THIS TEST HOLE WAS PLUGGED FROM 137 FEET TO 5 FEET WITH HIGH SOLIDS BENTONITE GROUT, AND FROM 5 FEET TO 2 FEET WITH CEMENT GROUT, AND BACK FILLED TO LAND SURFACE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2122.00 - 2121.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL, REDDISH-BROWN; CALCAREOUS</td>
</tr>
<tr>
<td>2121.00 - 2104.00</td>
<td>1.0 - 18.0</td>
<td>CLAYSTONE, LIGHT-BROWN, VERY SILTY; VERY CALCAREOUS, FISSLIE, ABUNDANT FORAMINIFERA SPECKS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2104.00 - 2090.00</td>
<td>18.0 - 32.0</td>
<td>CLAYSTONE, LIGHT-BROWNISH-GRAY TO BROWNISH-GRAY; GREASY, NON- TO VERY POORLY FISSLIE, CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2090.00 - 2045.00</td>
<td>32.0 - 77.0</td>
<td>CLAYSTONE, BROWNISH-GRAY; GREASY, CALCAREOUS, FISSLIE, ABUNDANT FORAMINIFERA SPECKS AND POSSIBLY BACULITES SHELL DEBRIS WITH PEARLY LUSTER (PIERRE SHALE)</td>
</tr>
<tr>
<td>2045.00 - 1985.00</td>
<td>77.0 - 137.0</td>
<td>CLAYSTONE, OLIVE-GRAY; SLIGHTLY CALCAREOUS, FISSLIE, SOME BACULITES SHELL DEBRIS, SOME THIN LIGHT-GREENISH-GRAY BENTONITE SEAMS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
THIS WELL WAS FILTER PACKED FROM 38 TO 20 FEET; THE ANNULAR SPACE WAS FILLED WITH NEAT CEMENT GROUT FROM 20 FEET TO LAND SURFACE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2031.00-2029.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, BROWN</td>
</tr>
<tr>
<td>2029.00-2009.00</td>
<td>2.0-22.0</td>
<td>SILT, BROWN</td>
</tr>
<tr>
<td>2009.00-1996.00</td>
<td>22.0-35.0</td>
<td>GRAVEL</td>
</tr>
<tr>
<td>1996.00-1993.00</td>
<td>35.0-38.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * *
Location Information

Legal Location: SE NW SEC. 12, T. 040 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: C
Location: 040N-25W-12BD
Latitude: 43° 27' 27"
Longitude: 100° 13' 35"
Ground Surface Elevation (ft.): 2040 T

Project Information

Project: NORBECK DRILLING
Drill Date: 10/18/1929
Company: NORBECK DRILLING
Drilling Method: X
Test Hole Number: UNKNOWN
Total Casing and Screen (ft.): 1681.0
Well Maintenance Date:

Samples:

Well Information

SDGS Well Name: 040N25W12BD
Water Rights Well: 01/31/2005
Other Well Name: RAILROAD
Casing Type: UNKNOWN
Screen Type: UNKNOWN
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.): 0

Well Information

Spontaneous Potential:
Natural Gamma:
Aquifer:
Management Unit:
Casing Type:
Screen Length (ft.):
Casing Top Elevation:
Casing Diameter (in.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

CASING DIAMETER: 330 FEET OF 8-INCH, 737 FEET OF 6-INCH, 403 FEET OF 4.5-INCH, 211 FEET OF 3-INCH.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2040.00-2015.00</td>
<td>0.0-25.0</td>
<td>CLAY, YELLOW</td>
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<tr>
<td>2015.00-1557.00</td>
<td>25.0-483.0</td>
<td>SHALE, BLUE</td>
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<tr>
<td>1557.00-1397.00</td>
<td>483.0-643.0</td>
<td>SHALE, BLUE; WITH OCCASIONAL HARD STREAKS</td>
</tr>
<tr>
<td>1397.00-774.00</td>
<td>643.0-1266.0</td>
<td>SHALE, BLUE</td>
</tr>
<tr>
<td>774.00-677.00</td>
<td>1266.0-1363.0</td>
<td>SHALE, BLUE; VERY HARD</td>
</tr>
<tr>
<td>677.00-384.00</td>
<td>1363.0-1656.0</td>
<td>SHALE; HARD</td>
</tr>
<tr>
<td>384.00-359.00</td>
<td>1656.0-1681.0</td>
<td>OPEN HOLE</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NW SE SW SEC. 20, T. O40 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: MELLETTE
Location: 040N-25W-20CDB
Latitude: 43 25' 18"
Longitude: 100 18' 25"
Ground Surface Elevation (ft.): 2077 T

Project Information

Project: MELLETTE
Drill Date: Location: 040N-25W-20CDB
Company: HURON DRILLING
Driller: B. MILLS
Drilling Method: Driller's Log: X
Test Hole Number: Total Drill Hole Depth (ft.): 1692.0
Samples: Ground Surface Elevation (ft.): 2077 T

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type:
Screen Type:
Total Casing and Screen (ft.):
Well Maintenance Date:

Aquifer:
Management Unit:
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2077.00 - 1222.00</td>
<td>0.0 - 855.0</td>
<td>PIERRE SHALE</td>
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<tr>
<td>1222.00 - 1047.00</td>
<td>855.0 - 1030.0</td>
<td>NIOBRARA FORMATION</td>
</tr>
<tr>
<td>1047.00 - 744.00</td>
<td>1030.0 - 1333.0</td>
<td>CARLILE SHALE</td>
</tr>
<tr>
<td>744.00 - 647.00</td>
<td>1333.0 - 1430.0</td>
<td>GREENHORN LIMESTONE</td>
</tr>
<tr>
<td>647.00 - 499.00</td>
<td>1430.0 - 1578.0</td>
<td>GRANEROS SHALE</td>
</tr>
<tr>
<td>499.00 - 385.00</td>
<td>1578.0 - 1692.0</td>
<td>DAKOTA FORMATION</td>
</tr>
</tbody>
</table>

* * * *
**Location Information**

Legal Location: SW NE SEC. 07, T. 040 N., R. 27 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: E. MADEARIS
Location: 040N-27W-07AC
Latitude: 43 27' 27"
Longitude: 100 33' 29"
Ground Surface Elevation (ft.): 2290 T

**Project Information**

Project:
Drill Date: 06/26/1978
Company: JURACEK WELL BORING
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 51.0

**Well Information**

SDGS Well Name:
Water Rights Well: PRIVATE
Other Well Name:
Casing Type: CEMENT TILE
Screen Type:
Total Casing and Screen (ft.): 52.0
Well Maintenance Date:
Casing Top Elevation:
Casing Diameter (in.): 24.0
Screen Length (ft.):
Casing Stick-up (ft.):

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2290.00-2289.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>2289.00-2273.00</td>
<td>1.0-17.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>2273.00-2266.00</td>
<td>17.0-24.0</td>
<td>GRAVEL</td>
</tr>
<tr>
<td>2266.00-2259.00</td>
<td>24.0-31.0</td>
<td>MAGNESIA</td>
</tr>
<tr>
<td>2259.00-2250.00</td>
<td>31.0-40.0</td>
<td>GRAVEL AND WATER</td>
</tr>
<tr>
<td>2250.00-2239.00</td>
<td>40.0-51.0</td>
<td>SHALE</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location:SE NW NW SW SEC. 03, T. 040 N., R. 28 W.
County: MELLETT
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:
Location: 040N-20W-03CBBD
Latitude: 43 28' 05"
Longitude: 100 37' 48"
Ground Surface Elevation (ft.): 2480 T

Project Information

Project: TODD-MELLETT STUDY
Drill Date: 06/18/1991
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-91-24
Samples:
Total Casing and Screen (ft.): 65.0
Total Drill Hole Depth (ft.): 64.0

Well Information

SDGS Well Name: R20-91-24
Water Rights Well: MANAGEMENT UNIT:
Other Well Name: Casing Top Elevation: 2482.00 T
Casing Type: PVC, SCH. 80
Screen Type: PVC, MFG., SLOT SIZE 0.010 IN.
Screen Length (ft.): 10.0
Total Casing and Screen (ft.): 65.0
Casing Diameter (in.): 2.0
Casing Stick-up (ft.): 2.00
Well Maintenance Date:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL DATA: SCREEN INTERVAL FROM 63 TO 53 FEET; FILTER PACK (0.65-0.75 MM QUARTZ SAND) 64 TO 39 FEET; BENTONITE 39 TO 20 FEET; CEMENT 20 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED. SCREEN AND CASING ARE FLUSH THREADED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2480.00 - 2478.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, TAN, SILTY</td>
</tr>
<tr>
<td>2478.00 - 2470.00</td>
<td>2.0 - 10.0</td>
<td>SAND, DARK-BROWN, VERY FINE TO FINE</td>
</tr>
<tr>
<td>2470.00 - 2462.00</td>
<td>10.0 - 18.0</td>
<td>SAND AND GRAVEL, VERY FINE SAND TO FINE GRAVEL; SOME CLAY</td>
</tr>
<tr>
<td>2462.00 - 2453.00</td>
<td>18.0 - 27.0</td>
<td>CLAYSTONE, LIGHT-BROWN; WITH SOME TAN CLAY</td>
</tr>
<tr>
<td>2453.00 - 2440.00</td>
<td>27.0 - 40.0</td>
<td>CLAYSTONE, LIGHT-REDDISH-BROWN, SILTY, SLIGHTLY SANDY; CALCAREOUS</td>
</tr>
<tr>
<td>2440.00 - 2429.00</td>
<td>40.0 - 51.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-GRAY, SILTY, SANDY</td>
</tr>
<tr>
<td>2429.00 - 2417.00</td>
<td>51.0 - 63.0</td>
<td>CLAYSTONE, GREENISH-GRAY, SILTY, SANDY; CALCAREOUS</td>
</tr>
<tr>
<td>2417.00 - 2416.00</td>
<td>63.0 - 64.0</td>
<td>CLAYSTONE, LIGHT-GRAY</td>
</tr>
</tbody>
</table>
Location Information

Legal Location: NW SW NW SW SEC. 03, T. 040 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Casing Top Elevation: 2447.00 T
Total Casing and Screen (ft.): 60.0
Well Maintenance Date: 06/18/1991
Drilling Method: ROTARY
Test Hole Number: R20-91-23
Samples: Single Point Resistivity: Extra:

Project Information

Project: TODD-MELLETTE STUDY
Drill Date: 06/18/1991
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-91-23
Samples: Total Drill Hole Depth (ft.): 69.0

Well Information

SDGS Well Name: R20-91-23
Water Rights Well: 
Other Well Name: 
Casing Type: PVC, SCH. 80
Screen Type: PVC, MFG., SLOT SIZE 0.010 IN.
Total Casing and Screen (ft.): 60.0

Geophysical Information

Spontaneous Potential: 43 28' 00"
Natural Gamma: Longitude: 100 37' 55"

WELL DATA: SCREEN INTERVAL FROM 58 TO 48 FEET; FILTER PACK (0.65-0.75 MM QUARTZ SAND) 69 TO 44 FEET; BENTONITE 44 TO 20 FEET; CEMENT 20 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED. SCREEN AND CASING ARE FLUSH THREADED.
Location Information

Legal Location: NE SW SE SE SEC. 04, T. 040 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 040N-28W-04DDDCA
Latitude: 43 27' 50"
Longitude: 100 38' 06"
Ground Surface Elevation (ft.): 2440 T

Project Information

Project: TODD-MELLETTE STUDY
Drill Date: 06/17/1991
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-91-22

Samples:

Total Casing and Screen (ft.): 75.0
Casing Stick-up (ft.): 2.00
Casing Diameter (in.): PVC, SCH. 80
Casing Top Elevation: 2442.00 T
Casing Diameter (in.): 2.0
Casing Stick-up (ft.): 10.0
Screen Length (ft.): 0.010 IN.

Well Information

SDGS Well Name: R20-91-22
Water Rights Well: 
Other Well Name: 
Casing Type: PVC, MFG., SLOT SIZE 0.010 IN.
Screen Type: PVC, MFG., SLOT SIZE 0.010 IN.

Total Casing and Screen (ft.): 75.0
Casing Stick-up (ft.): 2.00
Casing Diameter (in.): 2.0
Casing Top Elevation: 2442.00 T

Well Maintenance Date: 06/17/1991
Driller: D. IVERSON
Driller's Log: X
Geologist: P. HAMMOND
Geologist's Log: 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

WELL DATA: SCREEN INTERVAL FROM 73 TO 63 FEET; FILTER PACK (0.65-0.75 MM QUARTZ SAND) 74 TO 55 FEET; BENTONITE 55 TO 20 FEET; CEMENT 20 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED. SCREEN AND CASING ARE FLUSH THREADED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2440.00 - 2438.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, BROWN</td>
</tr>
<tr>
<td>2438.00 - 2436.00</td>
<td>2.0 - 4.0</td>
<td>SILTSTONE, LIGHT-BROWN; CALCAREOUS</td>
</tr>
<tr>
<td>2436.00 - 2423.00</td>
<td>4.0 - 17.0</td>
<td>CLAYSTONE, REDDISH-BROWN TO LIGHT-BROWN; NONCALCAREOUS</td>
</tr>
<tr>
<td>2423.00 - 2408.00</td>
<td>17.0 - 32.0</td>
<td>CLAYSTONE, LIGHT-PINKISH-BROWN</td>
</tr>
<tr>
<td>2408.00 - 2398.00</td>
<td>32.0 - 42.0</td>
<td>CLAYSTONE, REDDISH-BROWN TO LIGHT-GREENISH-GRAY; SOME SILT</td>
</tr>
<tr>
<td>2398.00 - 2388.00</td>
<td>42.0 - 52.0</td>
<td>CLAYSTONE, GREENISH-GRAY; SOME SILT AND VERY FINE SAND</td>
</tr>
<tr>
<td>2388.00 - 2373.00</td>
<td>52.0 - 67.0</td>
<td>CLAYSTONE, GREENISH-GRAY; SOME CALCAREOUS SILTSTONE</td>
</tr>
<tr>
<td>2373.00 - 2366.00</td>
<td>67.0 - 74.0</td>
<td>MARL(?), LIGHT-TAN, SILTY, SANDY; CALCAREOUS</td>
</tr>
</tbody>
</table>
**Location Information**

Legal Location: SW NE NW NE SEC. 09, T. 040 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 040N-28W-09ABAC
Latitude: 43° 27' 38"
Longitude: 100° 38' 19"

Ground Surface Elevation (ft.): 2400 T

**Project Information**

Project: TODD-MELLETTE STUDY
Drill Date: 06/11/1991
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-91-19
Samples:

Total Drill Hole Depth (ft.): 172.0

**Well Information**

SDGS Well Name: R20-91-19
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80
Screen Type: PVC, MFG., SLOT SIZE 0.010 IN.
Total Casing and Screen (ft.): 140.0

Casing Top Elevation: 2402.00 T
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 2.00

Well Maintenance Date:

**Geophysical Information**

Spontaneous Potential: X
Natural Gamma: X

Single Point Resistivity: X
Extra:

