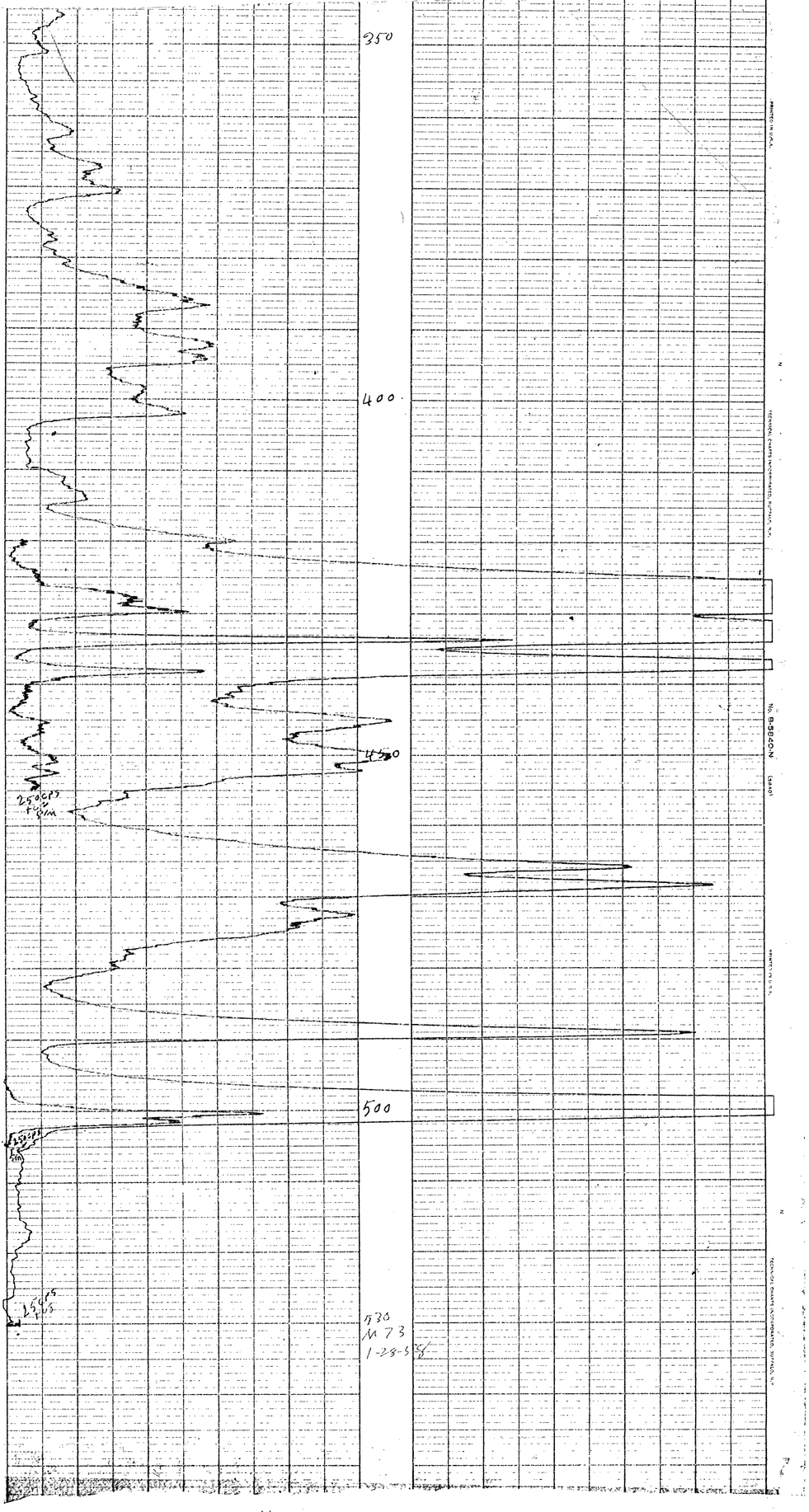
Received with F.T. Memo

January 30, 1958

Received w/ F.T. Memo of

January 13, 1958

Received w/ F.T. memo of
2-18-58



LOGGING DATA

PROBE SIZE: 1 3/4 CALIBRATION: 3 0 0

DATE: 1-28-58 FIELD HDQTRS: Elmont

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	M 73						
HOLE DIA.	6 1/2 IN						
DRILLED DEPTH	530 FT						
LOGGED DEPTH	530 FT	10 35					
GAMMA SCALE	25 CPS	250 250					
TIME CONSTANT	3 SEC	2 2					
PAPER SPEED	10 FT/IN	10 10					
LOGGING SPEED	15 FT/M	15 15 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	.5						
SELF POT SCALE	.5 MV/IN						
BORE HOLE MEDIUM		WITH					
MUD READINGS	RESISTIVITY			TYPE BASE			
	VISCOSITY			SALINITY			
CALIPER SCALE	MV/IN	LOG SIZE		PAPER SCALE			
TIME IN	2025	CASED TO				I.D.	IN
TIME OUT	2225	CORE INT.				DIAM	IN

575

LOCATION

SEC. TWP. RGE.

COUNTY: Fall River

STATE: S.D.

[illegible]: [illegible]

[illegible]D BY:

TIME

DRIVE: 3.

FIELD: 1.0

STANDBY: .4

BREAKDOWN:

TOTAL: 1.9

OPERATOR: Miller

PARTY NO: U11

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY:

BORE HOLE NO.

FIELD

COUNTY

LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM _____ FILE _____
DRLG. MEAS. FROM _____ NO. _____

DATE:
FOOTAGE
TOTAL DEPTH (DR)
HOLE DIAM.
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE

ELEVATION
KB
GL
BKGRD. COUNT
SLUSH PIT CT.

REMARKS:

565-495 - 250CPS FOM

455-420 - 250CPS FOM

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH THICKNESS	K KD	CORR. CPS.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS

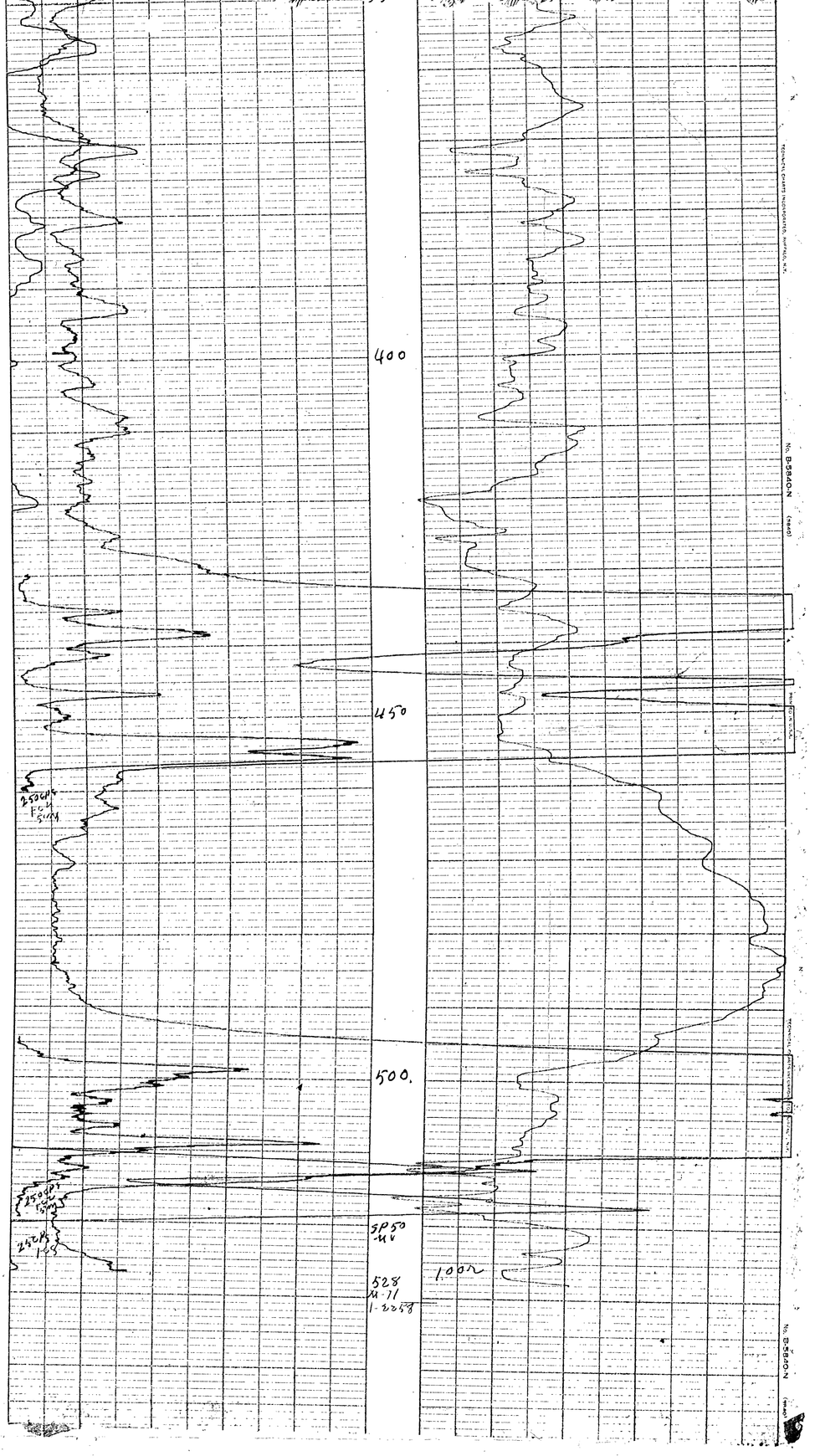
SELF POTENTIAL NO S.P.

