

SM-4e

Surveyed:

Coordinate - ~~32~~ 3312N - 3879E

BUREAU OF MINES Elevation - 921.

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6/26/1948 Hole No. NE-24-C
Shift _____ Driller M. Murray Helper G. Gilstrap Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	165	170								
Depth at end of run	170	173								
Feet drilled	5	3								
Diameter of bit	6"	6"								
Time at start of run	7:00	8:00								
Time at end of run	8:00	9:00								
Total drilling time	1:00	1:00								
Sample recovery percent	80	80								

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Dark blue, gray, brown flint, little brown lime
2	Ditto
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled 8

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks:

Water stands at 20'
Bottom of hole - 173'

(Time distribution on reverse side)

MINING DIVISION
RECEIVED
JUN 29 1948
ROLLA BRANCH
BUREAU OF MINES

SM-4e

Surveyed:

Coordinate location:

BUREAU OF MINES

3312N, 3879E

Collar Elevation - 921.

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-25-1948 Hole No. NE-24-C.

Shift Day Driller J. Murray Helper F. Gilstrap Sampler

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	150	155	160							
Depth at end of run	155	160	165							
Feet drilled	5	5	5							
Diameter of bit	6"	6"	6"							
Time at start of run	7:00	9:30	1:30							
Time at end of run	9:30	1:30	4:00							
Total drilling time	2:30	4:00	2:30							
Sample recovery percent	80	80	80							

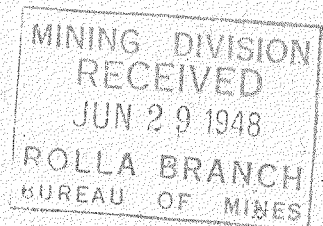
Runs	Kind of Rock - Drilling Characteristics - Remarks
1	White, gray, little blue flint
2	Gray, blue, white flint
3	Blue gray brown white flint.
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled 15

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: 4:00 till 5:00 on 160-165 run.

(Time distribution on reverse side)



SM-4e

Surveyed:
Coordinate location:
3312N, 3879E
Collar elevation: 921

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-24-1948 Hole No. NE-24-C
Shift Day Driller J. Murray Helper F. Gilstrap Sampler

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	135	140	145							
Depth at end of run	140	145	150							
Feet drilled	5	5	5							
Diameter of bit	6"	6"	6"							
Time at start of run	7:00	8:30	11:30							
Time at end of run	9:30	11:30	3:00							
Total drilling time	2:30	2:00	3:30							
Sample recovery percent	80	80	80							

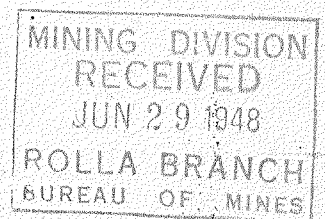
Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Yellow, gray, blue flint, loose
2	Gray, yellow blue flint, brown lime
3	Gray blue, little brown flint.
4	
5	
6	
7	
8	
9	
10	

Reaming, feet Casings, feet 12'-6-1/4" Total feet drilled 15

Gas used, gal. Lubrication oil used Fuel oil used

Remarks: 3:00 till 5:00 on 150-155 run.
Bottom 6-11/16" pipe - 125' 4 inch

(Time distribution on reverse side)



SM-4e

Surveyed:
Coordinate location:
3312N, 3879E
Elevation - 921.

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-23-1948 Hole No. NE-24C
Shift Day Driller Murray Helper Gilstrap Sampler

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run										
Depth at end of run										
Feet drilled										
Diameter of bit										
Time at start of run										
Time at end of run										
Total drilling time										
Sample recovery percent										

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled _____

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: No work on account of heavy rain.

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JUN 28 1948
ROLLA BRANCH
BUREAU OF MINES

(Time distribution on reverse side)

SM-4e

Surveyed:
Coordinate location: 3312N-2879E
Elevation - 921.

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15- 226 Location North Empire Date 6-22-1948 Hole No. NE-24-C
Shift Day Driller Murray Helper Gilstrap Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run										
Depth at end of run										
Feet drilled										
Diameter of bit										
Time at start of run										
Time at end of run										
Total drilling time										
Sample recovery percent										

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled _____

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: No work on account of heavy rains.

(Time distribution on reverse side)

MINING DIVISION
RECEIVED
JUN 25 1948
ROLLA BRANCH
BUREAU OF MINES

SM-4e

Surveyed:
Coordinate location: 3312N, 2879E
Elevation - 921

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-21-1948 Hole No. NE-24-C
Shift Day Driller Murray Helper Gils trap. Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run										
Depth at end of run										
Feet drilled										
Diameter of bit										
Time at start of run										
Time at end of run										
Total drilling time										
Sample recovery percent										

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled _____
Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____
Remarks: No work on account of heavy rain.