WELL DATA: SCREEN INTERVAL FROM 138 TO 128 FEET; FILTER PACK (VERY COARSE QUARTZ SAND) 172 TO 110 FEET; BENTONITE 110 TO 22 FEET; CEMENT 22 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED. CASING AND SCREEN ARE FLUSH THREADED. SOUTH WELL OF THREE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400.00 - 2398.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, TAN, SILTY, CLAYEY</td>
</tr>
<tr>
<td>2398.00 - 2392.00</td>
<td>2.0 - 8.0</td>
<td>CLAYSTONE, LIGHT-BROWN (BRULE FORMATION?)</td>
</tr>
<tr>
<td>2392.00 - 2370.00</td>
<td>8.0 - 30.0</td>
<td>CLAYSTONE, LIGHT-BROWN; SOME SILT, SLIGHTLY CALCAREOUS (BRULE FORMATION?)</td>
</tr>
<tr>
<td>2370.00 - 2368.00</td>
<td>30.0 - 32.0</td>
<td>CLAYSTONE, LIGHT-PINKISH-BROWN; SOME SILT AND VERY FINE SAND (BRULE FORMATION?)</td>
</tr>
<tr>
<td>2368.00 - 2355.00</td>
<td>32.0 - 45.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-BROWN; SOME SILT AND VERY FINE SAND (CHADRON FORMATION?)</td>
</tr>
<tr>
<td>2355.00 - 2344.00</td>
<td>45.0 - 56.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-GRAY; SOME SILT AND VERY FINE SAND (CHADRON FORMATION?)</td>
</tr>
<tr>
<td>2344.00 - 2336.00</td>
<td>56.0 - 64.0</td>
<td>CLAYSTONE, LIGHT-GREEN, SILTY; VERY CALCAREOUS (CHADRON FORMATION?)</td>
</tr>
</tbody>
</table>
2336.00-2330.00  64.0-70.0  MARL, LIGHT-TAN, SILTY, SANDY; CALCAREOUS (CHADRON FORMATION?)
2330.00-2296.00  70.0-104.0  CLAYSTONE, LIGHT-GREEN; WITH SOME CALCAREOUS SILT (CHADRON FORMATION?)
2296.00-2280.00  104.0-120.0  CLAYSTONE, GREENISH-GRAY (CHADRON FORMATION?)
2280.00-2267.00  120.0-133.0  CLAYSTONE, LIGHT-GREEN-BROWN, SILTY, SOME FINE TO MEDIUM QUARTZ-FELDSPAR SAND (CHADRON FORMATION?)
2267.00-2255.00  133.0-145.0  CLAYSTONE, LIGHT-GREEN, SOMewhat SANDY (CHADRON FORMATION?)
2255.00-2244.00  145.0-156.0  CLAYSTONE, LIGHT-GREENISH-GRAY, SILTY (CHADRON FORMATION?)
2244.00-2242.00  156.0-158.0  CLAYSTONE, LIGHT-GREEN; WITH VERY FINE TO FINE QUARTZ-FELDSPAR SAND (CHADRON FORMATION?)
2242.00-2236.00  158.0-164.0  SHALE, REDDISH-PURPLE TO PURPLE; BENTONITIC, WEATHERED (PIERRE SHALE)
2236.00-2228.00  164.0-172.0  CLAY, LIGHT-BROWN; SLIGHTLY CALCAREOUS, WEATHERED (PIERRE SHALE)

* * * *
Casing Type: Screen Type: Casing Stick-up (ft.): Spontaneous Potential: Natural Gamma: Samples: Longitude: Hydrologic Unit Code: SDGS Well Name: Test Hole Number: Casing Top Elevation: Total Casing and Screen (ft.): Casing Diameter (in.): Screen Length (ft.): Well Maintenance Date: Ground Surface Elevation (ft.):2400 T

Location Information
Legal Location: SW NE NW NE SEC. 09, T. 040 N., R. 28 W. County: MELLETTE Basin: WHITE Hydrologic Unit Code: 10140203 Land Owner: Location: 040N-28W-09ABAC 1 Latitude: 43 27' 38" Longitude: 100 38' 19"

Project Information
Project: TODD-MELLETTE STUDY Drill Date: 06/12/1991 Company: SDGS Drilling Method: ROTARY Test Hole Number: R20-91-20 SDGS Well Name: R20-91-20 Samples: Total Drill Hole Depth (ft.): 110.0

Well Information
SDGS Well Name: R20-91-20 Water Rights Well: Other Well Name: Casing Type: PVC, SCH. 80 Screen Type: PVC, MFG., SLOT SIZE 0.010 IN. Total Casing and Screen (ft.): 110.0 Casing Top Elevation: 2402.00 T Casing Diameter (in.): 2.0 Screen Length (ft.): 10.0 Casing Stick-up (ft.): 2.00

Geophysical Information
Spontaneous Potential: Natural Gamma: Single Point Resistivity: Extra:

WELL DATA: SCREEN INTERVAL FROM 108 TO 98 FEET; FILTER PACK (VERY COARSE QUARTZ SAND) 110 TO 93 FEET; BENTONITE 93 TO 23 FEET; CEMENT 23 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED. CASING AND SCREEN ARE FLUSH THREADED. NORTH WELL OF THREE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400.00-2398.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, TAN, SILTY</td>
</tr>
<tr>
<td>2398.00-2392.00</td>
<td>2.0-8.0</td>
<td>CLAYSTONE, LIGHT-BROWN; SOME SILT, SOME VERY FINE SAND, CALCAREOUS</td>
</tr>
<tr>
<td>2392.00-2382.00</td>
<td>8.0-18.0</td>
<td>CLAYSTONE, LIGHT-BROWN; SOME SILT, SLIGHTLY CALCAREOUS</td>
</tr>
<tr>
<td>2382.00-2364.00</td>
<td>18.0-36.0</td>
<td>CLAYSTONE, LIGHT-PINKISH-BROWN; SOME SILT AND VERY FINE SAND</td>
</tr>
<tr>
<td>2364.00-2351.00</td>
<td>36.0-49.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-BROWN; SOME SILT AND VERY FINE SAND</td>
</tr>
<tr>
<td>2351.00-2347.00</td>
<td>49.0-53.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-GRAY; SOME SILT AND VERY FINE SAND</td>
</tr>
<tr>
<td>2347.00-2337.00</td>
<td>53.0-63.0</td>
<td>CLAYSTONE, LIGHT-GREEN; WITH CALCAREOUS SILT</td>
</tr>
</tbody>
</table>
2337.00–2344.00  63.0–76.0  MARL, LIGHT-TAN, SILTY, SANDY; CALCAREOUS
2324.00–2314.00  76.0–86.0  CLAYSTONE, LIGHT-GREEN; SOME CALCAREOUS SILT
2314.00–2302.00  86.0–98.0  CLAYSTONE, LIGHT-GREEN TO LIGHT-GREENISH-BROWN, SILTY
2302.00–2296.00  98.0–104.0  CLAYSTONE, LIGHT-GREEN; SOME CALCAREOUS SILT
2296.00–2290.00  104.0–110.0  CLAYSTONE, LIGHT-GREEN TO LIGHT-GREENISH-BROWN, SILTY; SLIGHTLY CALCAREOUS

* * * *
**Location Information**

Legal Location: SW NE NW NE SEC. 09, T. 040 N., R. 28 W.
County: MELLEETE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 040N-28W-09ABAC 2
Latitude: 43 27' 38"
Longitude: 100 38' 19"
Ground Surface Elevation (ft.): 2400 T

**Project Information**

Project: TODD-MELLEETE STUDY
Drill Date: 06/12/1991
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-91-21
Samples:

Geologist: P. HAMMOND
Driller: D. IVERSON
Driller's Log: 
Total Drill Hole Depth (ft.): 65.0

**Well Information**

SDGS Well Name: R20-91-21
Water Rights Well: 
Other Well Name: 
Casing Type: PVC, SCH. 80
Screen Type: PVC, MFG., SLOT SIZE 0.010 IN.
Total Casing and Screen (ft.): 65.0
Well Maintenance Date:

Aquifer: WHITE RIVER GROUP
Casing Top Elevation: 2402.00 T
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 2.00

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

WELL DATA: SCREEN INTERVAL FROM 63 TO 53 FEET; FILTER PACK (VERY COARSE QUARTZ SAND) 65 TO 41 FEET; BENTONITE 41 TO 21 FEET; CEMENT 21 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED. CASING AND SCREEN ARE FLUSH THREADED. WEST WELL OF THREE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400.00 - 2398.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, TAN, SILTY</td>
</tr>
<tr>
<td>2398.00 - 2382.00</td>
<td>2.0 - 18.0</td>
<td>CLAYSTONE, LIGHT-BROWN, SILTY; SOME VERY FINE SAND; CALCAREOUS</td>
</tr>
<tr>
<td>2382.00 - 2372.00</td>
<td>18.0 - 28.0</td>
<td>CLAYSTONE, LIGHT-BROWN; SOME SILT; SLIGHTLY CALCAREOUS</td>
</tr>
<tr>
<td>2372.00 - 2355.00</td>
<td>28.0 - 45.0</td>
<td>CLAYSTONE, LIGHT-PINKISH-BROWN; SOME SILT AND VERY FINE SAND</td>
</tr>
<tr>
<td>2355.00 - 2350.00</td>
<td>45.0 - 50.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-BROWN; SOME SILT AND VERY FINE SAND</td>
</tr>
<tr>
<td>2350.00 - 2342.00</td>
<td>50.0 - 58.0</td>
<td>CLAYSTONE, LIGHT-GREENISH-GRAY; SOME SILT AND FINE SAND</td>
</tr>
<tr>
<td>2342.00 - 2335.00</td>
<td>58.0 - 65.0</td>
<td>CLAYSTONE, LIGHT-GREEN TO GRAY; SOME CALCAREOUS SILT</td>
</tr>
</tbody>
</table>
**Location Information**

Legal Location: SE SE SE SW SEC. 15, T. 040 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:
Location: 040N-29W-15CDDD
Latitude: 43 26' 00"
Longitude: 100 44' 27"
Ground Surface Elevation (ft.): 2430 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 09/26/1994
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-94-74
Samples:
Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2430.00-2428.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, BROWN, SILTY</td>
</tr>
<tr>
<td>2428.00-2423.00</td>
<td>2.0 - 7.0</td>
<td>SILTSTONE, PALE-YELLOWISH-BROWN; NONCALCAREOUS (BRULE FORMATION?)</td>
</tr>
<tr>
<td>2423.00-2375.00</td>
<td>7.0 - 55.0</td>
<td>SILTSTONE, GRAYISH-GREEN, CLAYEY; MASSIVE, NONCALCAREOUS (CHADRON FORMATION?)</td>
</tr>
<tr>
<td>2375.00-2361.00</td>
<td>55.0 - 69.0</td>
<td>SANDSTONE, LIGHT-PINK TO VERY LIGHT-BLUE, SILTY FROM 55 TO 61 FEET; NONCALCAREOUS (CHADRON FORMATION?)</td>
</tr>
<tr>
<td>2361.00-2336.00</td>
<td>69.0 - 94.0</td>
<td>CLAYSTONE, MEDIUM-GRAY TO ORANGE-BROWN; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2336.00-2328.00</td>
<td>94.0 - 102.0</td>
<td>CLAYSTONE, DARK-GRAY TO BLACK; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Legal Location: SW SW SE SE SEC. 04, T. 040 N., R. 30 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 040N-30W-04DDCC
Latitude: 43° 27' 45"
Longitude: 100° 51' 52"
Ground Surface Elevation (ft.): 2510 T

Project Information
Project: MELLETTE-TODD CO. STUDY
Drill Date: 05/26/1993
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-93-07

Spontaneous Potential: X
Natural Gamma: X

Geophysical Information
Spontaneous Potential: X
Natural Gamma: X

HOLE PLUGGED WITH HIGH SOLIDS BENTONITE FROM 162 FEET TO GROUND SURFACE. AFTER SETTLEMENT, 20 FEET OF OPEN HOLE WAS PLUGGED WITH CEMENT GROUT.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2510.00 - 2499.00</td>
<td>0.0 - 11.0</td>
<td>CLAY AND SILT, MOTTLED LIGHT-YELLOW- BROWN AND GRAY-ORANGE, SANDY</td>
</tr>
<tr>
<td>2499.00 - 2494.00</td>
<td>11.0 - 16.0</td>
<td>SILTSTONE, MODERATE-YELLOWISH-BROWN</td>
</tr>
<tr>
<td>2494.00 - 2493.00</td>
<td>16.0 - 17.0</td>
<td>SAND, WHITE, FINE; CEMENTED, QUARTZOSE</td>
</tr>
<tr>
<td>2493.00 - 2478.00</td>
<td>17.0 - 32.0</td>
<td>SILTSTONE, MODERATE-YELLOW-BROWN, SANDY, SLIGHTLY CLAYEY, MASSIVE</td>
</tr>
<tr>
<td>2478.00 - 2432.00</td>
<td>32.0 - 78.0</td>
<td>CLAYSTONE AND SILTSTONE, ALTERNATING BROWN-GRAY TO MODERATE-YELLOW-BROWN, SANDY</td>
</tr>
<tr>
<td>2432.00 - 2402.00</td>
<td>78.0 - 108.0</td>
<td>SILTSTONE AND CLAYSTONE, GRAYISH-GREEN, SLIGHTLY SHALEY; BENTONITIC</td>
</tr>
<tr>
<td>2402.00 - 2393.00</td>
<td>108.0 - 117.0</td>
<td>SILTSTONE, PALE-GRAYISH-BLUE, SANDY; TABULAR TO BLOCKY CUTTINGS</td>
</tr>
<tr>
<td>2393.00 - 2383.00</td>
<td>117.0 - 127.0</td>
<td>CLAYSTONE, GRAY-BROWN; SOME PURPLE AND RUSTY COLORED NODULES, GREASY, WEATHERED SHALE</td>
</tr>
<tr>
<td>2383.00 - 2353.00</td>
<td>127.0 - 157.0</td>
<td>SHALE, LIGHT-GRAY; GREASY, SOME OXIDIZED FRACTURE FILLINGS</td>
</tr>
<tr>
<td>2353.00 - 2348.00</td>
<td>157.0 - 162.0</td>
<td>SHALE, DARK-GRAY-BLACK; GREASY, BENTONITIC</td>
</tr>
</tbody>
</table>

* * *
Spontaneous Potential:
Natural Gamma:
Samples:
Longitude:
Hydrologic Unit Code:
Test Hole Number:
Single Point Resistivity:
Extra:
Latitude:
County:
Project:
Company:
Driller:
Geologist:
Basin:
Ground Surface Elevation (ft.):
Location:
Land Owner:
Drill Date:
Drilling Method:
Driller's Log:
Geologist's Log:

**Location Information**

Legal Location: NE SW SW NE SEC. 27, T. 040 N., R. 30 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 040N-30W-27ACCA
Latitude: 43 24' 45"
Longitude: 100 51' 22"
Ground Surface Elevation (ft.): 2350 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 05/26/1993
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-93-06
Samples: 
Geophysics: M. JARRETT
Driller: G. JENSEN
Total Drill Hole Depth (ft.): 122.0

**Geophysical Information**

Spontaneous Potential: X
Natural Gamma: X
Single Point Resistivity: X
Extra: 

HOLE WAS PLUGGED WITH HIGH SOLIDS BENTONITE FROM 122 FEET TO GROUND SURFACE. AFTER SETTLEMENT, OPEN HOLE OF 30 FEET WAS PLUGGED WITH CEMENT GROUT.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2350.00-2348.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, BROWN</td>
</tr>
<tr>
<td>2348.00-2340.00</td>
<td>2.0-10.0</td>
<td>SAND, BROWN, FINE TO MEDIUM, SILTY, CLAYEY</td>
</tr>
<tr>
<td>2340.00-2328.00</td>
<td>10.0-22.0</td>
<td>SILT AND CLAY, DARK-YELLOWISH-BROWN, SANDY</td>
</tr>
<tr>
<td>2328.00-2320.00</td>
<td>22.0-30.0</td>
<td>SILTSTONE, DARK-YELLOWISH-BROWN TO RUSTY-BROWN, VERY SANDY</td>
</tr>
<tr>
<td>2320.00-2303.00</td>
<td>30.0-47.0</td>
<td>SILTSTONE, PALE-BLUE-GRAY, SANDY</td>
</tr>
<tr>
<td>2303.00-2278.00</td>
<td>47.0-72.0</td>
<td>CLAY, OLIVE-GRAY TO GREENISH-GRAY; SOME RUSTY COLORED OXIDIZED NODULES, SOME ROUNDED MAFIC AND SHALE PEBBLES, GREASY</td>
</tr>
<tr>
<td>2278.00-2228.00</td>
<td>72.0-122.0</td>
<td>CLAY, GRAYISH-BLACK; GREASY (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW NW SW NE SEC. 35, T. 040 N., R. 30 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 040N-30W-35ACBC
Latitude: 43 23' 54"
Longitude: 100 50' 20"
Ground Surface Elevation (ft.): 2280 T

Project Information

Project: STATEWIDE MONITORING
Drill Date: 06/21/1995
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-95-21
Samples:

Geologist: P. HAMMOND
Geologist's Log: X
Driller: D. IVESON
Driller's Log: 
Total Drill Hole Depth (ft.): 30.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
2280.00 - 2277.00 | 0.0 - 3.0 | SAND, LIGHT-BROWN TO DARK-BROWN, MEDIUM TO COARSE; SOME GRAVEL
2277.00 - 2273.00 | 3.0 - 7.0 | SAND AND GRAVEL, MEDIUM TO COARSE
2273.00 - 2268.00 | 7.0 - 12.0 | SAND, BROWN, COARSE, CLAYEY, SILTY; WITH SOME GRAVEL
2268.00 - 2261.00 | 12.0 - 19.0 | SAND AND CLAY, DARK-BROWN, COARSE SAND, SILTY
2261.00 - 2250.00 | 19.0 - 30.0 | CLAY, LIGHT-GRAY TO GRAY; CALCAREOUS (PIERRE SHALE)