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER MV/IN

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS — M



LOGGING DATA

PROBE SIZE: 1 3/4 CALIBRATION: 3.6

DATE: 1-22-53 FIELD HDQTRS: Cleveland

	INITIAL RUN		RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	M-71						
HOLE DIA.	4 1/4	IN					
DRILLED DEPTH	533	FT	25/30				533
LOGGED DEPTH	525	FT	2 ~~[illegible]~~				
GAMMA SCALE	25	CPS	250	250			
TIME CONSTANT	5	SEC	2	2			
PAPER SPEED	10	FT/IN	10	10			
LOGGING SPEED	10	FT/IN	FT/IN	FT/IN	FT/IN	FT/IN	FT/IN
RESISTANCE SCALE	100						
SELF POT SCALE	10	MV/IN					
BORE HOLE MEDIUM	H2O		WITH				
MUD READINGS	RESISTIVITY			TYPE BASE			
	VISCOSITY			SALINITY			
CALIPER SCALE		MV/IN	LEG SIZE	PAPER SCALE			
TIME IN	1945		CASED TO			I.D.	IN
TIME OUT	2100		CORE INT.			DIAM	IN

LOCATION

SEC. TWP. RGE.
COUNTY: California
STATE:
AREA:
CLIENT:
Mr. Leitz
LOG REC'D BY:

TIME

DRIVE:
FIELD: 1.3
STANDBY: 9.3
BREAKDOWN:
TOTAL: 10.1
OPERATOR: Melton
PARTY NO: U11

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY:
BORE HOLE NO.
FIELD
COUNTY
LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM ---------- FILE ----------
DRLG. MEAS. FROM ---------- NO. ----------

DATE:
FOOTAGE
TOTAL DEPTH (DR)
HOLE DIAM.
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE

ELEVATION
KB
GL

BKGRD. COUNT ----------
SLUSH PIT CT. ----------

REMARKS:
520 - 495 - 250 CPS tc2
460 - 430 - 250 CPS tc2

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH THICKNESS	K KD	CORR. CPS.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS

SELF POTENTIAL 50/IN

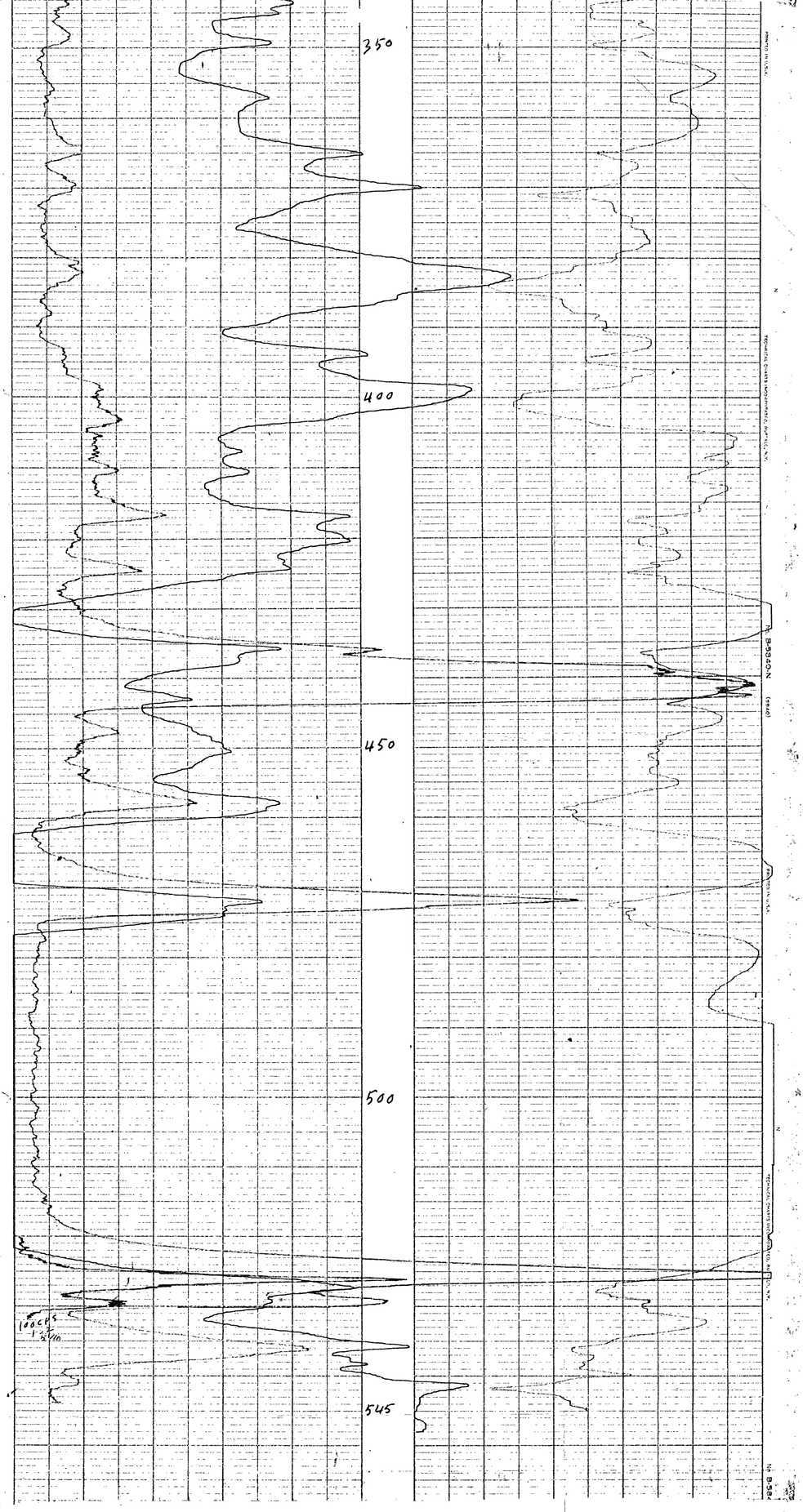
+ | 10 MV | −

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER MV/IN

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS — M



LOGGING DATA

PROBE SIZE: 1 7/8 CALIBRATION: 30 0

DATE: 1-25-55 FIELD HDQTRS: Edgemont

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	M-72						
HOLE DIA.	6 1/2 IN						
DRILLED DEPTH	552 FT						
LOGGED DEPTH	545 FT	12					
GAMMA SCALE	25 CPS	100					
TIME CONSTANT	8 SEC	2					
PAPER SPEED	10 FT/IN	10					
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	100						
SELF POT SCALE	10 MV/IN						
BORE HOLE MEDIUM	H2O	WITH					
MUD READINGS	RESISTIVITY			TYPE BASE			
	VISCOSITY			SALINITY			
CALIPER SCALE	MV/IN	LEG SIZE		PAPER SCALE			
TIME IN	1330	CASED TO				I.D.	IN
TIME OUT	1630	CORE INT.				DISH	IN

LOCATION			TIME	
SEC.	TWP.	RGE.	DRIVE:	5
COUNTY: Uranium			FIELD:	10
STATE: SD			STANDBY:	60
AREA:			BREAKDOWN:	
CLIENT: Mesabite			TOTAL:	75
LOG REC'D BY:			OPERATOR: Miller	
			PARTY NO: U 11	

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U. S. A.

