"	"	
W-75	"	31-55N-66W	Seep	-	C	Sh	Mowry shale	"	Shale	"	"	
W-76	"	22-55N-67W	Seep	-	C	Ss	Top Fall R.	Lower Cretaceous	Sandstone	6/2/55	"	
W-77	"	25-54N-67W	St	-	C	-	-	-	Drains Fall River sandstone	6/3/55	"	
W-78	"	"	St	-	C	-	-	-	About 1/2 mile down stream from W-77	"	"	
W-79	"	33-55N-66W	Sp	1 gpm	C	Ss	Newcastle ss	Lower Cretaceous	Sandstone	6/4/55	"	
W-80	"	35-52N-67W	Seep	-	C	"	Fall R. ss	"	Sandstone-shale	6/7/55	"	
W-81	"	26-52N-67W	Sp	-	C	"	"	"	"	"	"	
W-82	"	23-52N-67W	Sp	1-2 gpm	C	"	"	"	"	"	"	
W-83	"	26-51N-66W	W	-	C	"	"	"	"	6/20/55	"	
W-84	"	1-50N-66W	W	-	C	"	"	"	"	7/6/55	"	
W-85	Weston (Mont.)	24-48N-65W	W	Trickle	C	Unknown	Unknown	Unknown	Unknown	7/7/55	"	
W-86	"	31-48N-64W	W	6 gpm	C	Ss	Fall R. ss	Lower Cretaceous	Sandstone-shale	7/21/55	"	

✓ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)
 ✓ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary
 ✓ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any
 ✓ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

(over)

FUELS BRANCH TRACE ELEMENTS
WATER SAMPLE DATA

ANAL: 8/2/54

Project Chief James R. Gill

Project title and number 5-56730 Dakota lignites

State (s) Wyoming & S. Dakota

Sample No.	County	Location Sec. T., R.	Source of sample Type 1/ Name		Condition of water Flow 2/ (gpm) Clarity 3/		Aquifer Type 4/ Formation Age			Lithology of rocks in intake area if determinable 4/	Date collected	Collector	Uranium (ppb)	pH
GRW-1	Laramie, Wyoming	16 mi. N. of Cheyenne	W	none		C	T-ss		Oligocene Miocene	T-ss	7/25/54	J. R. Gill	5	7.8
-2	"	23 mi. N.	W			C	T-ss		"	T-ss	"	"	9	8.0
-3	"	33 mi. N.	Pond		none	Cl	-		"	T-ss	"	"	1	7.0
-4	Goshute, Wyoming	7.2 mi. S. Hank Spr.	W			C	T-ss		"	T-ss	"	"	18	7.9
-5	"	Torrington, Wyoming	St	Platte R.		C			Tertiary & PC	-	"	"	18	7.9*
SD-349	Harding, S. Dak.	SE 34, 24N 8E 14W	Sp	-	1qt/min	Cl	Qls	Ludlow	Paleocene		7/9/54	"	56	8.2
350	"	SE 27, 19-3 SW 5, 10N 8E	W	Coffield	-	C	ss	Ludlow	Paleocene	ss	7/9/54	"	50	7.9
358	"		Sp	Puckerhop	5gal/m	C	T-ss	Arikaree	Miocene	T-ss	7/11/54	"	51	8.1
359	"	NW 4 - "	Sp	Harry	5 gal/m	C	"	"	"	"	7/11/54	"	67	9.3
359A	"	SE 32, 19N 8E	Sp	N. end	"	C	"	"	"	"	7/11/54	"	74	9.5
363	"	NE 15, 18N 8E	W	Mitchell		Cl	ss	Ludlow	Paleocene	"	7/12/54	"	1	8.2
374	"	NE 28, 19N 8E	Sp		Seep	C	ss	Ludlow	Paleocene	?	7/14/54	"	2	8.9
375	"	NE 32, 19N 8E	Sp		5 gal/m+	C	T-ss	Arikaree	Miocene	T & ss	7/14/54	"	51	9.5
382	"	SE 6, 18N 7E	St	Squaw		SM	Al	Ludlow Hell Creek	Paleocene Cretaceous	?	7/16/54	"	7	8.6
383	"	NE 9, 18N 8E	St	Gap		C	Al	Ludlow	Paleocene	?	7/16/54	"	72	8.6

1/ Spring (Sp), Well (W), Stream (St), City or town water system (WS), Reservoir (R), Lake (L), Other (specify)

2/ Estimated flow in gallons per minute; use second-feet (cubic feet per second) if necessary

3/ Clear (C), Cloudy (Cl), Slightly muddy (SM), Muddy (M), Very muddy (VM); Color, if any

4/ Qtz. sandstone (Ss), Arkose (Ar), Alluvium (Al), Conglomerate (Cgl), Limestone (Ls), Tuff (T), Other (specify)

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