* * * *
Location Information

Legal Location: NW NW NW NW SEC. 16, T. 040 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 040N-31W-16BBBB
Latitude: 43 26' 50"
Longitude: 101 00' 25"
Ground Surface Elevation (ft.): 2553 T

Project Information

Project: WATER RIGHTS
Drill Date: 09/03/1978
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: MT-78-5
Samples: 
Geologist: J. GOODMAN
Driller: M. THOMPSON
Geologist's Log: X
Driller's Log: 
Total Drill Hole Depth (ft.): 260.0

Geophysical Information

Spontaneous Potential: X
Natural Gamma: 
Single Point Resistivity: X
Extra: 

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2553.00 - 2488.00</td>
<td>0.0 - 65.0</td>
<td>SILTSTONE, REDDISH-BROWN; WITH SANDSTONE OF SAME COLOR</td>
</tr>
<tr>
<td>2488.00 - 2317.00</td>
<td>65.0 - 236.0</td>
<td>SANDSTONE, REDDISH-BROWN; SLIGHTLY CEMENTED, WITH SILTSTONE</td>
</tr>
<tr>
<td>2317.00 - 2293.00</td>
<td>236.0 - 260.0</td>
<td>SILTSTONE, GREENISH-WHITE, SHALEY; BENTONITE</td>
</tr>
</tbody>
</table>
* * * *
## Location Information

Legal Location: NE NE NE NE SEC. 21, T. 040 N., R. 31 W.  
Location: 040N-31W-21AAAAA  
County: MELLETTE  
Location: 040N-31W-21AAAAA  
Basin: WHITE  
Latitude: 43° 25' 55"  
Hydrologic Unit Code: 10140202  
Longitude: 100° 59' 15"  
Land Owner:  
Ground Surface Elevation (ft.): 2585 T

## Project Information

Project: MELLETTE-TODD CO. STUDY  
Geologist: R. HAMMOND  
Drill Date: 09/16/1992  
Geologist's Log: X  
Company: SDGS  
Driller: G. JENSEN  
Drilling Method: ROTARY  
Driller's Log:  
Test Hole Number: R2-92-46  
Total Drill Hole Depth (ft.): 417.0  
Samples:  

## Geophysical Information

Spontaneous Potential: X  
Natural Gamma: X  
Single Point Resistivity: X  
Extra:

PLUGGED FROM TOTAL DEPTH TO TOP WITH HIGH SOLIDS BENTONITE PLUGGING FLUID; SETTLED OVER WEEKEND TO 50 FEET; FILLED WITH BENTONITE CRUMBLES TO 8 FEET, CEMENT FROM 8 TO 3 FEET, AND NATIVE SOIL FROM 3 TO 0 FEET.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2585.00 - 2574.00</td>
<td>0.0 - 11.0</td>
<td>SILT, PALE-BROWN, SANDY, CLAYEY; CALCAREOUS; ABUNDANT PEBBLY CONCRETIONS</td>
</tr>
<tr>
<td>2574.00 - 2541.00</td>
<td>11.0 - 44.0</td>
<td>SILTSTONE, PALE-REDDISH-BROWN, VERY SANDY, CLAYEY; VERY CALCAREOUS, MASSIVE, VERY POORLY CEMENTED, VERY PALE-ORANGE BELOW 28 FEET</td>
</tr>
<tr>
<td>2541.00 - 2517.00</td>
<td>44.0 - 68.0</td>
<td>SAND, YELLOWISH-BROWN, VERY FINE, VERY SILTY, CLAYEY; SLIGHTLY TO NON- CALCAREOUS, MASSIVE(?)</td>
</tr>
<tr>
<td>2517.00 - 2508.00</td>
<td>68.0 - 77.0</td>
<td>SAND, GRAYISH-ORANGE, VERY FINE, VERY SILTY; SLIGHTLY TO MODERATELY CALCAREOUS, MASSIVE(?)</td>
</tr>
<tr>
<td>2508.00 - 2456.00</td>
<td>77.0 - 129.0</td>
<td>SILTSTONE, LIGHT-BROWN, SANDY, CLAYEY; SLIGHTLY CALCAREOUS, MASSIVE(?) ; GRADES TO LIGHT-OLIVE-GRAY, CLAYEY, FISSILE SILTSTONE BY 100 FEET</td>
</tr>
<tr>
<td>2456.00 - 2415.00</td>
<td>129.0 - 170.0</td>
<td>SILTSTONE, PALE-YELLOWISH-BROWN, CLAYEY; NONCALCAREOUS TO SLIGHTLY CALCAREOUS, POORLY FISSILE TO FISSILE, GRADES TO OLIVE-GRAY BY 160 FEET</td>
</tr>
<tr>
<td>2415.00 - 2378.00</td>
<td>170.0 - 207.0</td>
<td>SILTSTONE, PALE-YELLOWISH-BROWN, VERY CLAYEY; NONCALCAREOUS, FISSILE, MOTTLED WITH OLIVE-GRAY BY 200 FEET</td>
</tr>
<tr>
<td>2378.00 - 2210.00</td>
<td>207.0 - 375.0</td>
<td>SILTSTONE, GRAYISH-ORANGE, CLAYEY; FISSILE, SLIGHTLY TO NONCALCAREOUS, GRADES TO OLIVE-GRAY</td>
</tr>
</tbody>
</table>
BY 230 FEET, SEVERAL VERY FINE SANDY BEDS
BETWEEN 233 AND 280 FEET, SEVERAL THIN ASHY
CLAYSTONE BEDS AT 235 TO 320 FEET

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Interval</th>
<th>Description</th>
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</thead>
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<tr>
<td>2210.00-2202.00</td>
<td>375.0-383.0</td>
<td>SAND, YELLOWISH-GRAY, FINE TO VERY FINE, SILTY</td>
</tr>
<tr>
<td>2202.00-2168.00</td>
<td>383.0-417.0</td>
<td>SHALE, OLIVE-BLACK; FISSLIE, SLIGHTLY CALCAREOUS (MOBRIDGE MEMBER - PIERRE SHALE?)</td>
</tr>
</tbody>
</table>

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### Location Information

- **Legal Location:** NE NE NE SEC. 21, T. 040 N., R. 31 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140202
- **Land Owner:** Location: 040N-31W-21AAAA 1
- **Longitude:** 100 59' 15"
- **Latitude:** 43 25' 55"
- **Ground Surface Elevation (ft.):** 2585

### Project Information

- **Project:** MELLETTE-TODD CO. STUDY
- **Drill Date:** 09/21/1992
- **Company:** SDGS
- **Drilling Method:** ROTARY
- **Test Hole Number:** R2-92-47
- **Samples:**
- **SDGS Well Name:** R2-92-47
- **Water Rights Well:**
- **Other Well Name:**
- **Casing Type:** PVC
- **Screen Type:** PVC, MFG., SLOT SIZE 0.010 IN.
- **Total Casing and Screen (ft.):** 82.0
- **Casing Top Elevation:** 2587.00
- **Casing Diameter (in.):** 2.0
- **Screen Length (ft.):** 10.0
- **Casing Stick-up (ft.):** 2.00
- **Total Drill Hole Depth (ft.):** 82.0
- **Well Maintenance Date:**

### Well Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Aquifer:**
- **Management Unit:**
- **Casing Top Elevation:** 2587.00
- **Casing Diameter (in.):** 2.0
- **Screen Length (ft.):** 10.0
- **Casing Stick-up (ft.):** 2.00

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2585.00-2574.00</td>
<td>0.0-11.0</td>
<td>SILT, PALE-BROWN, SANDY, CLAYEY; CALCAREOUS; ABUNDANT CONCRETIONARY CALCAREOUS PEBBLES</td>
</tr>
<tr>
<td>2574.00-2541.00</td>
<td>11.0-44.0</td>
<td>SILTSTONE, PALE-REDDISH-BROWN, VERY SANDY, CLAYEY; VERY CALCAREOUS, MASSIVE, VERY POORLY CEMENTED, VERY PALE-ORANGE BELOW 28 FEET</td>
</tr>
<tr>
<td>2541.00-2517.00</td>
<td>44.0-68.0</td>
<td>SAND, YELLOWISH-BROWN, VERY FINE, VERY SILTY, CLAYEY; SLIGHTLY TO NON- CALCAREOUS, MASSIVE(?)</td>
</tr>
<tr>
<td>2517.00-2508.00</td>
<td>68.0-77.0</td>
<td>SAND, GRAYISH-ORANGE, VERY FINE, VERY SILTY; SLIGHTLY TO MODERATELY CALCAREOUS, MASSIVE(?)</td>
</tr>
<tr>
<td>2508.00-2503.00</td>
<td>77.0-82.0</td>
<td>SILTSTONE, LIGHT-BROWN, SANDY, CLAYEY; SLIGHTLY CALCAREOUS, MASSIVE(?)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW SW SEC. 16, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: D. SCHMIDT

Location: 040N-32W-16CC
Latitude: 43° 26' 03"
Longitude: 101° 06' 53"
Ground Surface Elevation (ft.): 2575 T

Project Information

Project:
Drill Date: 06/05/1986
Company: BABBY WELL DRILLING
Drilling Method: ROTARY
Test Hole Number:
Samples:

Total Drill Hole Depth (ft.): 80.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type: PVC
Screen Type: PVC
Total Casing and Screen (ft.): 80.0
Well Maintenance Date:

Aquifer:
Management Unit:
Casing Top Elevation:
Casing Diameter (in.): 4.0
Screen Length (ft.): 20.0
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2575.00–2570.00</td>
<td>0.0–5.0</td>
<td>SAND, FINE</td>
</tr>
<tr>
<td>2570.00–2495.00</td>
<td>5.0–80.0</td>
<td>ROCK, RED, COARSE</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NW NW NW NW SEC. 21, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 040N-32W-21BBBB
Latitude: 43 25' 55"
Longitude: 101 07' 00"
Ground Surface Elevation (ft.): 2576 T

Project Information

Project: WATER RIGHTS
Drill Date: 10/03/1978
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: MT-78-2
Total Casing and Screen (ft.): 165.3
Well Maintenance Date: 06/14/1984

Samples:

Geologist: J. GOODMAN
Geologist's Log: X
Driller: M. THOMPSON
Driller's Log: 
Total Drill Hole Depth (ft.): 170.0

Well Information

SDGS Well Name: 
Water Rights Well: MT-78A
Other Well Name: 
Casing Type: PVC
Screen Type: PVC, MFG.
Total Casing and Screen (ft.): 165.3
Well Maintenance Date: 06/14/1984

Aquifer: ARIKAREE
Management Unit: 
Casing Top Elevation: 
Casing Diameter (in.): 2.0
Screen Length (ft.): 25.0
Casing Stick-up (ft.): 2.80

Extra:

CASING WAS SLOTTED 20 FEET ABOVE THE SANDPOINT.

Elevation (ft.)  Depth (ft.)  Description
2576.00 - 2570.00  0.0 - 6.0  SAND, BROWN; UNCONSOLIDATED
2570.00 - 2491.00  6.0 - 85.0  SANDSTONE, REDDISH-BROWN, FINE; SLIGHTLY CEMENTED
2491.00 - 2448.00  85.0 - 128.0  SANDSTONE, REDDISH-BROWN, FINE; ALMOST A SILTSTONE
2448.00 - 2417.00  128.0 - 159.0  SAND, BROWN, MEDIUM, LOOSE; LAST 10 FEET CONTAINED CEMENTED LAYERS
2417.00 - 2416.00  159.0 - 160.0  SANDSTONE; VERY HARD
2416.00 - 2406.00  160.0 - 170.0  SILTSTONE, LIGHT-BROWN TO WHITE; WITH BENTONITE

* * * *

Spontaneous Potential: X
Natural Gamma: 
Single Point Resistivity: X

Drill Date: 10/03/1978
Drilling Method: ROTARY
Test Hole Number: MT-78-2
Total Casing and Screen (ft.): 165.3
Well Maintenance Date: 06/14/1984

Elevation (ft.)  Depth (ft.)  Description
2576.00 - 2570.00  0.0 - 6.0  SAND, BROWN; UNCONSOLIDATED
2570.00 - 2491.00  6.0 - 85.0  SANDSTONE, REDDISH-BROWN, FINE; SLIGHTLY CEMENTED
2491.00 - 2448.00  85.0 - 128.0  SANDSTONE, REDDISH-BROWN, FINE; ALMOST A SILTSTONE
2448.00 - 2417.00  128.0 - 159.0  SAND, BROWN, MEDIUM, LOOSE; LAST 10 FEET CONTAINED CEMENTED LAYERS
2417.00 - 2416.00  159.0 - 160.0  SANDSTONE; VERY HARD
2416.00 - 2406.00  160.0 - 170.0  SILTSTONE, LIGHT-BROWN TO WHITE; WITH BENTONITE

* * * *
Casing Type: PVC, SCH. 40
Screen Type: PVC, SCH. 40, MFG., 0.018 SLOT
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Total Casing and Screen (ft.): 59.3
Casing Top Elevation: 2580.00 T
Cement Grout Placed from 5 feet below land surface to ground level.

Well Information
Aquifer: ARIKAREE
Management Unit:
Casing Top Elevation: 2580.00 T
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 2.00

Geophysical Information
Spontaneous Potential: X
Natural Gamma: X
Single Point Resistivity: X
Extra:

WELL SCREENED FROM 59.3 TO 49.3 FEET BELOW CASING TOP. FILTER PACK FROM 59 TO 39 FEET BELOW LAND SURFACE. BENTONITE GROUT FROM 39 FEET TO GROUND LEVEL. CEMENT GROUT PLACED FROM 5 FEET BELOW LAND SURFACE TO GROUND LEVEL.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2578.00-2519.00</td>
<td>0.0-59.0</td>
<td>SAND AND SANDSTONE, RED-BROWN, FINE TO VERY FINE GRAINED; SOME SILTSTONE IN CUTTINGS</td>
</tr>
</tbody>
</table>

* * * *
**Location Information**

Legal Location: NW NW NW NW SEC. 21, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Location: 040N-32W-21BBBB 2
Latitude: 43 25' 55"
Longitude: 101 07' 05"
Ground Surface Elevation (ft.): 2578 T

**Project Information**

Project: STATEWIDE MONITORING
Drill Date: 08/05/1997
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-97-36
Samples:

Geologist: L. SCHULZ
Geologist's Log: X
Driller: D. IVESON
Driller's Log:
Total Drill Hole Depth (ft.): 30.0

**Well Information**

SDGS Well Name: R20-97-36
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80
Screen Type: PVC, SCH. 40, MFG., 0.018 SLOT
Total Casing and Screen (ft.): 31.1

Casing Top Elevation: 2580.00 T
Casing Diameter (in.): 4.0
Screen Length (ft.): 5.5
Casing Stick-up (ft.): 2.00
Well Maintenance Date:

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL INFORMATION: SCREENED INTERVAL FROM 31.1 TO 25.6 FEET BELOW CASING TOP. FILTER PACK FROM 31 TO 7 FEET BELOW LAND SURFACE. BENTONITE FROM 7 TO 5 FEET BELOW LAND SURFACE. CEMENT GROUT AND CUTTINGS FROM 5 FEET BELOW LAND SURFACE TO GROUND LEVEL. ONE STEEL, LOCKING WELL PROTECTOR INSTALLED.