EXPLORATION LOG

COMPANY:
BORE HOLE NO.
FIELD
COUNTY
LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM ..... FILE .....
DRLG. MEAS. FROM ..... NO. .....

DATE:
FOOTAGE
TOTAL DEPTH (DR)
HOLE DIAM.
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE

ELEVATION
KB
GL
BKGRD. COUNT .....
SLUSH PIT CT. .....

REMARKS:
520 - 532 - 100CPS FCL

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH THICKNESS	K KD	CORR. CPS.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS

SELF POTENTIAL 50/IN

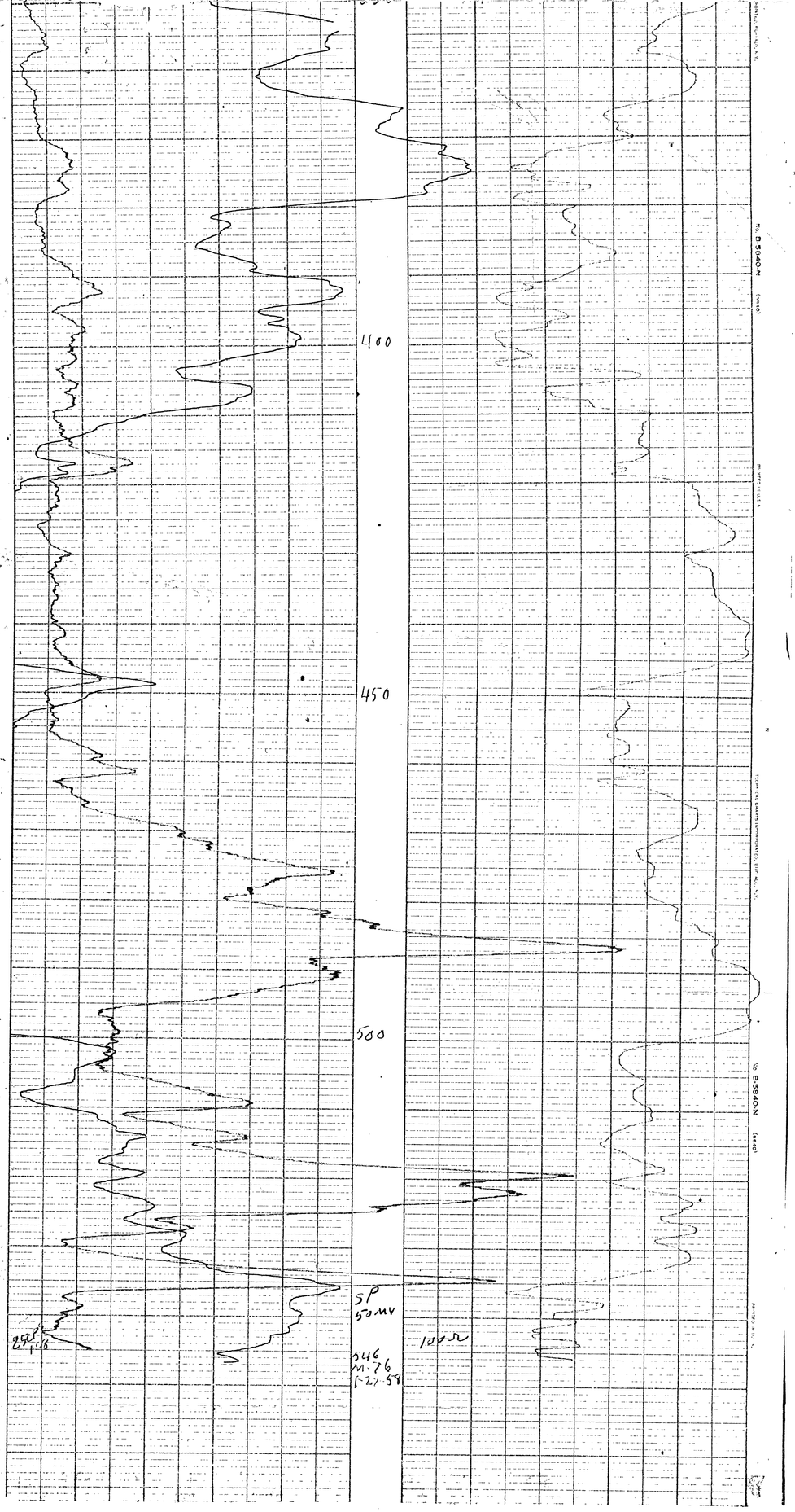
+ 10 −

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER MV/IN

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS — M



LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 3-0

DATE: 1-27-55 FIELD HOOTRS: 2 Lemmon S.D

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	M-76					
HOLE DIA.	6 1/2 IN					
DRILLED DEPTH	549 FT					
LOGGED DEPTH	546 FT					
GAMMA SCALE	25 CPS					
TIME CONSTANT	8 SEC					
PAPER SPEED	12 FT/IN					
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	100					
SELF POT SCALE	10 MV/IN					
BORE HOLE MEDIUM	H2O	WITH				
MUD READINGS	RESISTIVITY			TYPE BASE		
	VISCOSITY			SALINITY		
CALIPER SCALE	MV/IN	LEG SIZE		PAPER SCALE		
TIME IN	11:40	CASED TO			I.D.	IN
TIME OUT	12:40	CORE INT.			DIAM	IN

LOCATION		TIME	
SEC.	TWP. RGE.	DRIVE:	.5
COUNTY: Powder River		FIELD:	1.0
STATE: S.D		STANDBY:	1.7
AREA:		BREAKDOWN:	
CLIENT: Mesalinter		TOTAL:	3.2
LOG REC'D BY:		OPERATOR: Mellon	
		PARTY NO: U11	

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.
EXPLORATION LOG

COMPANY:
BORE HOLE NO.
FIELD
COUNTY
LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM K FILE
DRLG. MEAS. FROM NO.

DATE:
FOOTAGE
TOTAL DEPTH (DR)
HOLE DIAM.
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE

ELEVATION
KB
GL
BKGRD. COUNT
SLUSH PIT CT.