(Time distribution on reverse side)

MINING DIVISION
RECEIVED
JUN 25 1948
ROLLA BRANCH
BUREAU OF MINES

SM-4e

Surveydd:
 Coordinate location: 3312-N,
 2879-E
 Elevation - 921.

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-19-1948 Hole No. NE-24-C.
 Shift Day Driller J. Murray Helper F. Gilstrap Sampler _____

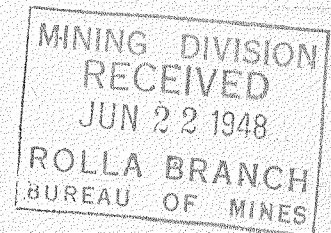
Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	107½	110	115	120	125	130				
Depth at end of run	110	115	120	125	130	135				
Feet drilled	2½	5	5	5	5	5				
Diameter of bit	6"	6"	6"	6"	6"	6"				
Time at start of run	7:00	10:30	11:30	12:30	1:00	2:00				
Time at end of run	10:30	11:30	12:30	1:00	2:00	4:00				
Total drilling time	3:30	1:00	1:00	0:30	1:00	2:00				
Sample recovery percent	80	80	80	80	80	80				

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Blue, gray, white flint, loose
2	Cotton rock, blue, white flint, loose
3	Ditto
4	Yellow, gray, blue flint, loose
5	Ditto
6	Ditto
7	
8	
9	
10	

Reaming, feet _____ Casings, feet 5'-6-1/4" Total feet drilled 27-1/2
 Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: Bottom of 6-1/4" pipe is 113 feet.

(Time distribution on reverse side)



SM-4e

BUREAU OF MINES

Surveyed:
Coordinate location:
3312-N, 2879-E
Elevation - 921

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-18-1948 Hole No. NE-24-C
Shift Day Driller J. Murray Helper F. Gilstrap Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	95	100	105							
Depth at end of run	100	105	107½							
Feet drilled	5	5	2½							
Diameter of bit	6"	6"	6"							
Time at start of run	7:00	11:00	2:00							
Time at end of run	11:00	2:00	5:00							
Total drilling time	4:00	3:00	3:00							
Sample recovery percent	80	80	80							

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Blue, gray, white flint, mudic, loose
2	Gray blue little yellow flint
3	Gray blue, white flint, loose
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet 13'-6-1/4" Total feet drilled 12½

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: Bottom of 6-1/4" pipe - 108 feet.

(Time distribution on reverse side)

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JUN 22 1948
ROLLA BRANCH
BUREAU OF MINES

SM-4e

Surveyed:
 Coordinate - 3312-N, 2879-E
 Elevation - 921.

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-17-1948 Hole No. NE-24-C.

Shift _____ Driller J. Murray Helper F. Gilstrap Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	70	75	80	85	90					
Depth at end of run	75	80	85	90	95					
Feet drilled	5	5	5	5	5					
Diameter of bit	8"	8"	8"	8"	6"					
Time at start of run	7:00	8:30	10:30	12:30	3:30					
Time at end of run	8:30	10:30	12:30	3:30	5:00					
Total drilling time	1:30	2:00	2:00	3:00	1:30					
Sample recovery percent	80	80	80	80	80					

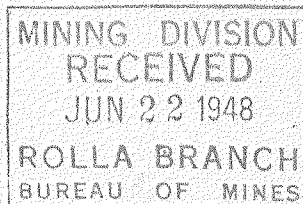
Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Yellow, blue white flint - loose
2	Ditto
3	Ditto
4	Blue, gray flint, loose.
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet 11' - 8-1/4" Total feet drilled 25

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: Bottom of 8" pipe - 78 feet.
 95 feet of 6-1/4"

(Time distribution on reverse side)



SM-4e

Surveyed location:
3312N - 2879E
Collar Elevation - 921.