**Elevation (ft.)** | **Depth (ft.)** | **Description**
---|---|---
2578.00 - 2548.00 | 0.0 - 30.0 | SAND AND SANDSTONE, RED-BROWN, FINE TO VERY FINE GRAINED; SOME SILTSTONE IN CUTTINGS; SOME CLAY

* * * *
Location Information

Legal Location: NW NW NW NW SEC. 21, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Location: 040N-32W-21BBBB 3
Latitude: 43 25' 55"
Longitude: 101 07' 05"
Ground Surface Elevation (ft.): 2578 T

Project Information

Project: STATEWIDE MONITORING
Drill Date: 08/05/1997
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-97-37
Samples:

SDGS Well Name: R20-97-37
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT
Total Casing and Screen (ft.): 16.7
Well Maintenance Date:

Total Drill Hole Depth (ft.): 15.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL INFORMATION: SCREENED INTERVAL FROM 16.7 TO 6.6 FEET BELOW CASING TOP. FILTER PACK FROM 15 TO 3.5 FEET BELOW LAND SURFACE. BENTONITE FROM 3.5 TO 2 FT BELOW LAND SURFACE. CEMENT GROUT FROM 2 FEET TO GROUND LEVEL. ONE STEEL, LOCKING WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2578.00 - 2563.00</td>
<td>0.0 - 15.0</td>
<td>SAND AND SANDSTONE, RED-BROWN, FINE TO VERY FINE GRAINED; SOME SILTSTONE IN CUTTINGS; SOME CLAY</td>
</tr>
</tbody>
</table>

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### Location Information
Legal Location: SE SE SE SEC. 22, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 040N-32W-22DDDD
Latitude: 43 25' 05"
Longitude: 101 04' 43"
Ground Surface Elevation (ft.): 2546 T

### Project Information
Project: WATER RIGHTS
Drill Date: 09/04/1978
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: 
Samples: 
Geologist: J. GOODMAN
Geologist's Log: X
Driller: M. THOMPSON
Driller's Log: 
Total Drill Hole Depth (ft.): 155.0

### Geophysical Information
Spontaneous Potential: X
Natural Gamma: 
Single Point Resistivity: X
Extra: 

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2546.00-2543.00</td>
<td>0.0-3.0</td>
<td>SAND, BROWNISH-GRAY; UNCONSOLIDATED</td>
</tr>
<tr>
<td>2543.00-2461.00</td>
<td>3.0-85.0</td>
<td>SANDSTONE, REDDISH-BROWN, FINE; LOOSELY CEMENTED FROM 36 TO 39 FEET</td>
</tr>
<tr>
<td>2461.00-2424.00</td>
<td>85.0-122.0</td>
<td>SANDSTONE, REDDISH-BROWN; WITH SILTSTONE</td>
</tr>
<tr>
<td>2424.00-2408.00</td>
<td>122.0-138.0</td>
<td>SILTSTONE, GREEN</td>
</tr>
<tr>
<td>2408.00-2391.00</td>
<td>138.0-155.0</td>
<td>SILTSTONE, GRAY-WHITE, SHALEY; BENTONITIC</td>
</tr>
<tr>
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<td></td>
<td>** * * * **</td>
</tr>
</tbody>
</table>
Location Information

Legal Location: NW NW NW NW SEC. 32, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: 
Location: 040N-32W-32BBBB
Latitude: 43 24' 12"
Longitude: 101 08' 13"
Ground Surface Elevation (ft.): 2640

Project Information

Project: WATER RIGHTS
Drill Date: 10/03/1978
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: MT-78-1
Samples: 
Total Casing and Screen (ft.): 236.7
Well Maintenance Date: 06/14/1984
Geologist: J. GOODMAN
Geologist's Log: X
Driller: M. THOMPSON
Driller's Log: 
Total Drill Hole Depth (ft.): 290.0

Well Information

SDGS Well Name: 
Water Rights Well: MT-78B
Other Well Name: 
Casing Type: PVC
Screen Type: PVC, MFG.
Total Casing and Screen (ft.): 250.0
Casing Top Elevation:
Casing Diameter (in.): 2.0
Screen Length (ft.): 25.0
Casing Stick-up (ft.): 1.00

Geophysical Information

Spontaneous Potential: X
Natural Gamma: 
Single Point Resistivity: X
Extra: 
CASING WAS SLOTTED 20 FEET ABOVE THE SANDPOINT.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2640.00 - 2632.00</td>
<td>0.0 - 8.0</td>
<td>SAND, BROWN, FINE; UNCONSOLIDATED</td>
</tr>
<tr>
<td>2632.00 - 2490.00</td>
<td>8.0 - 150.0</td>
<td>SANDSTONE, REDDISH-BROWN; NEARLY A SILTSTONE; CEMENTED WITH SOME LOOSE AREAS 50 TO 56 AND 136 TO 140 FEET</td>
</tr>
<tr>
<td>2490.00 - 2435.00</td>
<td>150.0 - 205.0</td>
<td>SILTSTONE OR SANDSTONE, REDDISH-BROWN WITH WHITE; SLIGHTLY CEMENTED, BECOMING CLAYEY</td>
</tr>
<tr>
<td>2435.00 - 2350.00</td>
<td>205.0 - 290.0</td>
<td>SILTSTONE, REDDISH-BROWN; WITH WHITE AND GREEN BENTONITE LAST 10 FEET</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW SW SW SW SEC. 33, T. 040 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 040N-32W-33CCCC
Latitude: 43 23' 21"
Longitude: 101 07' 03"
Ground Surface Elevation (ft.): 2624 T

Project Information

Project: WATER RIGHTS
Drill Date: 09/29/1978
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: MT-78-4

Geologist: J. GOODMAN
Driller: M. THOMPSON
Driller's Log: X
Geologist's Log: 

Total Drill Hole Depth (ft.): 290.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2624.00-2623.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL, BLACK</td>
</tr>
<tr>
<td>2623.00-2589.00</td>
<td>1.0-35.0</td>
<td>SANDSTONE, REDDISH-BROWN, FINE; SLIGHTLY CEMENTED</td>
</tr>
<tr>
<td>2589.00-2577.00</td>
<td>35.0-47.0</td>
<td>SANDSTONE, REDDISH-BROWN, FINE; LOOSE</td>
</tr>
<tr>
<td>2577.00-2473.00</td>
<td>47.0-151.0</td>
<td>SANDSTONE, REDDISH-BROWN; SLIGHTLY CEMENTED, MORE SiltSTONE, ALSO LIGHTER COLOR LAYERS</td>
</tr>
<tr>
<td>2473.00-2359.00</td>
<td>151.0-265.0</td>
<td>SILTSTONE, REDDISH-BROWN, LIGHTER COLOR; SOME SANDSTONE</td>
</tr>
<tr>
<td>2359.00-2334.00</td>
<td>265.0-290.0</td>
<td>SILTSTONE, MULTICOLORED, BROWN, GREEN, REDDISH-BROWN, WHITE</td>
</tr>
</tbody>
</table>

* * * *
### Location Information

**Legal Location:** NW SW SEC. 02, T. 040 N., R. 33 W.
**County:** MELLETTE
**Basin:** WHITE
**Hydrologic Unit Code:** 10140202
**Land Owner:**

- **Location:** 040N-33W-02CB
- **Latitude:** 43° 28' 02"
- **Longitude:** 101° 11' 30"
- **Ground Surface Elevation (ft.):** 2500 T

### Project Information

**Project:**
**Drill Date:** 02/21/1985
**Company:** STATE LINE WELL SERVICE
**Drilling Method:** ROTARY
**Test Hole Number:**
**Samples:**

- **Geologist:**
- **Driller:**
- **Driller's Log:**
- **Geologist's Log:**
- **Total Drill Hole Depth (ft.):** 105.0

### Well Information

**SDGS Well Name:**
**Water Rights Well:**
**Other Well Name:** PRIVATE
**Casing Type:** PVC
**Screen Type:** PVC
**Total Casing and Screen (ft.):** 100.0

- **Casing Top Elevation:**
- **Casing Diameter (in.):** 4.0
- **Screen Length (ft.):** 40.0
- **Casing Stick-up (ft.):**

**Well Maintenance Date:**

### Geophysical Information

**Spontaneous Potential:**
**Natural Gamma:**
**Single Point Resistivity:**
**Extra:**

### Elevation (ft.)

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2500.00 - 2497.00</td>
<td>0.0 - 3.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>2497.00 - 2474.00</td>
<td>3.0 - 26.0</td>
<td>BUTTE ROCK</td>
</tr>
<tr>
<td>2474.00 - 2465.00</td>
<td>26.0 - 35.0</td>
<td>SAND, FINE</td>
</tr>
<tr>
<td>2465.00 - 2435.00</td>
<td>35.0 - 65.0</td>
<td>SANDSTONE, FINE; BUTTE ROCK LEDGES</td>
</tr>
<tr>
<td>2435.00 - 2420.00</td>
<td>65.0 - 80.0</td>
<td>SAND AND SANDSTONE</td>
</tr>
<tr>
<td>2420.00 - 2413.00</td>
<td>80.0 - 87.0</td>
<td>BUTTE ROCK LEDGE</td>
</tr>
<tr>
<td>2413.00 - 2400.00</td>
<td>87.0 - 100.0</td>
<td>SANDSTONE, COARSE; SAND</td>
</tr>
<tr>
<td>2400.00 - 2395.00</td>
<td>100.0 - 105.0</td>
<td>CLAY</td>
</tr>
</tbody>
</table>

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### Location Information

- **Legal Location:** NW NW NW NW SEC. 35, T. 040 N., R. 33 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140202
- **Land Owner:**
- **Ground Surface Elevation (ft.):** 2680 T
- **Location:** 040N-33W-35BBBB
- **Latitude:** 43° 24' 12"
- **Longitude:** 101° 11' 48"

### Project Information

- **Project:** MELLETTE-TODD CO. STUDY
- **Drill Date:** 09/09/1992
- **Company:** SDGS
- **Drilling Method:** ROTARY
- **Test Hole Number:** R2-92-44
- **Driller:** G. JENSEN
- **Geologist:** R. HAMMOND
- **Driller's Log:**
- **Geologist's Log:**
- **Total Drill Hole Depth (ft.):** 747.0

### Geophysical Information

- **Spontaneous Potential:** X
- **Natural Gamma:** X
- **Single Point Resistivity:** X
- **Extra:**

PLUGGED FROM TOTAL DEPTH TO SURFACE WITH HIGH SOLIDS BENTONITE PLUGGING FLUID, SETTLED TWO DAYS, FILLED WITH BENTONITE CRUMBLES TO AROUND 8 FEET, CEMENT FROM 8 FEET TO SURFACE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2680.00-2666.00</td>
<td>0.0-14.0</td>
<td>SILTSTONE, PALE-YELLOWISH-BROWN, VERY SANDY; NONCALCAREOUS, MODERATELY TO POORLY FISSILE</td>
</tr>
<tr>
<td>2666.00-2652.00</td>
<td>14.0-28.0</td>
<td>SILTSTONE, YELLOW-BROWN, SANDY; CALCAREOUS, MODERATELY FISSILE; MOTTLED WITH SOME PALE-OLIVE-GRAY BELOW 20 FEET</td>
</tr>
<tr>
<td>2652.00-2608.00</td>
<td>28.0-72.0</td>
<td>SILTSTONE, PALE-REDDISH-BROWN, CLAYEY; NONCALCAREOUS TO ABOUT 35 FEET, CALCAREOUS BELOW 35 FEET, POORLY FISSILE, GRADES TO GRAYISH-ORANGE MOTTLED WITH PALE-OLIVE BELOW 50 FEET</td>
</tr>
<tr>
<td>2608.00-2591.00</td>
<td>72.0-89.0</td>
<td>SILTSTONE, PALE-REDDISH-BROWN, SLIGHTLY SANDY, CLAYEY; SLIGHTLY CALCAREOUS, POORLY TO NONFISSILE, GRADES TO GRAYISH-ORANGE BY 80 FEET (ARIKAREE GROUP?)</td>
</tr>
<tr>
<td>2591.00-2524.00</td>
<td>89.0-156.0</td>
<td>SILTSTONE, PALE-OLIVE, SANDY; CALCAREOUS, CLAYEY AT 100 TO 110 FEET, SLIGHTLY SANDY BELOW 130 FEET (BRULE FORMATION?)</td>
</tr>
<tr>
<td>2524.00-2493.00</td>
<td>156.0-187.0</td>
<td>SILTSTONE, GRAYISH-ORANGE, SLIGHTLY SANDY, CLAYEY; SOME CALCAREOUS GRAYISH- GREEN SILTSTONE AT 160 TO 170 FEET; GRADES TO PALE-OLIVE SILTSTONE BELOW 170 FEET</td>
</tr>
<tr>
<td>2493.00-2478.00</td>
<td>187.0-202.0</td>
<td>CLAYSTONE, GRAYISH-ORANGE, VERY SILTY; NONCALCAREOUS, MASSIVE</td>
</tr>
</tbody>
</table>
2478.00 - 2375.00  202.0 - 305.0  Siltstone, pale-grayish-orange, sandy, slightly clayey; slightly calcareous, massive, very sandy at 216 to 230 feet, more calcareous at 250 to 290 feet

2375.00 - 2364.00  305.0 - 316.0  Siltstone, grayish-orange, clayey; non-calcareous, fissile

2364.00 - 2319.00  316.0 - 361.0  Siltstone, pale-yellowish-orange; slightly calcareous, poorly fissile to massive, graded to massive; pale-olive siltstones below 340 feet

2319.00 - 2164.00  361.0 - 516.0  Siltstone, pale-yellowish-orange, clayey; calcareous, massive, grades to pale-olive below 410 feet (Brule Formation?)

2164.00 - 2122.00  516.0 - 558.0  Siltstone, pale-yellowish-orange, clayey; calcareous, massive; olive mottled and olive clayey beds below 525 feet (Chadron Formation?)

2122.00 - 2070.00  558.0 - 610.0  Siltstone, pale-yellowish-orange, clayey; calcareous; noncalcareous 580 to 610 feet, massive, mottled with pale-olive below 570 feet

2070.00 - 1974.00  610.0 - 706.0  Siltstone, pale-yellowish-orange and pale-olive, clayey to very clayey; calcareous, poorly fissile; sand lens, medium to coarse, subrounded quartzose at 682 to 684 feet; several reddish-brown claystone layers at 671 to 703 feet

1974.00 - 1959.00  706.0 - 721.0  Claystone, pale-yellowish-brown; slightly calcareous, poorly fissile

1959.00 - 1933.00  721.0 - 747.0  Claystone, olive-black; slightly to moderately calcareous, poorly fissile, (Mobridge Member - Pierre Shale?)

* * * *
**Location Information**

- **Legal Location:** NW NW SEC. 36, T. 040 N., R. 33 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140202
- **Land Owner:** L. HICKS
- **Location:** 040N-33W-36BB
- **Latitude:** 43 24' 07"
- **Longitude:** 101 10' 30"
- **Ground Surface Elevation (ft.):** 2660 T

**Project Information**

- **Project:**
- **Drill Date:** 09/24/1984
- **Company:** STATE LINE WELL SERVICE
- **Drilling Method:** ROTARY
- **Test Hole Number:**
- **Samples:**
- **Geologist:**
- **Geologist's Log:**
- **Driller:**
- **Driller's Log:** X
- **Total Drill Hole Depth (ft.):** 120.0

**Well Information**

- **SDGS Well Name:**
- **Water Rights Well:**
- **Other Well Name:** PRIVATE
- **Casing Type:** PVC, SCH. 80
- **Screen Type:** PVC
- **Total Casing and Screen (ft.):** 120.0
- **Well Maintenance Date:**
- **Aquifer:**
- **Management Unit:**
- **Casing Top Elevation:**
- **Casing Diameter (in.):** 4.0
- **Screen Length (ft.):** 40.0
- **Casing Stick-up (ft.):**

**Geophysical Information**

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2660.00 - 2657.00</td>
<td>0.0 - 3.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>2657.00 - 2649.00</td>
<td>3.0 - 11.0</td>
<td>BUTTE ROCK</td>
</tr>
<tr>
<td>2649.00 - 2639.00</td>
<td>11.0 - 21.0</td>
<td>SAND</td>
</tr>
<tr>
<td>2639.00 - 2616.00</td>
<td>21.0 - 44.0</td>
<td>BUTTE ROCK</td>
</tr>
<tr>
<td>2616.00 - 2613.00</td>
<td>44.0 - 47.0</td>
<td>SAND; FIRM; SANDSTONE</td>
</tr>
<tr>
<td>2613.00 - 2580.00</td>
<td>47.0 - 80.0</td>
<td>BUTTE ROCK; WITH TRACE OF SAND</td>
</tr>
<tr>
<td>2580.00 - 2540.00</td>
<td>80.0 - 120.0</td>
<td>SAND, FINE TO MEDIUM; SOFT SANDSTONE WITH FIRM SANDSTONE LAYER</td>
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* * * *
Location Information

Legal Location: SE SE SE SE SEC. 11, T. 041 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/12/1993
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-93-34
Samples:

Geophysical Information

Spontaneous Potential: X
Natural Gamma: X

HOLE WAS PLUGGED WITH HIGH SOLIDS BENTONITE GROUT FROM 87 FEET TO 3 FEET AND CEMENT GROUT FROM 3 FEET TO 1 FOOT BELOW LAND SURFACE.