REMARKS:

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH THICKNESS	K %D	CORR. CPS.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS

SELF POTENTIAL 50MV

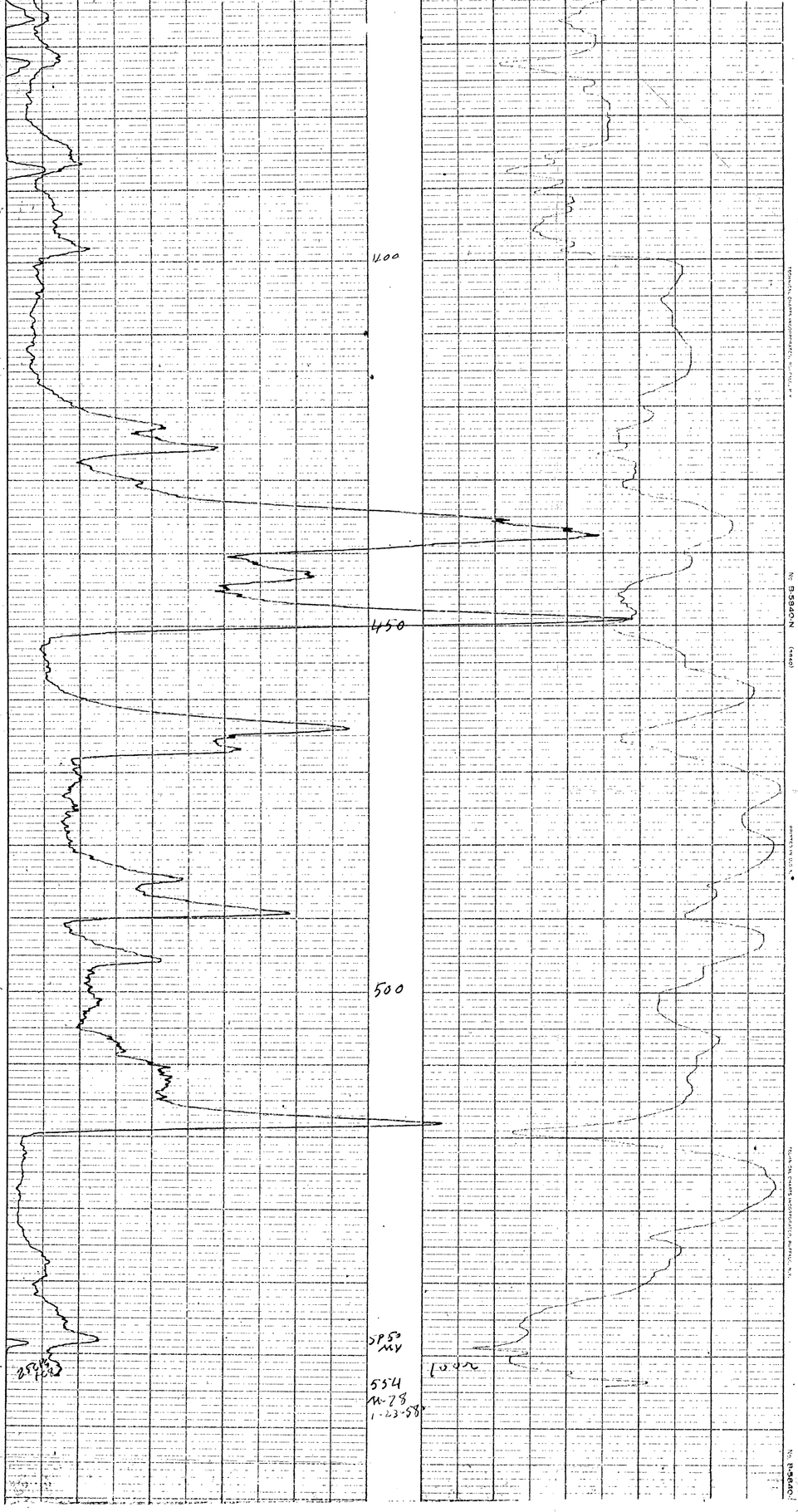
+ 10 −

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER MV/IN

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS — M



LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 3 c.s.

DATE: 1-23-55 FIELD HDQTRS: Edgemont

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	11-15						
HOLE DIA.	4 1/2 IN						
DRILLED DEPTH	8 55 FT						
LOGGED DEPTH	1 56 FT						
GAMMA SCALE	25 CPS						
TIME CONSTANT	3 SEC						
PAPER SPEED	10 FT/IN						
LOGGING SPEED	10 FT/M	FT/M	FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	100						
SELF POT SCALE	10 MV/IN						
BORE HOLE MEDIUM	120	WITH					
MUD READINGS	RESISTIVITY			TYPE BASE			
	VISCOSITY			SALINITY			
CALIBER SCALE	MV/IN	LEG SIZE		PAPER SCALE			
TIME IN	1620	CASED TO				I.D.	IN
TIME OUT		CORE INT.				DIAM	IN

LOCATION

SEC. TWP. RGE.

COUNTY: Weld

STATE: Colorado

TIME

DRIVE: 5

FIELD: 10

STANDBY:

BREAKDOWN:

TOTAL: 14

OPERATOR: Mueller

U21

Century

GEOPHYSICAL CORP.

TULSA, OKLA., U. S. A.

EXPLORATION LOG

COMPANY:

BORE HOLE NO.

FIELD

COUNTY

LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM FILE

DRLG. MEAS. FROM NO.

DATE:

FOOTAGE

TOTAL DEPTH (DR)

HOLE DIAM.

LOGGING SPEED

TIME CONSTANT

MUD TYPE

CASED TO

LOCATION OF HOLE

ELEVATION

KB

GL

BKGRD. COUNT

SLUSH PIT CT.

REMARKS:

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH THICKNESS	K KD	CORR. CPS.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