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-16-1948 Hole No. NE-24-C.
Shift Day Driller J. Murray Helper F. Gilstra Sampler

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	60	65								
Depth at end of run	65	70								
Feet drilled	5	5	5							
Diameter of bit	8"	8"								
Time at start of run	7:00	12:00								
Time at end of run	12:00	2:30								
Total drilling time	5:00	2:30								
Sample recovery percent	80	80								

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Brown yellow and gray flint, mundic, loose
2	Blue gray flint, green selvage.
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet Casings, feet 5'8" - 8-1/4" Total feet drilled 10

Gas used, gal. Lubrication oil used Fuel oil used

Remarks: Bottom of 8" pipe - ~~XXXXXX~~ 67 ft. 5 in.
2:30 till 5:00 on 70 to 75 run

(Time distribution on reverse side)

MINING DIVISION
RECEIVED
JUN 21 1948
ROLLA BRANCH
BUREAU OF MINES

SM-4e

Surveyed:
Coordinate location:
3312N - 287 9-E
Elevation - 921

BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location north Empire Date 6/15/1948 Hole No. NE-24-C.
Shift Day Driller J. Murray Helper F. Gilstrap Sampler _____

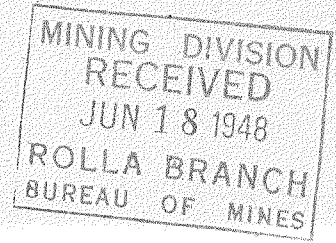
Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run										
Depth at end of run										
Feet drilled										
Diameter of bit										
Time at start of run										
Time at end of run										
Total drilling time										
Sample recovery percent										

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled _____
Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: No work on account of heavy downpouring rain.

(Time distribution on reverse side)



BUREAU OF MINES

Coordinate location:
3312-N, 2879-E
Elevation - 921.

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-14-1948 Hole No. NE-24-C.

Shift Day Driller J. Murray Helper F. Gilstrap Sampler

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	0	5	10	15	20	25	30	35	40	45
Depth at end of run	5	10	15	20	25	30	35	40	45	50
Feet drilled	5	5	5	5	5	5	5	5	5	5
Diameter of bit	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"
Time at start of run	7:00	7:20	7:40	8:00	8:30	9:00	9:30	10:00	10:30	12:00
Time at end of run	7:20	7:40	8:00	8:30	9:00	9:30	10:00	10:30	12:00	1:00
Total drilling time	0:20	0:20	0:20	0:30	0:30	0:30	0:30	0:30	1:30	1:00
Sample recovery percent	90	90	90	90	90	90	90	90	90	90

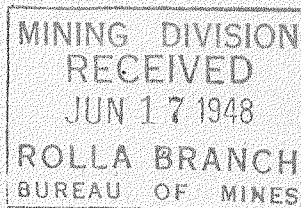
Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Yellow clay, surface rock
2	Ditto
3	Gray shale
4	Ditto
5	Ditto -
6	Ditto and blue shale
7	Blue shale
8	Blue shale, blue and white flint - hit rock at 36 feet
9	Gray and blue flint, gray selvage
10	Ditto

Reaming, feet _____ Casings, feet _____ Total feet drilled _____

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: struck water at 50 feet.

(Time distribution on reverse side)



SM-4e

Surveyed:
 Coordinate location:
 3312 -N, 2879 -E
 Elevation - 921.

BUREAU OF MINES

DAILY CHURN DRILL RECORD

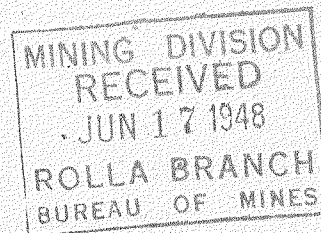
Project 15-226 Location North Empire Date 6-11-1948 Hole No. NE-24-C
 Shift Day Driller J. Murray Helper F. Gilstrap Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run	50	55								
Depth at end of run	55	60								
Feet drilled	5	5								
Diameter of bit	10"	8"								
Time at start of run	1:00	2:00								
Time at end of run	2:00	3:30								
Total drilling time	1:00	1:30								
Sample recovery percent	80	80								

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	Gray, blue, yellow flint, loose mudic
2	Ditto.
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet ~~61.9~~ ^{61.8} ~~8-1/4~~ Total feet drilled 60
 Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____
 Remarks: ~~X5~~ 4:30 till 5:00 on 60 to ~~xx~~ 65 run

(Time distribution on reverse side)



BUREAU OF MINES

DAILY CHURN DRILL RECORD

Project 15-226 Location North Empire Date 6-12-1948 Hole No. NE-24-C.
 Shift Day Driller J. Murray Helper F. Gilstrap Sampler _____

Run	1	2	3	4	5	6	7	8	9	10
Depth at start of run										
Depth at end of run										
Feet drilled										
Diameter of bit										
Time at start of run										
Time at end of run										
Total drilling time										
Sample recovery percent										

Runs	Kind of Rock - Drilling Characteristics - Remarks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Reaming, feet _____ Casings, feet _____ Total feet drilled _____

Gas used, gal. _____ Lubrication oil used _____ Fuel oil used _____

Remarks: This sheet and sheet same date hole NE-21-C makes full shift.

(Time distribution on reverse side)