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>2048.00-2047.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL, REDDISH-BROWN; CALCAREOUS</td>
</tr>
<tr>
<td>2047.00-2041.00</td>
<td>1.0-7.0</td>
<td>SILT, PALE-RED, CLAYEY; POORLY CALCAREOUS</td>
</tr>
<tr>
<td>2041.00-2036.00</td>
<td>7.0-12.0</td>
<td>CLAY, DARK-YELLOWISH-BROWN TO DUSKY-BROWN IN THE JOINTS, SLIGHTLY SILTY, MASSIVE; CALCAREOUS (WEATHERED PIERRE SHALE)</td>
</tr>
<tr>
<td>2036.00-2028.00</td>
<td>12.0-20.0</td>
<td>CLAYSTONE, BROWNISH-GRAY, SILTY; HARD, SLIGHTLY CALCAREOUS</td>
</tr>
<tr>
<td>2028.00-2026.00</td>
<td>20.0-22.0</td>
<td>SILTSTONE, DARK-YELLOWISH-ORANGE, VERY CLAYEY; VERY CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2026.00-1993.00</td>
<td>22.0-55.0</td>
<td>CLAYSTONE, OLIVE-GRAY; GREASY, NON-CALCAREOUS TO POORLY CALCAREOUS, MASSIVE TO FISSILE, SOME FINE FORAMINIFERA TESTS BELOW 32 FEET</td>
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<tr>
<td>1993.00-1991.00</td>
<td>55.0-57.0</td>
<td>CLAYSTONE, BROWNISH-GRAY, VERY SILTY, MASSIVE; SOFT, VERY CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>1991.00-1961.00</td>
<td>57.0-87.0</td>
<td>CLAYSTONE, BROWNISH-BLACK, SLIGHTLY SILTY, FISSILE; SLIGHTLY CALCAREOUS, SOME RARE ARAGONITE DEBRIS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *

Geologic Log:

- TOPSOIL, REDDISH-BROWN; CALCAREOUS (WEATHERED PIERRE SHALE)
- Silt, pale-red, clayey; poorly calcareous
- Clay, dark-yellowish-brown to dusky-brown in the joints, slightly silty, massive; calcareous (weathered Pierre Shale)
- Claystone, brownish-gray, silty; hard, slightly calcareous
- Siltstone, dark-yellowish-orange, very clayey; very calcareous (Pierre Shale)
- Claystone, olive-gray; greasy, non-calcareous to poorly calcareous, massive to fissile, some fine foraminifera tests below 32 feet
- Claystone, brownish-gray, very silty, massive; soft, very calcareous (Pierre Shale)
- Claystone, brownish-black, slightly silty, fissile; slightly calcareous, some rare aragonite debris (Pierre Shale)
Location Information

Legal Location: NE NE NE SW SEC. 18, T. 041 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 041N-25W-18CAAA
Latitude: 43 11' 43"
Longitude: 100 20' 25"
Ground Surface Elevation (ft.): 22

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/10/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-31
Samples: 
Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log: 
Total Drill Hole Depth (ft.): 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>22.00 - 20.00</td>
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<td>TOPSOIL, BROWN</td>
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<tr>
<td>20.00 - 12.00</td>
<td>2.0 - 10.0</td>
<td>SILT, BROWN</td>
</tr>
<tr>
<td>12.00 - 0.00</td>
<td>10.0 - 22.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
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* * * *
**Location Information**

- Legal Location: SW SW SW NW SEC. 09, T. 041 N., R. 26 W.
- County: MELLETTE
- Basin: WHITE
- Hydrologic Unit Code: 10140203
- Land Owner:

  - Location: 041N-26W-09BCCC
  - Latitude: 43 32' 41"
  - Longitude: 100 25' 49"
  - Ground Surface Elevation (ft.): 2287 T

**Project Information**

- Project: MELLETTE-TODD CO. STUDY
- Drill Date: 07/10/1996
- Company: SDGS
- Drilling Method: ROTARY
- Test Hole Number: R2-96-30
- Samples:

  - Driller: G. JENSEN
  - Geologist: R. HAMMOND
  - Geologist's Log: X
  - Driller's Log:
  - Total Drill Hole Depth (ft.): 62.0

**Geophysical Information**

- Spontaneous Potential:
- Natural Gamma:
- Single Point Resistivity:
- Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2287.00 - 2285.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, BROWN</td>
</tr>
<tr>
<td>2285.00 - 2281.00</td>
<td>2.0 - 6.0</td>
<td>SILT, BROWN</td>
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<tr>
<td>2281.00 - 2225.00</td>
<td>6.0 - 62.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
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* * * *
Location Information

Legal Location: NE NE SE NE SEC. 31, T. 041 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 041N-26W-31ADAA
Latitude: 43° 29' 22"
Longitude: 100° 27' 00"
Ground Surface Elevation (ft.): 2132 T

Extra:

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/19/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-21
Samples:

Driller: G. DUCHOSSOIS
Geologist: M. JARRETT
Geologist's Log: X
Driller's Log: X
Total Drill Hole Depth (ft.): 28.0

Geophysical Information

Spontaneous Potential: Extra:
Natural Gamma: Single Point Resistivity:

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<th>Description</th>
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<tr>
<td>2132.00-2129.00</td>
<td>0.0-3.0</td>
<td>TOPSOIL, BLACK</td>
</tr>
<tr>
<td>2129.00-2114.00</td>
<td>3.0-18.0</td>
<td>CLAY, YELLOWISH-BROWN, VERY SILTY; DRY, CALCAREOUS</td>
</tr>
<tr>
<td>2114.00-2109.00</td>
<td>18.0-23.0</td>
<td>CLAY, YELLOWISH-BROWN, SILTY; SATURATED, SLIGHTLY CALCAREOUS</td>
</tr>
<tr>
<td>2109.00-2104.00</td>
<td>23.0-28.0</td>
<td>CLAY, DARK-GRAY WITH A LITTLE MEDIUM-YELLOW-BROWN; SOME LIGHT-GRAY BENTONITE, CALCAREOUS (PIERRE SHALE)</td>
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* * * *
Location Information

Legal Location: NW SW NW NW SEC. 31, T. 041 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 041N-26W-31BBCB
Latitude: 43 29' 29"
Longitude: 100 28' 11"
Ground Surface Elevation (ft.): 2149 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/20/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-22
Samples:

Geologist: M. JARRETT
Driller: G. DUCHOSSOIS
Driller's Log:
Geologist's Log: X

Total Drill Hole Depth (ft.): 23.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2149.00-2147.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, DARK-BROWN</td>
</tr>
<tr>
<td>2147.00-2142.00</td>
<td>2.0-7.0</td>
<td>SILT, YELLOW-BROWN, CLAYEY; WITH FINE SAND, DRY, CALCAREOUS</td>
</tr>
<tr>
<td>2142.00-2135.00</td>
<td>7.0-14.0</td>
<td>CLAY, YELLOW-BROWN; CALCAREOUS</td>
</tr>
<tr>
<td>2135.00-2129.00</td>
<td>14.0-20.0</td>
<td>CLAY, GRAY WITH SOME YELLOWISH-BROWN; CALCAREOUS (WEATHERED SHALE)</td>
</tr>
<tr>
<td>2129.00-2126.00</td>
<td>20.0-23.0</td>
<td>CLAYSTONE, DARK-GRAY; A LITTLE LIGHT-GRAY BENTONITE, CALCAREOUS</td>
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* * * *
Location Information

Legal Location: NE NW NE NW SEC. 14, T. 041 N., R. 27 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 041N-27W-14BABA
Latitude: 43° 32' 13"
Longitude: 100° 30' 16"
Ground Surface Elevation (ft.): 2159 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/10/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-29

Geologic Information:

Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log: 
Total Drill Hole Depth (ft.): 42.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>2159.00-2157.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, BROWN</td>
</tr>
<tr>
<td>2157.00-2153.00</td>
<td>2.0-6.0</td>
<td>SAND</td>
</tr>
<tr>
<td>2153.00-2143.00</td>
<td>6.0-16.0</td>
<td>SILT, BROWN</td>
</tr>
<tr>
<td>2143.00-2117.00</td>
<td>16.0-42.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
<tr>
<td></td>
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<td>* * * *</td>
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LEGAL LOCATION: 041N-27W-14BABA

041N27W14BABA  Page 1  01/31/2005
Location Information

Legal Location: NW SW SEC. 25, T. 041 N., R. 27 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: C
Location: 041N-27W-25CB
Latitude: 43 29' 57"
Longitude: 100 29' 13"
Ground Surface Elevation (ft.): 2150 T

Project Information

Project:
Drill Date: 02/01/1930
Company: NORBECK DRILLING
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 1834.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: RAILROAD
Casing Type: UNKNOWN
Screen Type:
Total Casing and Screen (ft.): 1795.0
Well Maintenance Date:
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

CASING DIAMETER: 769 FEET OF 8-INCH, 411 FEET OF 6-INCH, 400 FEET OF 4.5-INCH, 173 FEET OF 3-INCH, 42 FEET OF 2.5-INCH.

<table>
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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>2150.00 - 2019.50</td>
<td>0.0 - 130.5</td>
<td>CLAY</td>
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<tr>
<td>2019.50 - 1632.50</td>
<td>130.5 - 517.5</td>
<td>SHALE, BLUE</td>
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<tr>
<td>1632.50 - 1532.50</td>
<td>517.5 - 617.5</td>
<td>SHALE; SOFT</td>
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<tr>
<td>1532.50 - 649.50</td>
<td>617.5 - 1500.5</td>
<td>SHALE, BLUE; WITH FREQUENT STREAKS OF VERY HARD SHALE</td>
</tr>
<tr>
<td>649.50 - 619.50</td>
<td>1500.5 - 1530.5</td>
<td>LEAK</td>
</tr>
<tr>
<td>619.50 - 405.50</td>
<td>1530.5 - 1744.5</td>
<td>SHALE, BLUE; WITH FREQUENT HARD STREAKS</td>
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<tr>
<td>405.50 - 316.00</td>
<td>1744.5 - 1834.0</td>
<td>SANDSTONE</td>
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* * * *
**Location Information**

Legal Location: NW SE SEC. 33, T. 041 N., R. 27 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: E. MEDEARIS

Location: 041N-27W-33DB
Latitude: 43 29' 04"
Longitude: 100 32' 14"
Ground Surface Elevation (ft.): 2269 T

**Project Information**

Project:
Drill Date: 10/01/1979
Company: JURACEK WELL BORING
Drilling Method: BORED
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 60.0

**Well Information**

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type: CONCRETE
Screen Type:
Total Casing and Screen (ft.): 60.0
Well Maintenance Date:

Aquifer:
Management Unit:
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

**Elevation (ft.)** | **Depth (ft.)** | **Description**
--- | --- | ---
2269.00-2265.00 | 0.0-4.0 | TOPSOIL
2265.00-2243.00 | 4.0-26.0 | SAND AND CLAY
2243.00-2239.00 | 26.0-30.0 | CLAY AND GRAVEL AND WATER
2239.00-2237.00 | 30.0-32.0 | GRAVEL AND WATER
2237.00-2222.00 | 32.0-47.0 | CLAY AND GRAVEL, BLACK CLAY
2222.00-2209.00 | 47.0-60.0 | SHALE

* * * *
**Location Information**

Legal Location: NE NW NW NW SEC. 07, T. 041 N., R. 28 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140203  
Land Owner:  
Latitude: 43° 33' 02"  
Longitude: 100° 42' 30"  
Ground Surface Elevation (ft.): 2198 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY  
Drill Date: 07/21/1993  
Company: SDGS  
Drilling Method: AUGER  
Test Hole Number: A1-93-33  
Samples:  
Geologist: M. JARRETT  
Geologist's Log: X  
Driller: G. DUCHOSOIS  
Driller's Log:  
Total Drill Hole Depth (ft.): 18.0

**Geophysical Information**

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

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<th>Description</th>
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<td>TOPSOIL, BROWN</td>
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<tr>
<td>2197.00-2195.00</td>
<td>1.0-3.0</td>
<td>SAND, YELLOWISH-BROWN, FINE TO MEDIUM, VERY CLAYEY</td>
</tr>
<tr>
<td>2195.00-2187.00</td>
<td>3.0-11.0</td>
<td>SAND, FINE TO MEDIUM; DRY</td>
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<td>2187.00-2183.00</td>
<td>11.0-15.0</td>
<td>CLAYSTONE, BROWN; WEATHERED (PIERRE SHALE)</td>
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<tr>
<td>2183.00-2180.00</td>
<td>15.0-18.0</td>
<td>CLAYSTONE, BROWN AND GRAY; WEATHERED (PIERRE SHALE)</td>
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* * * *
**Location Information**

- **Legal Location:** SW SW SW SEC. 03, T. 041 N., R. 29 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140203
- **Land Owner:**

**Project Information**

- **Project:** USGS
- **Drill Date:** 08/12/1966
- **Company:**
- **Drilling Method:**
- **Test Hole Number:**
- **Samples:**

**Geophysical Information**

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

DEPT TO WATER: 15 FEET ESTIMATED 08-12-1966.

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<th>Description</th>
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<td>0.0-3.0</td>
<td>TILL</td>
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<tr>
<td>1982.00-1976.00</td>
<td>3.0-9.0</td>
<td>SAND, TAN, FINE</td>
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<tr>
<td>1976.00-1965.00</td>
<td>9.0-20.0</td>
<td>SAND, BROWN, MEDIUM; CLEAN</td>
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<tr>
<td>1965.00-1961.00</td>
<td>20.0-24.0</td>
<td>SAND, GRAY, MEDIUM, SILTY; DARK-GRAY SHALE AT 24 FEET</td>
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</tbody>
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Location Information

Legal Location: NW NE NE NE SEC. 10, T. 041 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 041N-29W-10AAAB
Latitude: 43 33' 01"
Longitude: 100 45' 03"
Ground Surface Elevation (ft.): 2155 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/26/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-31

Geologist: M. JARRETT
Geologist's Log: X
Driller: J. REZAC
Driller's Log:
Total Drill Hole Depth (ft.): 48.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>2155.00-2153.50</td>
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<td>TOPSOIL, TAN, SANDY</td>
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<tr>
<td>2153.50-2126.00</td>
<td>1.5-29.0</td>
<td>SAND, LIGHT-BROWN, FINE, WELL-SORTED; HIGHLY QUARTZOSE, DRY</td>
</tr>
<tr>
<td>2126.00-2107.00</td>
<td>29.0-48.0</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; SOME PEBBLE GRAVEL TO 1.5-INCH DIAMETER, SATURATED AT 45 FEET</td>
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* * * *
Location Information

Legal Location: NW NW NE NE SEC. 10, T. 041 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/26/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-32
Samples:

Spontaneous Potential: 
Natural Gamma: 

Geophysical Information

Spontaneous Potential: Single Point Resistivity: 
Natural Gamma: Extra: 

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2125.00-2123.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, DARK-BROWN</td>
</tr>
<tr>
<td>2123.00-2109.00</td>
<td>2.0 - 16.0</td>
<td>SAND AND GRAVEL, YELLOWISH-BROWN, FINE SAND TO 2-INCH GRAVEL; DRY</td>
</tr>
<tr>
<td>2109.00-2104.00</td>
<td>16.0 - 21.0</td>
<td>SAND, YELLOWISH-BROWN, FINE TO MEDIUM, CLAYEY FROM 18 TO 21 FEET; DRY</td>
</tr>
<tr>
<td>2104.00-2100.00</td>
<td>21.0 - 25.0</td>
<td>GRAVEL, DARK-GRAY, FINE TO 1-INCH DIAMETER SHALE PEBBLES</td>
</tr>
<tr>
<td>2100.00-2097.00</td>
<td>25.0 - 28.0</td>
<td>CLAYSTONE, DARK-GRAY; DAMP (PIERRE SHALE)</td>
</tr>
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</table>

* * * *
Location Information

Legal Location: NE NW SEC. 14, T. 041 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: MELLETTE

Location: 041N-29W-14BA
Latitude: 43' 32" 03"
Longitude: 100' 44" 30"
Ground Surface Elevation (ft.): 2001 T

Project Information

Project:
Drill Date: 04/01/1977
Company: MINNESOTA DRILLERS
Drilling Method: X
Test Hole Number: 10140204
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 45.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

Elevation (ft.) | Depth (ft.) | Description
2001.00 - 1986.00 | 0.0 - 15.0 | ROCK AND SAND; GUMBO AT 15 FEET
1986.00 - 1956.00 | 15.0 - 45.0 | GUMBO

* * * *
Location Information

Legal Location: SE NE SW SE SEC. 32, T. 041 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: ROSEBUD HOUSING