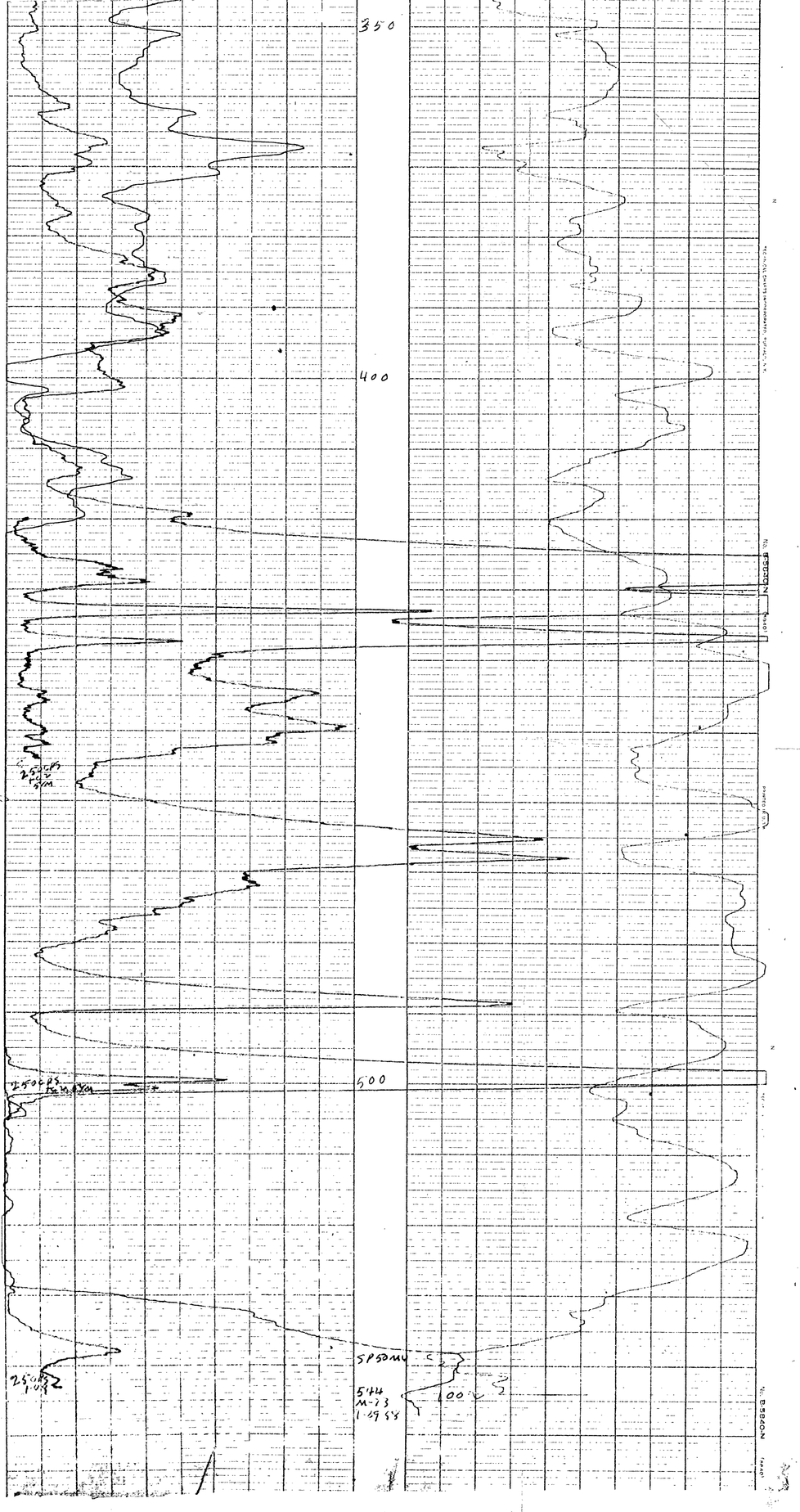
FORMATION	DEPTHS	THICKNESS

CALIBER MV/IN

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE

OHMS — M



LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 300

DATE: 1-29-55 FIELD HDQTRS: Lignecort

	INITIAL RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN	RE-RUN
HOLE NO.	M-73						
HOLE DIA.	4 1/2 IN						
DRILLED DEPTH	550 FT						559
LOGGED DEPTH	544 FT	1039					
GAMMA SCALE	25 CPS	25	2500				
TIME CONSTANT	5 SEC	2	2				
PAPER SPEED	10 FT/IN	10	10				
LOGGING SPEED	10 FT/M	10 FT/M	10 FT/M	FT/M	FT/M	FT/M	FT/M
RESISTANCE SCALE	100						
SELF POT SCALE	10 MV/IN						
BORE HOLE MEDIUM	Air	WITH	Mud				
MUD READINGS	RESISTIVITY			TYPE BASE			
	VISCOSITY			SALINITY			
CALIPER SCALE	MV/IN	LEG SIZE		PAPER SCALE			
TIME IN	11 30	CASED TO			I.D.	IN	
TIME OUT	12 30	CORE INT.			DIAM	IN	

LOCATION			TIME	
SEC.	TWP.	RGE.	DRIVE:	2
COUNTY: Salt River			FIELD:	1.0
STATE: Ky			STANDBY:	5
AREA:			BREAKDOWN:	
CLIENT: McCalister			TOTAL:	1.7
LOG REC'D BY:			OPERATOR: Melbo	
			PARTY NO: 611	

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.
EXPLORATION LOG

COMPANY:
BORE HOLE NO.
FIELD
COUNTY
LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM ..... FILE
DRLG. MEAS. FROM ..... NO.

DATE:	
FOOTAGE	
TOTAL DEPTH (DR)	
HOLE DIAM.	
LOGGING SPEED	
TIME CONSTANT	
MUD TYPE	
CASED TO	

LOCATION OF HOLE

ELEVATION
KB
GL
BKGRD. COUNT .....
SLUSH PIT CT. .....

REMARKS:

505 - 495 2500 CPS 102

555 - 420 2500 CPS 102

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH THICKNESS	K K0	CORR. CPS.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS

SELF POTENTIAL 50/MV

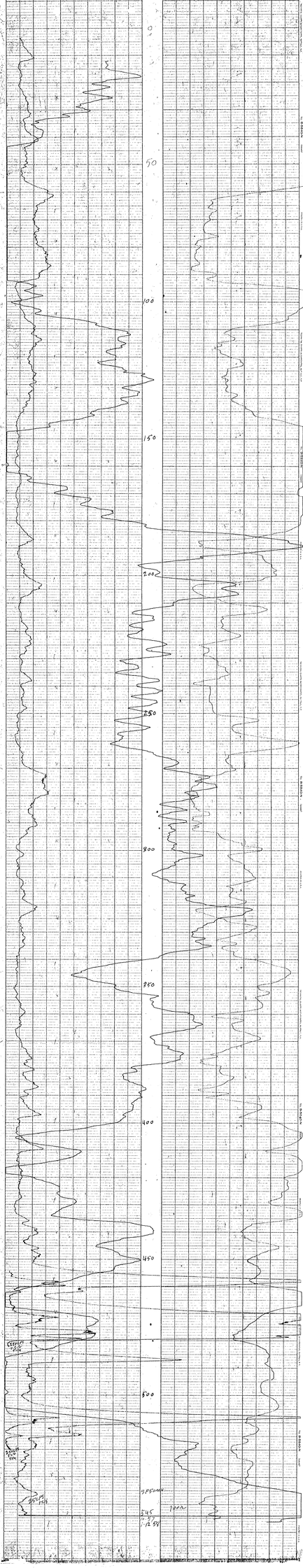
+ 10 MV −

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER MV/IN

4	5	6	7	8	9
4	6	8	10	12	14
4	8	12	16	20	24

RESISTANCE
OHMS — M


0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
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1050
1100
1150
1200
1250
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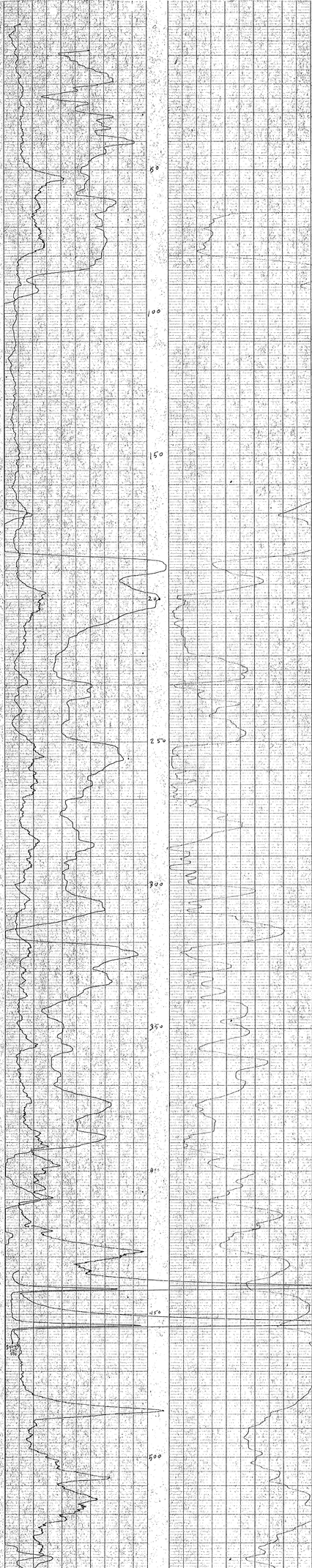
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000

100,000
105,000
110,000
115,000
120,000
370,000
365,000
360,000
355,000
350,000
345,000
340,000
AEC
PROPOSED DRILL HOLES
LAKOTA TEST
MCALESTER FUEL COMPANY
URANIUM OPERATIONS, EDGEMONT, SOUTH DAKOTA
SAND-MUD RATIO MAP
OF THE LAKOTA FORMATION
CONTOUR INTERVAL 20
LEGEND:
STAGE I DRILL HOLE
STAGE I DRILL HOLE MINERALIZED
IN THE LAKOTA FORMATION
SCALE 1" = 1000'
DATE



LOGGING DATA

PROBE SIZE: 1 3/8 CALIBRATION: 500

DATE: 1-10-55 FIELD HOURS: 8 1/2 hours

	PRESS. PSI	RS	RD	RS	RD	RS	RD
HOLE SIZE	10 in						
MUD WEIGHT	10.5 lb/gal						
MUD VISCOSITY	45 sec						
MUD RESISTIVITY	2.26 Ω-m	165					
MUD RESISTIVITY	2.5 Ω-m	65					
MUD CONTACT RESISTIVITY	7 Ω-m	5					
MUD CAKE RESISTIVITY	10 Ω-m	7					
MUD CAKE THICKNESS	1/8 in	1/8	1/8	1/8	1/8	1/8	1/8
RESISTIVITY SCALE	100						
MUD PH OR RAND HOLE MEDIUM	10 MEDIUM						
SP SCALE	50 MV/DIV	MUD		FINE RIDGE			
	MV/DIVISION			BOLLINGER			

CALIPER SCALE	500		CALIPER SCALE	500	
TIME CONSTANT	1 1/2		TIME CONSTANT		S.N.
LOG SCALE	1 & 5		LOG SCALE		MAR

LOCATION		TIME	
SEC.	TWP. 35S.	DRIVE:	5.0
COUNTY: Allen		FIELD:	0
STATE: Ks.		STANDBY:	1.5
AREA:		BREAKDOWN:	
CLIENT: Royal		TOTAL:	6.5
LOG RUN & BY: Miller		OPERATOR: Miller	

PARTY NO. 011

Century

GEOPHYSICAL CORP.
TULSA, OKLA., U.S.A.

EXPLORATION LOG

COMPANY:
SCHE HOLE NO.
FIELD
COUNTY
LOCATION: SEC. TWP. RGE.

LOG MEAS. FROM: PER
PROD. MEAS. FROM: MEAS.

DATE:
FOOTAGE
TOTAL DEPTH (DR)
HOLE DIAM.
LOGGING SPEED
TIME CONSTANT
MUD TYPE
CASED TO

LOCATION OF HOLE
ELEVATION
KB
DF
GL
DEGREE COUNT
CLOCKS AT 60

REMARKS:
1625 - 1675 - 2 1/2 ups Pos

INTERPRETATION

RADIO METRIC % VALUES COMPUTED WITHOUT BENEFIT OF LOCAL ORE EQUILIBRIUM FACTOR

MINERALIZATION

COUNTS PER SEC.	DEPTH FOOTAGE	% U	CONC. GPM.	% U_3O_8

INTERPRETATION BY:

GEOLOGIC TOPS

FORMATION	DEPTHS	THICKNESS

SELF POTENTIAL 5 Div

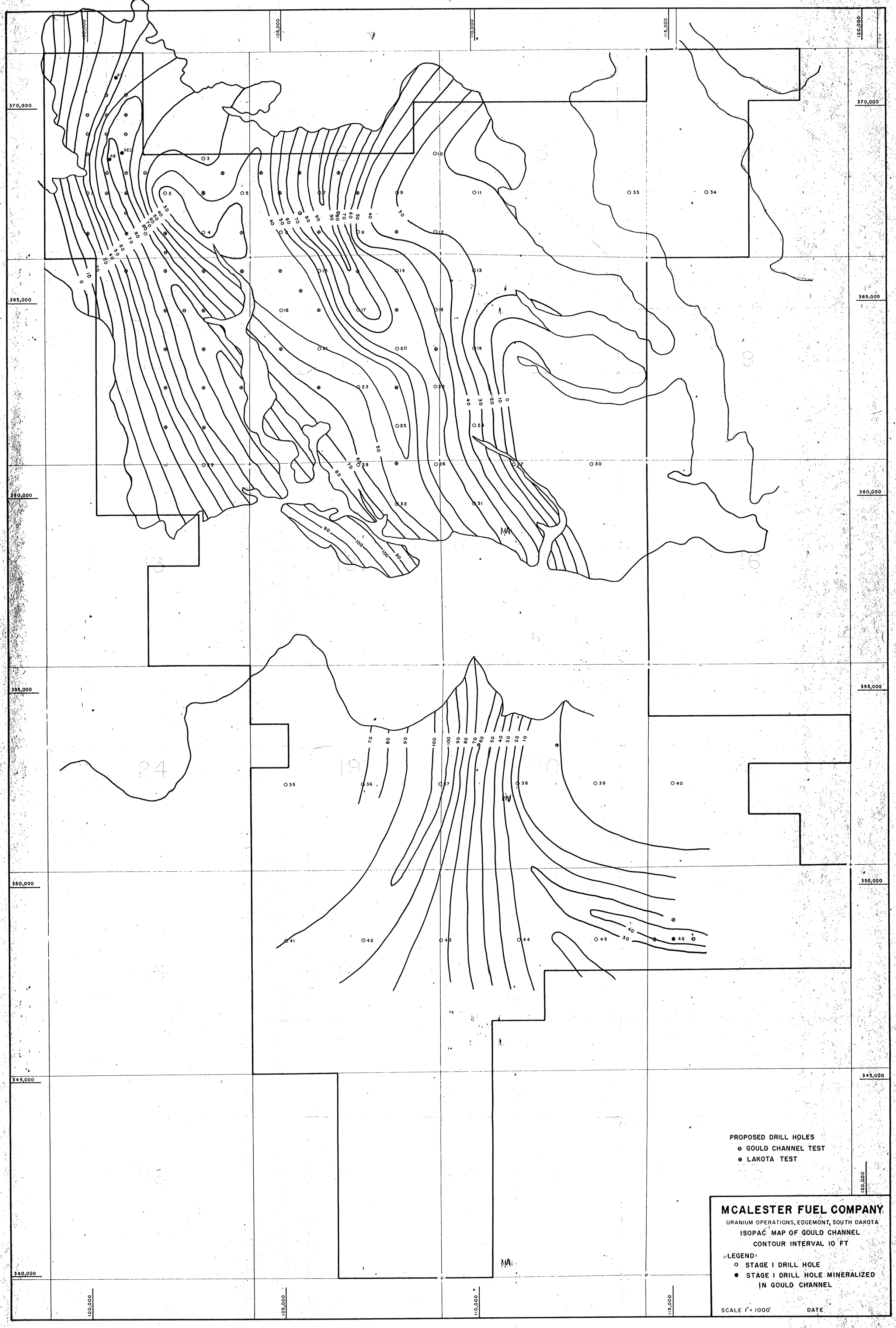
+ 10 −

NATURAL GAMMA RAY
COUNTS PER SECOND

CALIPER MV/IN

4	5	6	7	8	9		
4	6	8	10	12	14		
4	8	12	16	20	24		