Location: 041N-29W-32DCAD
Latitude: 43° 28' 48"
Longitude: 100° 47' 40"
Ground Surface Elevation (ft.): 2310 T

Project Information

Project: SDGS Well Name:
Drill Date: 10/01/1979
Company: GROOMS DRILLING
Drilling Method: BORED
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 60.0

Well Information

SDGS Well Name: PRIVATE
Water Rights Well: AQUIFER
Other Well Name: PRIVATE
Casing Type: CONCRETE
Casing Diameter (in.):
Screen Type:
Screen Length (ft.):
Total Casing and Screen (ft.): 60.0
Casing Stick-up (ft.):
Well Maintenance Date:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2310.00 - 2307.00</td>
<td>0.0 - 3.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>2307.00 - 2270.00</td>
<td>3.0 - 40.0</td>
<td>SAND AND MAGNESIA</td>
</tr>
<tr>
<td>2270.00 - 2250.00</td>
<td>40.0 - 60.0</td>
<td>SHALE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* * * *</td>
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# Location Information

<table>
<thead>
<tr>
<th>Legal Location:</th>
<th>NE SE SEC. 07, T. 041 N., R. 30 W.</th>
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</thead>
<tbody>
<tr>
<td>County:</td>
<td>MELLETTE</td>
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<tr>
<td>Basin:</td>
<td>WHITE</td>
</tr>
<tr>
<td>Hydrologic Unit Code:</td>
<td>10140203</td>
</tr>
<tr>
<td>Land Owner:</td>
<td>E. NEILSEN</td>
</tr>
<tr>
<td>Location:</td>
<td>041N-30W-07DA</td>
</tr>
<tr>
<td>Latitude:</td>
<td>43 32' 30&quot;</td>
</tr>
<tr>
<td>Longitude:</td>
<td>100 55' 55&quot;</td>
</tr>
<tr>
<td>Ground Surface Elevation (ft.):</td>
<td>2178 T</td>
</tr>
</tbody>
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# Project Information

<table>
<thead>
<tr>
<th>SDGS Well Name:</th>
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<tbody>
<tr>
<td>Water Rights Well:</td>
<td>PRIVATE</td>
</tr>
<tr>
<td>Other Well Name:</td>
<td>PRIVATE</td>
</tr>
<tr>
<td>Casing Type:</td>
<td>CONCRETE</td>
</tr>
<tr>
<td>Screen Type:</td>
<td>CONCRETE</td>
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<td>Total Casing and Screen (ft.):</td>
<td>32.0</td>
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<td>Well Maintenance Date:</td>
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# Well Information

<table>
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<tr>
<th>Spontaneous Potential:</th>
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<tbody>
<tr>
<td>Natural Gamma:</td>
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</tr>
<tr>
<td>Single Point Resistivity:</td>
<td>Extra:</td>
</tr>
</tbody>
</table>

# Geophysical Information

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2178.00-2176.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL</td>
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<tr>
<td>2176.00-2158.00</td>
<td>2.0-20.0</td>
<td>MAGNESIA</td>
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<tr>
<td>2158.00-2151.00</td>
<td>20.0-27.0</td>
<td>GRAVEL</td>
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<tr>
<td>2151.00-2098.00</td>
<td>27.0-80.0</td>
<td>SHALE</td>
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* * * *

041N30W07DA  Page 1  01/31/2005
**Location Information**

- **Legal Location:** NE NW SEC. 11, T. 041 N., R. 30 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140203
- **Land Owner:** L. KROGMAN
- **Location:** 041N-30W-11BA
- **Latitude:** 43 52' 15"
- **Longitude:** 100 51' 42"
- **Ground Surface Elevation (ft.):** 2083 T

**Project Information**

- **Project:** JURACEK WELL BORING
- **Drill Date:** 12/19/1979
- **Company:** JURACEK WELL BORING
- **Drilling Method:** BORED
- **Test Hole Number:**
- **Samples:**
- **Driller:** L. KROGMAN
- **Driller's Log:** X
- **Total Drill Hole Depth (ft.):** 44.0

**Well Information**

- **SDGS Well Name:**
- **Water Rights Well:**
- **Other Well Name:** PRIVATE
- **Casing Type:** CONCRETE
- **Screen Type:**
- **Total Casing and Screen (ft.):**
- **Well Maintenance Date:**
- **Casing Top Elevation:**
- **Casing Diameter (in.):**
- **Screen Length (ft.):**
- **Casing Stick-up (ft.):**

**Geophysical Information**

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2083.00 - 2079.00</td>
<td>0.0 - 4.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>2079.00 - 2065.00</td>
<td>4.0 - 18.0</td>
<td>SAND AND CLAY</td>
</tr>
<tr>
<td>2065.00 - 2055.00</td>
<td>18.0 - 28.0</td>
<td>SAND AND WATER</td>
</tr>
<tr>
<td>2055.00 - 2039.00</td>
<td>28.0 - 44.0</td>
<td>SHALE(?)</td>
</tr>
</tbody>
</table>

* * * *
**Location Information**

- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140203
- **Land Owner:**
- **Location:** 041N-31W-05DDAD
- **Latitude:** 43 33' 03"
- **Longitude:** 101 01' 13"
- **Ground Surface Elevation (ft.):** 2313 T

**Project Information**

- **Project:** MELLETTE-TODD CO. STUDY
- **Drill Date:** 06/24/1996
- **Company:** SDGS
- **Drilling Method:** ROTARY
- **Test Hole Number:** R2-96-17
- **Samples:**
- **Driller:** G. JENSEN
- **Geologist:** R. HAMMOND
- **Geologist's Log:** X
- **Driller's Log:**
- **Total Drill Hole Depth (ft.):** 51.0

**Geophysical Information**

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2313.00 - 2303.00</td>
<td>0.0 - 10.0</td>
<td>CLAYSTONE, PALE-BROWN, SILTY; SOME FINE SAND; SLIGHTLY CALCAREOUS, MASSIVE (BRULE FORMATION?)</td>
</tr>
<tr>
<td>2303.00 - 2272.00</td>
<td>10.0 - 41.0</td>
<td>CLAYSTONE, DARK-YELLOWISH-ORANGE GRADING DOWNWARD TO OLIVE-GRAY, SILTY; MOTTLED; NONCALCAREOUS (CHADRON FORMATION?)</td>
</tr>
<tr>
<td>2272.00 - 2251.00</td>
<td>41.0 - 62.0</td>
<td>CLAYSTONE, BLACK; SLIGHTLY CALCAREOUS TO CALCAREOUS; POORLY FISSLILE (PIERRE SHALE)</td>
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**Legal Location:** SE NE SE SE SEC. 05, T. 041 N., R. 31 W.
Location Information

Legal Location: SE NE SEC. 10, T. 041 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: J. SIEVEKE
Location: 041N-32W-10AD
Latitude: 43 32' 42"
Longitude: 100 52' 17"
Ground Surface Elevation (ft.): 2066 T

Project Information

Project:
Drill Date: 06/24/1986
Company: BABBY WELL DRILLING
Drilling Method: ROTARY
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Total Casing and Screen (ft.): 100.0
Ground Surface Elevation (ft.): 2066 T

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type: PVC
Screen Type: PVC, MFG. AND HM.
Total Casing and Screen (ft.): 100.0
Well Maintenance Date:
Casing Top Elevation:
Casing Diameter (in.): 4.0
Screen Length (ft.): 20.0
Casing Stick-up (ft.): 

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2066.00 - 1966.00</td>
<td>0.0 - 100.0</td>
<td>CLAY, RED</td>
</tr>
<tr>
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</table>
**Location Information**

Legal Location: SE NE NE NW SEC. 31, T. 041 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: EAGLE BEAR
Location: 041N-32W-31BAAD
Latitude: 43° 29' 27"
Longitude: 100° 56' 04"
Ground Surface Elevation (ft.): 2420 T

**Project Information**

Project:
Drill Date: 05/10/1977
Company: ABERLE WELL COMPANY
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 57.0

**Well Information**

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type: CONCRETE
Screen Type:
Total Casing and Screen (ft.): 48.0
Well Maintenance Date:
Casing Top Elevation:
Casing Diameter (in.): 20.0
Screen Length (ft.):
Casing Stick-up (ft.):

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

CASING FROM 9 TO 57 FEET.

**Elevation (ft.)** | **Depth (ft.)** | **Description**
--- | --- | ---
2420.00 - 2419.00 | 0.0 - 1.0 | TOPSOIL
2419.00 - 2414.00 | 1.0 - 6.0 | CLAY, BROWN
2414.00 - 2363.00 | 6.0 - 57.0 | CLAY, BROWN; MIXED WITH SHALE

* * *
Location Information

Legal Location: SE NE NE NW SEC. 31, T. 041 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: EAGLE BEAR

Location: 041N-32W-31BAAD 1
Latitude: 43 29' 27"
Longitude: 100 56' 04"
Ground Surface Elevation (ft.): 2420 T

Project Information

Project:
Drill Date: 05/06/1977
Company: ABERLE WELL COMPANY
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 64.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2420.00 - 2419.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>2419.00 - 2374.00</td>
<td>1.0 - 46.0</td>
<td>SHALE, BROWN</td>
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<tr>
<td>2374.00 - 2370.00</td>
<td>46.0 - 50.0</td>
<td>SAND, BLUE; MIXED SHALE</td>
</tr>
<tr>
<td>2370.00 - 2356.00</td>
<td>50.0 - 64.0</td>
<td>SHALE; DRY</td>
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</tbody>
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* * * *
Location Information

Legal Location: SE NE NE NW SEC. 31, T. 041 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: EAGLE BEAR
Location: 041N-32W-31BAAD 2
Latitude: 43 29' 27"
Longitude: 100 56' 04"
Ground Surface Elevation (ft.): 2420

Project Information

Project:
Drill Date: 05/09/1977
Company: ABERLE WELL COMPANY
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 50.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Depth (ft.)</th>
<th>Description</th>
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<td>2420.00 - 2419.00</td>
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<td>TOPSOIL</td>
</tr>
<tr>
<td>2419.00 - 2370.00</td>
<td>1.0 - 50.0</td>
<td>SHALE, BLUE</td>
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* * * *
Location Information

Legal Location: SE SE NW NE SEC. 11, T. 041 N., R. 33 W.
County: MELLETE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: 

Location: 041N-33W-11ABDD
Latitude: 43 32' 48"
Longitude: 101 12' 15"
Ground Surface Elevation (ft.): 2441 T

Project Information

Project: MELLETE-TODD CO. STUDY
Drill Date: 09/01/1992
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-92-37

Geologist: M. JARRETT/R. HAMMOND
Driller: D. IVERSO
Driller's Log: 
Geologist's Log: X
Total Drill Hole Depth (ft.): 307.0

Samples:

Geophysical Information

Spontaneous Potential: X
Natural Gamma: X
Single Point Resistivity: X
Extra:

PLUGGED FROM TOTAL DEPTH TO SURFACE WITH HIGH SOLIDS BENTONITE PLUGGING FLUID, SETTLED TWO DAYS, FILLED WITH BENTONITE CRUMBLES TO AROUND 8 FEET, CEMENT FROM 8 FEET TO SURFACE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
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<th>Description</th>
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<tbody>
<tr>
<td>2441.00-2440.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL, BROWN, VERY SILTY AND SANDY</td>
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<tr>
<td>2440.00-2420.00</td>
<td>1.0-21.0</td>
<td>SAND, YELLOWISH-BROWN, SILTY; CALCAREOUS, BECOMES PROGRESSIVELY SILTIER WITH DEPTH TO 21 FEET, HARD CEMENT LAYER AT 10 FEET, MASSIVE</td>
</tr>
<tr>
<td>2420.00-2371.00</td>
<td>21.0-70.0</td>
<td>SILTSTONE, YELLOWISH-BROWN, SLIGHTLY CLAYEY; CALCAREOUS, MASSIVE TO POORLY BEDDED CLAYSTONE LENS AT 25 TO 27 FEET; NONCALCAREOUS BY 50 FEET, SAND LENS AT 48 TO 50 FEET; SOME FAINT BEDDING, AND MOTTLED LIGHT-OLIVE-GRAY AT 50 TO 60 FEET</td>
</tr>
<tr>
<td>2371.00-2362.00</td>
<td>70.0-79.0</td>
<td>CLAYSTONE, OLIVE-GRAY, SLIGHTLY SILTY; NONCALCAREOUS, MASSIVE</td>
</tr>
<tr>
<td>2362.00-2321.00</td>
<td>79.0-120.0</td>
<td>CLAYSTONE, DARK-YELLOWISH-BROWN; NONCALCAREOUS, MASSIVE; BECOMING AN OLIVE-GRAY CLAYEY SILTSTONE BY 90 FEET; FISSILE BELOW 100 FEET; PALE-YELLOWISH-BROWN BY 120 FEET</td>
</tr>
<tr>
<td>2321.00-2306.00</td>
<td>120.0-135.0</td>
<td>SILTSTONE, BLUSH-WHITE TO LIGHT-OLIVE-GRAY; VERY CALCAREOUS; SMOOTH GAMMA SIGNATURE (LACUSTRINE?)</td>
</tr>
<tr>
<td>2306.00-2268.00</td>
<td>135.0-173.0</td>
<td>SILTSTONE, PALE-YELLOWISH-BROWN; NONCALCAREOUS, GRADING TO LIGHT-OLIVE-GRAY AND CLAYEY TO 150 FEET; FISSILE</td>
</tr>
</tbody>
</table>
2268.00 - 2261.00  173.0 - 180.0  SILTSTONE, PALE-YELLOWISH-BROWN AND LIGHT-OLIVE-GRAY MOTTLING; NONCALCAREOUS, SLIGHTLY FISSILE

2261.00 - 2257.00  180.0 - 184.0  CLAYSTONE, LIGHT-GREENISH-GRAY, SLIGHTLY SILTY; BENTONITIC(?) ASH LAYER(?)

2257.00 - 2218.00  184.0 - 253.0  CLAYSTONE, YELLOWISH-GRAY, SILTY; NONCALCAREOUS, FISSILE TO MASSIVE, GRADES TO LIGHT-OLIVE-GRAY BY 210 FEET; BECOMES GRADUALLY SILTIER TO 250 FEET; GRADES TO LIGHT-GRAY BELOW 220 FEET, THIN SAND STRINGER AT 249 TO 250 FEET,

2188.00 - 2184.00  253.0 - 257.0  SAND, CLEAR TO WHITE, VERY COARSE TO FINE, WELL-ROUNDED; QUARTZOSE, SOME MINOR DARK SHALE(?) CLASTS

2184.00 - 2167.00  257.0 - 274.0  CLAYSTONE, OLIVE-BROWN, MOTTLED WITH YELLOWS, REDS, AND GRAYS, SILTY; SLIGHTLY FISSILE, NONCALCAREOUS; WEATHERED (PIERRE SHALE)

2167.00 - 2134.00  274.0 - 307.0  SHALE, BROWNISH-BLACK, SLIGHTLY SILTY; SLIGHTLY CALCAREOUS, FAIR TO POORLY FISSILE, THIN BENTONITIC LENS AT 294 FEET (MOBRIDGE MEMBER - PIERRE SHALE?)

* * * *
Location Information

Legal Location: SE SE NW SE SEC. 23, T. 041 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Longitude: 101 12' 16"
Latitude: 43 30' 35"

Ground Surface Elevation (ft.): 2487 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 09/02/1992
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-92-38
Samples:

Geologist: M. JARRETT/R. HAMMOND
Geologist's Log: X
Driller: D. IVerson
Driller's Log: Total Drill Hole Depth (ft.): 352.0

Geophysical Information

Spontaneous Potential: X
Natural Gamma: X
Extra: X

PLUGGED FROM TOTAL DEPTH TO SURFACE WITH HIGH SOLIDS BENTONITE PLUGGING FLUID, SETTLED TWO DAYS, FILLED WITH BENTONITE CRUMBLES TO AROUND 8 FEET, CEMENT FROM 8 FEET TO SURFACE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
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<th>Description</th>
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<tbody>
<tr>
<td>2487.00 - 2486.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL, BROWN, VERY SILTY</td>
</tr>
<tr>
<td>2486.00 - 2460.00</td>
<td>1.0 - 27.0</td>
<td>SILTSTONE, DARK-YELLOWISH-BROWN, SLIGHTLY CLAYEY; SLIGHTLY CALCAREOUS, MASSIVE, FINE QUARTZ SAND LENS AT 27 FEET, SOMEWHAT MORE CLAYEY FROM 20 TO 27 FEET</td>
</tr>
<tr>
<td>2460.00 - 2456.00</td>
<td>27.0 - 31.0</td>
<td>SILTSTONE, DUSKY-YELLOW-BROWN; SLIGHTLY BENTONITIC, SLIGHTLY FISSILE</td>
</tr>
<tr>
<td>2456.00 - 2443.00</td>
<td>31.0 - 44.0</td>
<td>SILTSTONE, REDDISH-BROWN; SLIGHTLY BENTONITIC, NONCALCAREOUS, SLIGHTLY FISSILE</td>
</tr>
<tr>
<td>2443.00 - 2429.00</td>
<td>44.0 - 58.0</td>
<td>SILTSTONE, PALE-YELLOWISH-BROWN, SLIGHTLY CLAYEY; SLIGHTLY CALCAREOUS, SLIGHTLY TO MODERATELY FISSILE</td>
</tr>
<tr>
<td>2429.00 - 2407.00</td>
<td>58.0 - 80.0</td>
<td>SILTSTONE, YELLOWISH-BROWN, CLAYEY; MODERATELY FISSILE, NONCALCAREOUS, GRADES TO SILTSTONE, PALE-YELLOWISH- BROWN, SLIGHTLY CALCAREOUS, SLIGHTLY CLAYEY, BENTONITIC, MASSIVE TO POORLY FISSILE AT 60 TO 70 FEET</td>
</tr>
<tr>
<td>2407.00 - 2390.00</td>
<td>80.0 - 97.0</td>
<td>SILTSTONE, LIGHT-OLIVE-GRAY, SLIGHTLY CLAYEY; CALCAREOUS, MODERATELY FISSILE</td>
</tr>
<tr>
<td>2390.00 - 2377.00</td>
<td>97.0 - 110.0</td>
<td>SILTSTONE, GREENISH-GRAY, MOTTLED WITH LIGHT-OLIVE; NONCALCAREOUS, MODERATELY FISSILE</td>
</tr>
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</table>
2377.00-2359.00  110.0-128.0  Siltstone, yellowish-brown, slightly clayey; calcareous, very poorly fissile to massive, grades to siltstone, light-olive-gray, noncalcareous, poorly fissile at 110 to 120 feet

2359.00-2333.00  128.0-154.0  Siltstone, medium-yellow-brown; noncalcareous, grades to an olive-gray below 130 feet, slightly clayey and calcareous

2333.00-2300.00  154.0-187.0  Siltstone, yellow-brown, slightly clayey; noncalcareous, grading to a dark-yellow-brown, calcareous siltstone below 160 feet

2300.00-2275.00  187.0-212.0  Siltstone, dark-yellowish-brown grading to a light-olive-gray below 200 feet, clayey; massive to poorly fissile, very calcareous

2275.00-2227.00  212.0-260.0  Siltstone, dark-yellowish-brown, clayey; very calcareous, some small calcareous nodules and pebbles, grades to greenish-gray below 220 feet, very calcareous, becomes less clayey with depth

2227.00-2190.00  260.0-297.0  Siltstone, light-olive-gray; bentonitic, calcareous, massive, some reddish oxidized materials, grades downward to olive-gray, noncalcareous, gleyed claystone at 268 to 277 feet

2190.00-2168.00  297.0-319.0  Siltstone, greenish-gray, very sandy; noncalcareous, massive, few claystone seams

2168.00-2162.00  319.0-325.0  Claystone, light-olive-brown; non-calcareous, poorly fissile, gleyed, some white to light-gray bentonite, weathered (pierre shale)

2162.00-2135.00  325.0-352.0  Shale, brownish-black, silty; calcareous, poorly fissile, some white bentonites (mobridge member - pierre shale)

* * * *
Location Information

Legal Location: SE SE SW SEC. 25, T. 041 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: C. DUNKEN DURHAM
Location: 041N-33W-25CDD
Latitude: 43 29' 32"
Longitude: 101 11' 25"
Ground Surface Elevation (ft.): 2480 T

Project Information

Project:
Drill Date: 05/06/1977
Company: ABERLE WELL COMPANY
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 34.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type: CONCRETE
Screen Type:
Total Casing and Screen (ft.): 26.0
Well Maintenance Date:

Aquifer:
Management Unit:
Casing Top Elevation:
Casing Diameter (in.): 20.0
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

CASING FROM 8 TO 34 FEET.

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>2480.00-2479.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>2479.00-2470.00</td>
<td>1.0-10.0</td>
<td>CLAY, BROWN</td>
</tr>
<tr>
<td>2470.00-2464.00</td>
<td>10.0-16.0</td>
<td>CLAY, BROWN; WITH SAND</td>
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<tr>
<td>2464.00-2446.00</td>
<td>16.0-34.0</td>
<td>GRAVEL</td>
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* * * *
Location Information

Legal Location: SW SW SEC. 32, T. 042 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: G. ANDERSON

Location: 042N-25W-32CC
Latitude: 43° 34' 02"
Longitude: 100° 19' 36"
Ground Surface Elevation (ft.): 2070

Project Information

Project:
Drill Date:
Company: INDEPENDENT DRILLING
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 2690.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type:
Screen Type:
Total Casing and Screen (ft.):
Well Maintenance Date:

Aquifer:
Management Unit:
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Description</th>
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<td>2070.00 - 1217.00</td>
<td>0.0 - 853.0</td>
<td>PIERRE SHALE</td>
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<tr>
<td>1217.00 - 1055.00</td>
<td>853.0 - 1015.0</td>
<td>NIOBRARA FORMATION</td>
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<tr>
<td>1055.00 - 720.00</td>
<td>1015.0 - 1350.0</td>
<td>CARLILE SHALE</td>
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<tr>
<td>720.00 - 615.00</td>
<td>1350.0 - 1455.0</td>
<td>GREENHORN LIMESTONE</td>
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<tr>
<td>615.00 - 485.00</td>
<td>1455.0 - 1585.0</td>
<td>GRANEROS SHALE</td>
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<tr>
<td>485.00 - 120.00</td>
<td>1585.0 - 1950.0</td>
<td>DAKOTA FORMATION</td>
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<tr>
<td>120.00 - 10.00</td>
<td>1950.0 - 2060.0</td>
<td>SKULL CREEK SHALE</td>
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<tr>
<td>10.00 - -107.00</td>
<td>2060.0 - 2177.0</td>
<td>INYAN KARA GROUP</td>
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<td>-107.00 - -146.00</td>
<td>2177.0 - 2216.0</td>
<td>UNDIFFERENTIATED MATERIAL; PRE-INYAN KARA GROUP - POST MINNELUSA FORMATION</td>
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<td>-146.00 - -470.00</td>
<td>2216.0 - 2540.0</td>
<td>MINNELUSA FORMATION</td>
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<tr>
<td>-470.00 - -620.00</td>
<td>2540.0 - 2690.0</td>
<td>MADISON LIMESTONE</td>
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Location: 042N-25W-32CC
Page 1 01/31/2005
**Location Information**

Legal Location: SW SW SEC. 34, T. 042 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: G. ANDERSON

Location: 042N-25W-34CC
Latitude: 43° 34' 02"
Longitude: 100° 17' 15"
Ground Surface Elevation (ft.): 1821 T

**Project Information**

Project: 
Drill Date: 
Company: HURON DRILLING
Drilling Method: 
Test Hole Number: 
Samples: 
Total Casing and Screen (ft.): 1567.0

**Well Information**

SDGS Well Name: 
Water Rights Well: 
Other Well Name: PRIVATE 
Casing Type: 
Screen Type: 
Total Casing and Screen (ft.): 
Well Maintenance Date: 
Casing Top Elevation: 
Casing Diameter (in.): 
Screen Length (ft.): 
Casing Stick-up (ft.): 

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

**Elevation (ft.)** | **Depth (ft.)** | **Description**
--- | --- | ---
1821.00-1248.00 | 0.0-573.0 | PIERRE SHALE
1248.00-1079.00 | 573.0-742.0 | NIOBRARA FORMATION
1079.00-726.00 | 742.0-1095.0 | CARLILE SHALE
726.00-608.00 | 1095.0-1213.0 | GREENHORN LIMESTONE
608.00-459.00 | 1213.0-1362.0 | GRANEROS SHALE
459.00-254.00 | 1362.0-1567.0 | DAKOTA FORMATION

* * * *
**Location Information**

Legal Location: SE SE SE NE SEC. 01, T. 042 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 
Location: 042N-26W-01ADDD
Latitude: 43 38' 43"
Longitude: 100 21' 00"
Ground Surface Elevation (ft.): 2080

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/27/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-36
Samples: 
Geologist: M. JARRETT
Driller: J. REZAC
Geologist's Log: X
Driller's Log: 
Total Drill Hole Depth (ft.): 19.0

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<th>Description</th>
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<td>2080.00-2078.50</td>
<td>0.0-1.5</td>
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<td>2078.50-2074.00</td>
<td>1.5-6.0</td>
<td>SAND AND GRAVEL, YELLOWISH-BROWN, FINE SAND</td>
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<tr>
<td>2074.00-2063.00</td>
<td>6.0-17.0</td>
<td>SILT, YELLOWISH-BROWN, SANDY</td>
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<tr>
<td>2063.00-2061.00</td>
<td>17.0-19.0</td>
<td>CLAY, OLIVE-GREENISH-BROWN, SILTY; COULD NOT PENETRATE</td>
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Location Information

Legal Location: NW SW NW SW SEC. 01, T. 042 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:
Location: 042N-26W-01CBCB
Latitude: 43 38' 33"
Longitude: 100 22' 12"
Ground Surface Elevation (ft.): 2110 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/20/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-26
Driller: G. DUCHOSSOIS
Geologist: M. JARRETT
Geologist's Log: X
Driller's Log:
Total Drill Hole Depth (ft.): 48.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>2110.00-2109.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL, BROWN</td>
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<tr>
<td>2109.00-2108.00</td>
<td>1.0-2.0</td>
<td>TOPSOIL, PALE-ORANGE-BROWN</td>
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<tr>
<td>2108.00-2096.00</td>
<td>2.0-14.0</td>
<td>SAND, PALE-YELLOWISH-BROWN, MEDIUM TO COARSE; SAND IS HIGHLY QUARTZOSE; A LITTLE COARSE GRAVEL, DRY</td>
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<tr>
<td>2096.00-2094.00</td>
<td>14.0-16.0</td>
<td>CLAY, YELLOW-BROWN; DRY</td>
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<tr>
<td>2094.00-2085.00</td>
<td>16.0-25.0</td>
<td>SAND, MEDIUM TO COARSE; DRY</td>
</tr>
<tr>
<td>2085.00-2074.00</td>
<td>25.0-36.0</td>
<td>SAND AND GRAVEL, MEDIUM SAND TO GRAVEL UP TO FOUR INCHES IN DIAMETER; SAND IS HIGHLY QUARTZOSE, DRY</td>
</tr>
<tr>
<td>2074.00-2062.00</td>
<td>36.0-48.0</td>
<td>SAND, PALE-YELLOWISH-BROWN, MEDIUM TO COARSE; HIGHLY QUARTZOSE, VERY LITTLE RETURN BELOW 43 FEET, DRY</td>
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* * * *
### Location Information

- **Legal Location:** NW NE NE NW SEC. 12, T. 042 N., R. 26 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140204
- **Land Owner:**
- **Longitude:** 100 21' 42"
- **Latitude:** 43 38' 15"
- **Ground Surface Elevation (ft.):** 2105 T

### Project Information

- **Project:** MELLETTE-TODD CO. STUDY
- **Drill Date:** 07/20/1993
- **Company:** SDGS
- **Drilling Method:** AUGER
- **Test Hole Number:** A1-93-25
- **Samples:**
- **Driller:** J. REZAC
- **Geologist:** M. JARRETT
- **Geologist’s Log:** X
- **Driller’s Log:**
- **Total Drill Hole Depth (ft.):** 38.0

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
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<td>2105.00 - 2104.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>2104.00 - 2099.00</td>
<td>1.0 - 6.0</td>
<td>SAND AND GRAVEL, BROWN; SOME CLAY, DRY</td>
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<tr>
<td>2099.00 - 2091.00</td>
<td>6.0 - 14.0</td>
<td>SAND, LIGHT-GRAY TO TAN, FINE; DRY</td>
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<tr>
<td>2091.00 - 2080.00</td>
<td>14.0 - 25.0</td>
<td>SAND AND GRAVEL, GRAVEL TO TWO INCHES IN DIAMETER, CLAYEY; DRY</td>
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<tr>
<td>2080.00 - 2074.00</td>
<td>25.0 - 31.0</td>
<td>GRAVEL AND SAND, GRAVEL TO THREE INCHES IN DIAMETER; DRY</td>
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<tr>
<td>2074.00 - 2067.00</td>
<td>31.0 - 38.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
**Location Information**

Legal Location: SW NW SW NW SEC. 12, T. 042 N., R. 26 W.

County: MELLETTE                                      Location: 042N-26W-12BCBC
Basin: WHITE                                          Latitude: 43 37' 57"
Hydrologic Unit Code: 10140204                        Longitude: 100 22' 10"
Land Owner:                                           Ground Surface Elevation (ft.): 2130 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY                      Geologist: M. JARRETT
Drill Date: 07/20/1993                                Geologist's Log: X
Company: SDGS                                        Driller: G. DUCHOSSOIS
Drilling Method: AUGER                                Driller's Log:
Test Hole Number: A1-93-24                            Total Drill Hole Depth (ft.): 48.0
Samples:

**Geophysical Information**

Spontaneous Potential:                                Single Point Resistivity: Extra:
Natural Gamma:                                        

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<th>Description</th>
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<td>2130.00 - 2128.00</td>
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<td>TOPSOIL, DARK-BROWN</td>
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<td>2128.00 - 2124.00</td>
<td>2.0 - 6.0</td>
<td>SAND, YELLOWISH-BROWN, MEDIUM</td>
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<tr>
<td>2124.00 - 2123.00</td>
<td>6.0 - 7.0</td>
<td>CLAY, YELLOW-BROWN</td>
</tr>
<tr>
<td>2123.00 - 2089.00</td>
<td>7.0 - 41.0</td>
<td>SAND, VERY PALE-ORANGE, MEDIUM TO COARSE; HIGHLY QUARTZOSE, A LITTLE GRAVEL AT 15 FEET AND STRINGERS THROUGHOUT, DRY TO DAMP</td>
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<tr>
<td>2089.00 - 2086.00</td>
<td>41.0 - 44.0</td>
<td>SAND, YELLOWISH-BROWN, MEDIUM TO COARSE, CLAYEY; DRY</td>
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<tr>
<td>2086.00 - 2082.00</td>
<td>44.0 - 48.0</td>
<td>CLAY, YELLOWISH-BROWN, SANDY; DRY</td>
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Location Information

Legal Location: SW NW NW SW SEC. 12, T. 042 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 042N-26W-12CBBC
Latitude: 43° 37' 45"
Longitude: 100° 22' 10"
Ground Surface Elevation (ft.): 2120 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/20/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-23
Samples:

Geologist: M. JARRETT
Geologist's Log: X
Driller: J. REZAC
Driller's Log:
Total Drill Hole Depth (ft.): 48.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<td>1.0-48.0</td>
<td>SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM SAND TO COARSE GRAVEL; MAJORITY IS QUARTZ RICH, SOME COBBLE GRAVEL, DRY</td>
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* * * *
### Location Information

- **Legal Location:** SW NW SEC. 14, T. 042 N., R. 26 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140204
- **Land Owner:** M. KESKA

- **Location:** 042N-26W-14BC
- **Latitude:** 43 37' 05"
- **Longitude:** 100 23' 15"
- **Ground Surface Elevation (ft.):** 2133 T

### Project Information

- **Project:**
- **Drill Date:** 09/14/1973
- **Company:** OLIVER WELL DRILLING
- **Drilling Method:**
- **Test Hole Number:**
- **Samples:**
- **Geologist:**
- **Geologist's Log:**
- **Driller:**
- **Driller's Log:**
- **Total Drill Hole Depth (ft.):** 44.0

### Well Information

- **SDGS Well Name:**
- **Water Rights Well:**
- **Other Well Name:** PRIVATE
- **Casing Type:** CONCRETE
- **Screen Type:** CONCRETE
- **Total Casing and Screen (ft.):** 22.0
- **Well Maintenance Date:**
- **Casing Top Elevation:**
- **Casing Diameter (in.):** 30.0
- **Screen Length (ft.):** 4.0
- **Casing Stick-up (ft.):**

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

### Elevation (ft.)

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<td>2131.00 - 2119.00</td>
<td>2.0 - 14.0</td>
<td>CLAY AND SAND</td>
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<tr>
<td>2119.00 - 2089.00</td>
<td>14.0 - 44.0</td>
<td>SHALE</td>
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* * * *
### Location Information

- **Legal Location:** SW SW SEC. 02, T. 042 N., R. 27 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140204
- **Land Owner:** B. RYNO
- **Location:** 042N-27W-02CC
- **Latitude:** 43 38' 24"
- **Longitude:** 100 30' 26"
- **Ground Surface Elevation (ft.):** 2110 T

### Project Information

- **Project:**
- **Drill Date:**
- **Company:**
- **Drilling Method:**
- **Test Hole Number:**
- **Samples:**
- **Total Casing and Screen (ft.):**
- **Casing Top Elevation:**
- **Casing Diameter (in.):**
- **Screen Length (ft.):**
- **Casing Stick-up (ft.):**
- **Well Maintenance Date:**
- **Total Drill Hole Depth (ft.):** 1995.0

### Well Information

- **SDGS Well Name:**
- **Water Rights Well:**
- **Other Well Name:** PRIVATE
- **Casing Type:**
- **Screen Type:**
- **Total Casing and Screen (ft.):**
- **Well Maintenance Date:**

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

### Geophysical Information

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
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<tr>
<td>260.00 - 250.00</td>
<td>1850.0 - 1860.0</td>
<td>SAND (NEWCASTLE? SANDSTONE MEMBER - GRANEROS SHALE)</td>
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<tr>
<td>250.00 - 180.00</td>
<td>1860.0 - 1930.0</td>
<td>DAKOTA FORMATION</td>
</tr>
<tr>
<td>180.00 - 115.00</td>
<td>1930.0 - 1995.0</td>
<td>SAND STREAKS; 4 FEET OF SHALE AT BOTTOM</td>
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SAMPLES SHOWED MOSTLY VERY FINE-GRAINED GRAY SAND WITH SOME WHITE MEDIUM-GRAINED SAND IN SMALL LOOSELY CEMENTED CLUSTERS. PYRITE PRESENT.