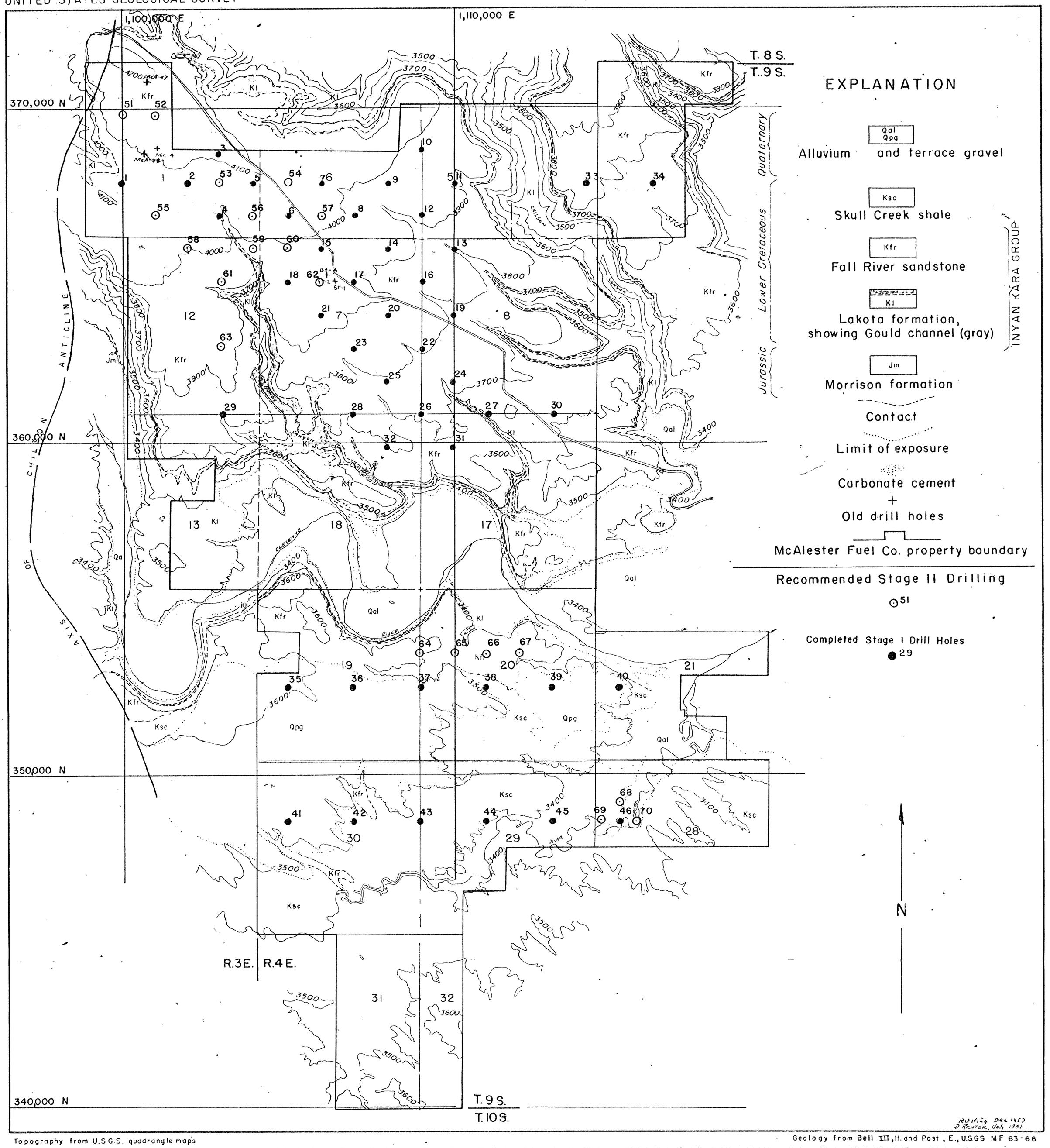
RESISTANCE
OHMS — M


PROPOSED DRILL HOLES
GOULD CHANNEL TEST
LAKOTA TEST
MCALESTER FUEL COMPANY
URANIUM OPERATIONS, EDGEMONT, SOUTH DAKOTA
ISOPAC MAP OF GOULD CHANNEL
CONTOUR INTERVAL 10 FT
LEGEND:
STAGE I DRILL HOLE
STAGE I DRILL HOLE MINERALIZED IN GOULD CHANNEL
SCALE 1" = 1000'
DATE

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

DMEA 4/42 Idm-E 1 1 3 3

PREPARED FOR
DEF. MIN. EXPLORATION ADMINISTRATION



Topography from U.S.G.S. quadrangle maps

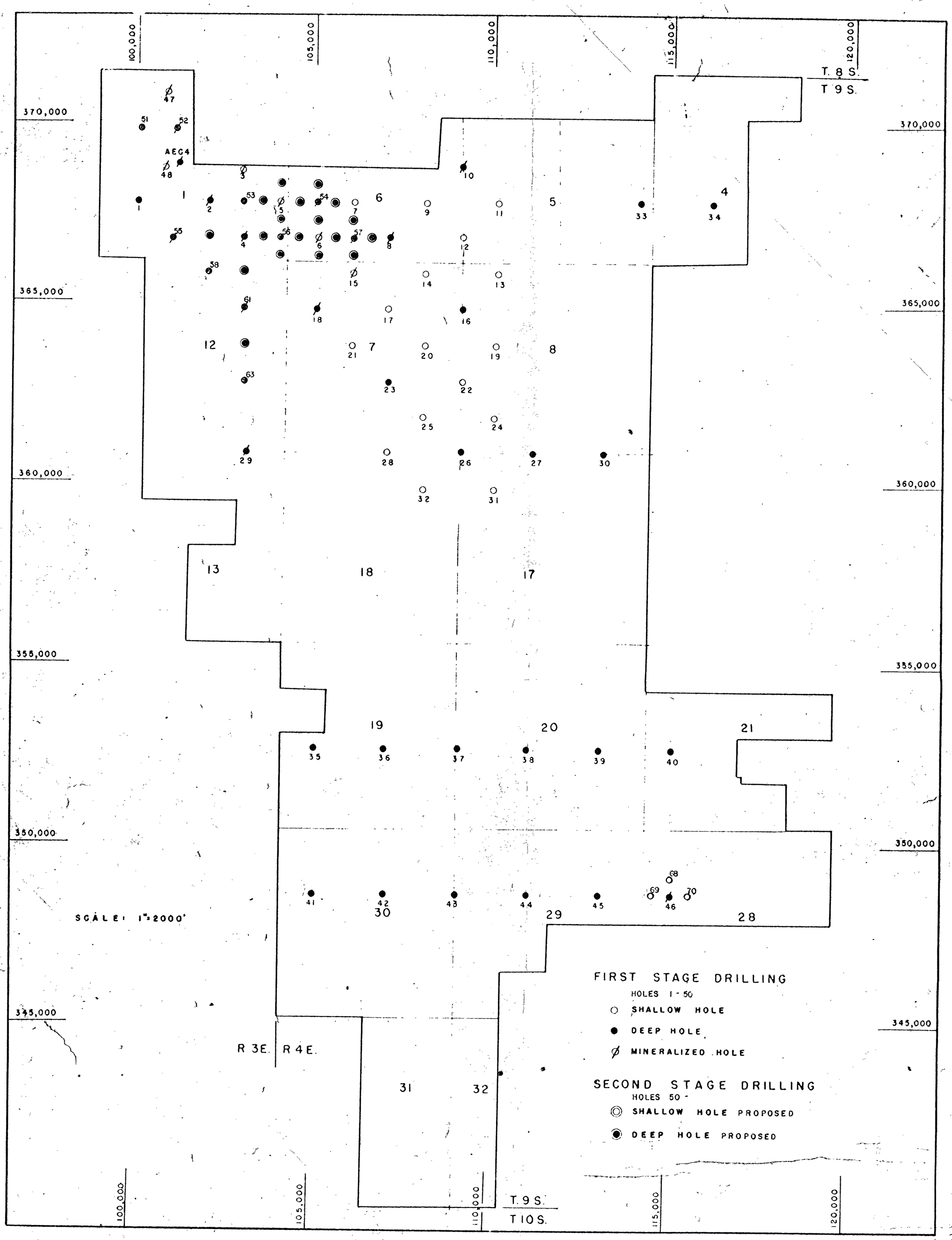
Geology from Bell III, H. and Post, E., U.S.G.S. MF 63-66

FIGURE 4A-GEOLOGIC MAP, SHOWING RECOMMENDED EXPLORATION, McALESTER FUEL COMPANY, FALL RIVER COUNTY, SOUTH DAKOTA

Scale 1" = 2000'

0 2000 4000 FEET

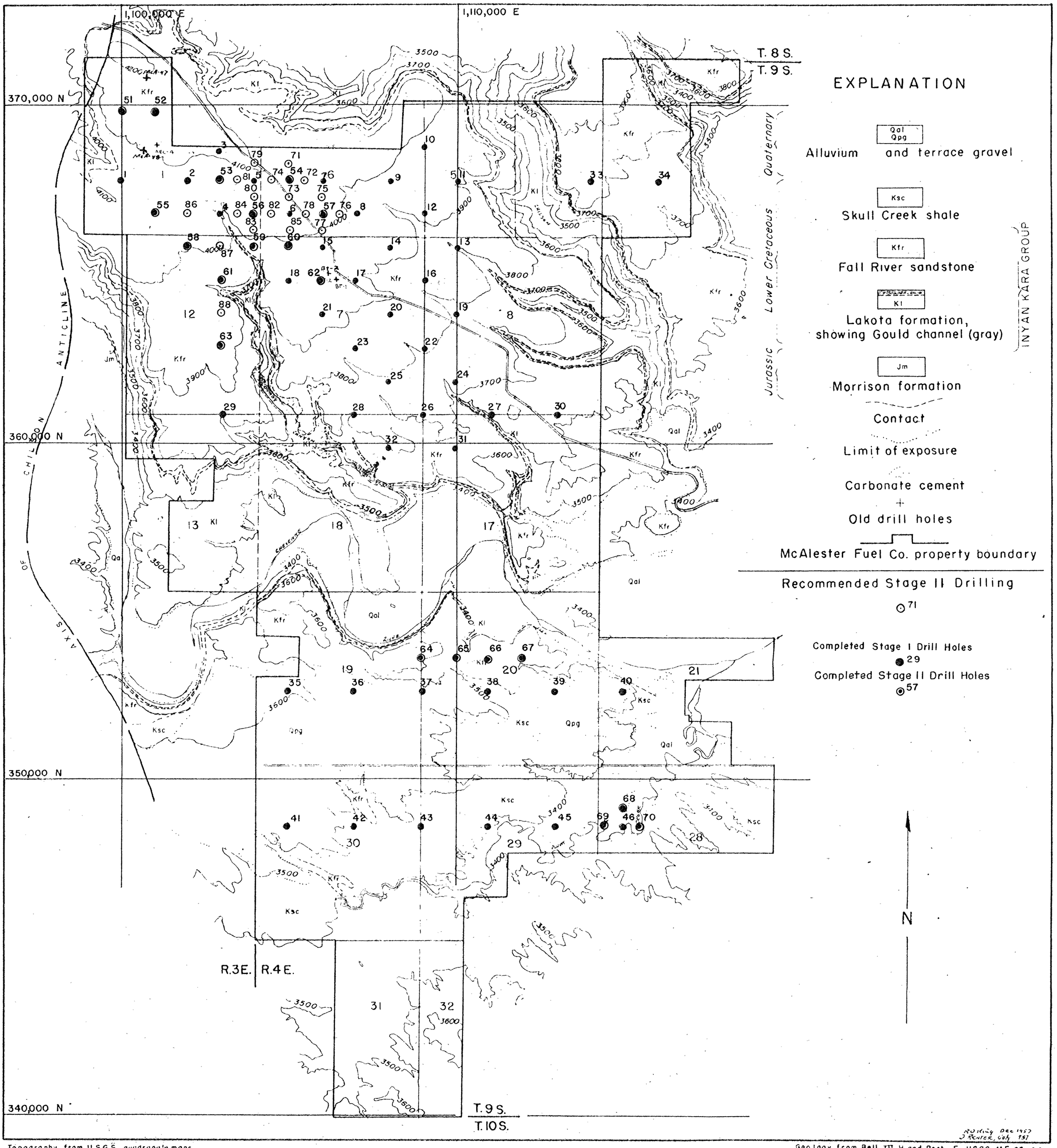
Contour Interval 100 feet


100,000
105,000
110,000
115,000
120,000
T. 8 S.
T 9 S.
370,000
365,000
360,000
355,000
350,000
345,000
AEC4
SCALE: 1"=2000'
R 3E.
R 4E.
T. 9 S.
T 10 S.
FIRST STAGE DRILLING
HOLES 1 - 50
SHALLOW HOLE
DEEP HOLE
MINERALIZED HOLE
SECOND STAGE DRILLING
HOLES 50 -
SHALLOW HOLE PROPOSED
DEEP HOLE PROPOSED

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

DMEA 4742 Idm-E 1133

PREPARED FOR
DEF MIN. EXPLORATION ADMINISTRATION



Topography from U.S.G.S. quadrangle maps

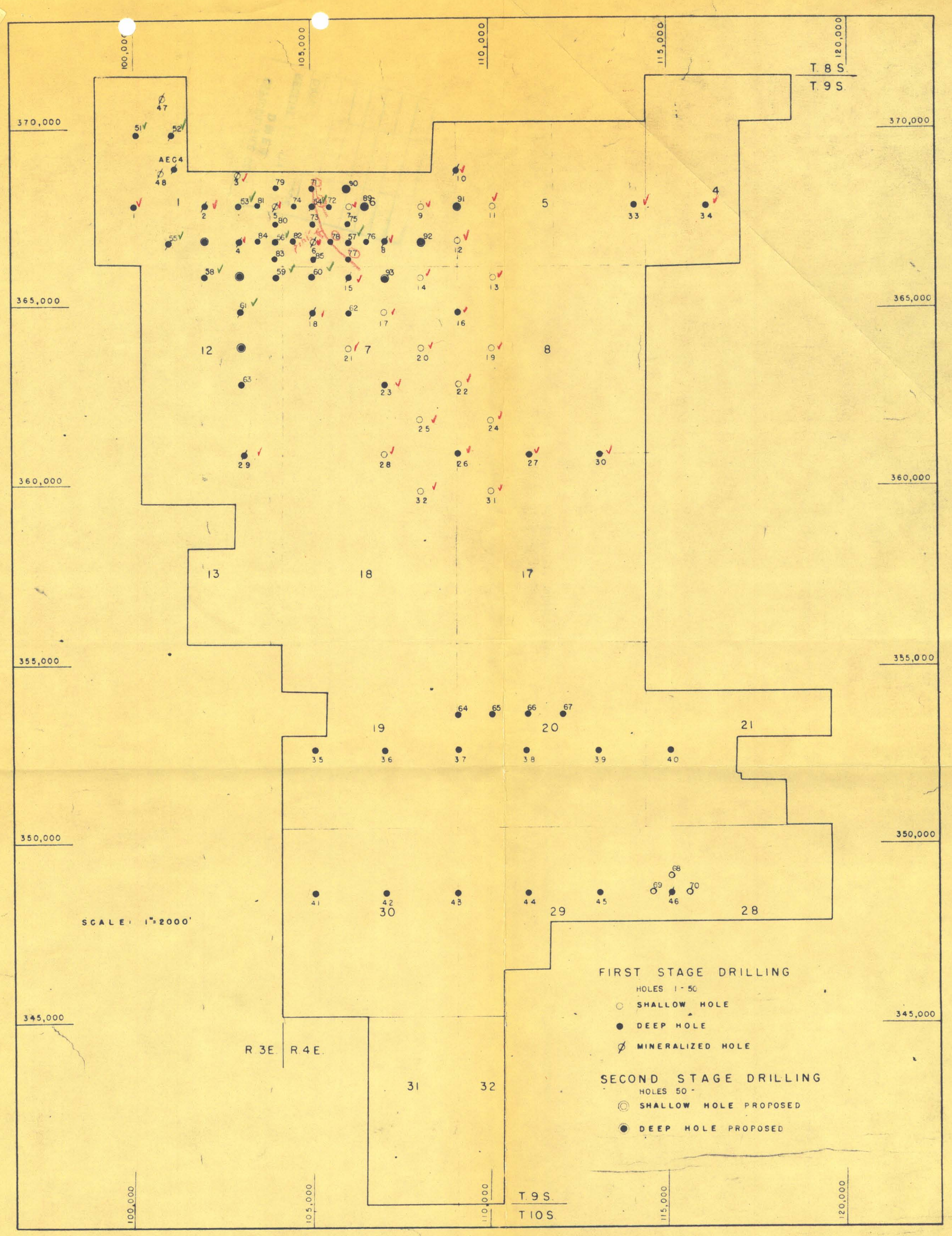
Geology from Bell III, H and Post, E, U.S.G.S. MF 63-66

FIGURE 4B-GEOLOGIC MAP, SHOWING RECOMMENDED EXPLORATION, McALESTER FUEL COMPANY, FALL RIVER COUNTY, SOUTH DAKOTA

Scale 1" = 2000'

0 2000 4000 FEET

Contour interval 100 feet


100,000
105,000
110,000
115,000
120,000
T. 8 S.
T. 9 S.
370,000
365,000
360,000
355,000
350,000
345,000
AEC4
SCALE: 1"=2000'
FIRST STAGE DRILLING
HOLES 1 - 50
SHALLOW HOLE
DEEP HOLE
MINERALIZED HOLE
SECOND STAGE DRILLING
HOLES 50 -
SHALLOW HOLE PROPOSED
DEEP HOLE PROPOSED
R 3E.
R 4E.
T. 9 S.
T 10 S.