* * * *
Location Information

Legal Location: NE NE NE NE SEC. 28, T. 042 N., R. 27 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 042N-27W-28AAAA
Latitude: 43° 35' 40"
Longitude: 100° 31' 48"
Ground Surface Elevation (ft.): 2154 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 08/16/1995
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-95-31
Samples: 

Geologist: R. HAMMOND
Geologist's Log: X
Driller: M. THOMPSON
Driller's Log: 
Total Drill Hole Depth (ft.): 60.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<th>Depth (ft.)</th>
<th>Description</th>
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<td>2154.00-2153.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL, SILTY, SANDY</td>
</tr>
<tr>
<td>2153.00-2146.00</td>
<td>1.0-8.0</td>
<td>SILT, DARK-BROWN; INTERBEDDED CLAY (WHITE RIVER GROUP)</td>
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<tr>
<td>2146.00-2122.00</td>
<td>8.0-32.0</td>
<td>CLAYSTONE, YELLOWISH-LIGHT-BROWN, SILTY (WHITE RIVER GROUP?)</td>
</tr>
<tr>
<td>2122.00-2094.00</td>
<td>32.0-60.0</td>
<td>SHALE, DARK-BLACK (PIERRE SHALE)</td>
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* * * *
**Location Information**

- Legal Location: NW NW NW NW Sec. 01, T. 042 N., R. 28 W.
- County: MELLETTE
- Basin: WHITE
- Hydrologic Unit Code: 10140203
- Land Owner: 
- Location: 042N-28W-01BBBB
- Latitude: 43° 39' 08"
- Longitude: 100° 36' 34"
- Ground Surface Elevation (ft.): 2168 T

**Project Information**

- Project: USGS
- Drill Date: 08/16/1966
- Company: USGS
- Drilling Method: 
- Test Hole Number: 
- Driller: 
- Driller's Log: X
- Geologist: 
- Geologist's Log: 
- Total Drill Hole Depth (ft.): 25.0
- Samples: 

**Geophysical Information**

- Spontaneous Potential: 
- Natural Gamma: 
- Single Point Resistivity: 
- Extra: 

**DEPT TO WATER: 15 FEET ESTIMATED 08-16-1966.**

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>2168.00 - 2161.00</td>
<td>0.0 - 7.0</td>
<td>CLAY, TAN</td>
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<tr>
<td>2161.00 - 2159.00</td>
<td>7.0 - 9.0</td>
<td>SAND, MEDIUM; GRAVEL, FINE</td>
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<tr>
<td>2159.00 - 2157.00</td>
<td>9.0 - 11.0</td>
<td>CLAY, TAN</td>
</tr>
<tr>
<td>2157.00 - 2143.00</td>
<td>11.0 - 25.0</td>
<td>SHALE, DARK-GRAY</td>
</tr>
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* * * *
Location Information

Legal Location: NE NE SEC. 05, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: L. HUTCHINSON

Location: 042N-28W-05AA
Latitude: 43 39' 01"
Longitude: 100 40' 17"
Ground Surface Elevation (ft.): 1850 T

Project Information

Project:
Drill Date: 06/12/1984
Company: SUMMERS DRILLING
Drilling Method: BORED
Test Hole Number:

Geologist:
Driller:
Projects Log:
Driller's Log:
Total Drill Hole Depth (ft.): 50.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type: CEMENT TILE
Screen Type:
Total Casing and Screen (ft.): 

Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):
Well Maintenance Date:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>1850.00 - 1849.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>1849.00 - 1840.00</td>
<td>1.0 - 10.0</td>
<td>SAND</td>
</tr>
<tr>
<td>1840.00 - 1830.00</td>
<td>10.0 - 20.0</td>
<td>GRAVEL AND ROCK</td>
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<tr>
<td>1830.00 - 1800.00</td>
<td>20.0 - 50.0</td>
<td>SHALE, BLUE</td>
</tr>
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</table>

* * * *
Location Information

Legal Location: SW SE SW NW SEC. 05, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 042N-28W-05BCDC
Latitude: 43 38' 44"
Longitude: 100 41' 10"
Ground Surface Elevation (ft.): 1862 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 17
Samples: 

Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 12.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 

Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 3 FEET.

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1862.00-1860.00</td>
<td>0.0-2.0</td>
<td>SAND, BROWN, MEDIUM</td>
</tr>
<tr>
<td>1860.00-1857.00</td>
<td>2.0-5.0</td>
<td>SAND, COARSE</td>
</tr>
<tr>
<td>1857.00-1853.00</td>
<td>5.0-9.0</td>
<td>SAND, GRAY; SOME PEBBLES</td>
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<tr>
<td>1853.00-1850.00</td>
<td>9.0-12.0</td>
<td>SHALE</td>
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* * * *
### Location Information

- **Legal Location:** NE SW NE SW SEC. 05, T. 042 N., R. 28 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140203
- **Land Owner:**
- **Location:** 042N-28W-05CACA
- **Latitude:** 43° 38' 33"
- **Longitude:** 100° 40' 57"
- **Ground Surface Elevation (ft.):** 1875 T

### Project Information

- **Project:** LITTLE WHITE RIVER VALLEY
- **Drill Date:** 01/01/1969
- **Company:** FERGUSON-MEADOR
- **Drilling Method:**
- **Test Hole Number:** 18
- **Samples:**
- **Geologist:** A. BARARI
- **Driller:**
- **Geologist's Log:** X
- **Driller's Log:**
- **Total Drill Hole Depth (ft.):** 8.0

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>1875.00-1874.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
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<td>1874.00-1871.00</td>
<td>1.0-4.0</td>
<td>CLAY, BROWN</td>
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<tr>
<td>1871.00-1867.00</td>
<td>4.0-8.0</td>
<td>SHALE, GRAY</td>
</tr>
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</table>

* * * *
Location Information

Legal Location: NW NW NE SEC. 08, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 042N-28W-08ABB
Latitude: 43 38' 11"
Longitude: 100 40' 43"
Ground Surface Elevation (ft.): 1870 T

Project Information

Project: USGS
Drill Date: 08/10/1966
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 25.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

DEPTH TO WATER: 5 FEET ESTIMATED 08-10-1966.

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<th>Description</th>
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<tr>
<td>1870.00–1867.00</td>
<td>0.0–3.0</td>
<td>SILT</td>
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<tr>
<td>1867.00–1853.00</td>
<td>3.0–17.0</td>
<td>SAND, MEDIUM</td>
</tr>
<tr>
<td>1853.00–1845.00</td>
<td>17.0–25.0</td>
<td>SHALE, DARK–GRAY</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>
Location Information
Legal Location: NW NW SE SW SEC. 18, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: Location: 042N-28W-18CDBB

Longitude: 100 42' 15"
Latitude: 43 36' 45"
Ground Surface Elevation (ft.): 1886 T

Project Information
Project: USGS
Drill Date: 08/10/1966
Company: USGS
Drilling Method: Geologist:
Test Hole Number: Driller:
Samples: Driller's Log: X

Total Drill Hole Depth (ft.): 6.0

Geophysical Information
Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
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<td>1886.00 – 1883.00</td>
<td>0.0 – 3.0</td>
<td>SILT</td>
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<tr>
<td>1883.00 – 1880.00</td>
<td>3.0 – 6.0</td>
<td>SAND, MEDIUM; GRAVEL, COARSE; SHALE, DARK-Grey AT 6 FEET</td>
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* * * *
Location Information

Legal Location: SE NW SE SW SEC. 18, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Longitude: 100 42' 08"
Latitude: 43 36' 40"
Ground Surface Elevation (ft.): 1930 T

Project Information

Project: USGS
Drill Date: 08/10/1966
Company: USGS
Drilling Method: 
Test Hole Number: 
Samples: 

Geologist:
Geologist's Log: 
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 7.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity: 
Extra: 

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>1930.00 - 1925.00</td>
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<tr>
<td>1925.00 - 1923.00</td>
<td>5.0 - 7.0</td>
<td>SAND, COARSE; GRAVEL, MEDIUM; DARK-GRAY SHALE at 7 FEET</td>
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Location Information

Legal Location: SE SE SW SEC. 18, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 042N-28W-18CDD
Latitude: 43 36' 35"
Longitude: 100 42' 03"
Ground Surface Elevation (ft.): 1919 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Driller:
Geologist's Log: Driller's Log: X
Total Drill Hole Depth (ft.): 52.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>TOPSOIL, BROWN</td>
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<td>1917.00-1916.00</td>
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<td>1916.00-1913.00</td>
<td>3.0-6.0</td>
<td>DIRT, BROWN</td>
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<td>1913.00-1904.00</td>
<td>6.0-15.0</td>
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<td>1904.00-1899.00</td>
<td>15.0-20.0</td>
<td>SAND, VERY FINE</td>
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<tr>
<td>1899.00-1894.00</td>
<td>20.0-25.0</td>
<td>SAND, FINE; GRAVEL, MEDIUM, SILTY</td>
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<td>1894.00-1889.00</td>
<td>25.0-30.0</td>
<td>GRAVEL, MEDIUM</td>
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<td>1889.00-1884.00</td>
<td>30.0-35.0</td>
<td>CLAY AND GRAVEL, MEDIUM GRAVEL</td>
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<td>1884.00-1867.00</td>
<td>35.0-52.0</td>
<td>SHALE, DARK-GRAY; MEDIUM GRAVEL</td>
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**Location Information**

Legal Location: NW SE SE SW SEC. 18, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 042N-28W-18CDDDB
Latitude: 43 36' 37"
Longitude: 100 42' 05"
Ground Surface Elevation (ft.): 1903 T

**Project Information**

Project: USGS
Drill Date:
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Driller:
Geologist:
Geologist's Log:
Driller's Log:
Total Drill Hole Depth (ft.): 17.0

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>1903.00-1900.00</td>
<td>0.0 - 3.0</td>
<td>SAND, VERY FINE</td>
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<td>1900.00-1889.00</td>
<td>3.0 - 14.0</td>
<td>SAND, FINE; MEDIUM GRAVEL</td>
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<tr>
<td>1889.00-1886.00</td>
<td>14.0 - 17.0</td>
<td>SHALE, DARK-GRAY, SANDY; VERY SOFT</td>
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Location Information

Legal Location: NW NW NW SW SEC. 21, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: Location: 042N-28W-21C BBB

Longitude: 100 40' 09"
Latitude: 43 36' 03"

Ground Surface Elevation (ft.): 2122 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/21/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-28
Samples: Geologist: M. JARRETT
Geologist's Log: X
Driller: J. REZAC
Driller's Log:
Total Drill Hole Depth (ft.): 28.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Depth (ft.)</th>
<th>Description</th>
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<td>TOPSOIL</td>
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<td>2120.00-2113.00</td>
<td>2.0-9.0</td>
<td>SILT, BUFF TO LIGHT-OLIVE, SANDY; DRY</td>
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<tr>
<td>2113.00-2108.00</td>
<td>9.0-14.0</td>
<td>CLAY, LIGHT-OLIVE-GREEN, SANDY</td>
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<tr>
<td>2108.00-2097.00</td>
<td>14.0-25.0</td>
<td>SAND, DARK-OLIVE-GREEN; DRY (PIERRE SHALE)</td>
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<tr>
<td>2097.00-2094.00</td>
<td>25.0-28.0</td>
<td>SHALE, DARK-GRAY (PIERRE SHALE)</td>
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Location Information

Legal Location: SW SW NE NW SEC. 25, T. 042 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 042N-28W-25BACC
Latitude: 43 35' 29"
Longitude: 100 36' 16"
Ground Surface Elevation (ft.): 2352 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 08/15/1995
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-95-30

Geologist: R. HAMMOND
Geologist's Log: X
Driller: M. THOMPSON
Driller's Log: 
Total Drill Hole Depth (ft.): 102.0

Samples:

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>2352.00-2350.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, SILTY, SANDY</td>
</tr>
<tr>
<td>2350.00-2328.00</td>
<td>2.0-24.0</td>
<td>SILTSTONE, TAN TO OLIVE-BROWN; SOME WHITE COLORED CLAY</td>
</tr>
<tr>
<td>2328.00-2297.00</td>
<td>24.0-55.0</td>
<td>CLAYSTONE, GREENISH TO MEDIUM-BROWN AND DARK-BLUISH-GREEN TO GREEN-BLUE, SILTY; SOME SILTSTONE LAYERS</td>
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<tr>
<td>2297.00-2250.00</td>
<td>55.0-102.0</td>
<td>SHALE, DARK-BLUE TO BLACK (PIERRE SHALE)</td>
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* * * *
Spontaneous Potential:  
Natural Gamma:  
Samples:  
Longitude:  
Hydrologic Unit Code: 10140203  
Land Owner:  
Location: 042N-29W-22DADD  
Latitude: 43 35' 50"  
Longitude: 100 45' 01"  
Ground Surface Elevation (ft.): 1936 T

Location Information

County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140203  
Land Owner:  
Location: 042N-29W-22DADD  
Latitude: 43 35' 50"  
Longitude: 100 45' 01"  
Ground Surface Elevation (ft.): 1936 T

Project Information

Project: STATEWIDE MONITORING  
Drill Date: 06/20/1995  
Company: SDGS  
Drilling Method: HOLLOWSTEM  
Test Hole Number: R20-95-19  
Samples:  
Geologist: P. HAMMOND  
Geologist's Log: X  
Driller: D. IVERSON  
Driller's Log:  
Total Drill Hole Depth (ft.): 25.0

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>1936.00 - 1925.00</td>
<td>0.0 - 11.0</td>
<td>SAND, LIGHT-BROWN, MEDIUM, WELL-ROUNDED; VERY CLEAN, DRY TO MOIST</td>
</tr>
<tr>
<td>1925.00 - 1923.00</td>
<td>11.0 - 13.0</td>
<td>SAND AND SHALE, FINE SAND WITH WEATHERED SHALE</td>
</tr>
<tr>
<td>1923.00 - 1911.00</td>
<td>13.0 - 25.0</td>
<td>CLAY, GRAY TO DARK-GRAY; CALCAREOUS, STICKY (PIERRE SHALE)</td>
</tr>
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* * * *
Location Information

Legal Location: SE SE NE SE SEC. 22, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:
Location: 042N-29W-22DADD 1
Latitude: 43° 35' 56"
Longitude: 100° 45' 00"
Ground Surface Elevation (ft.): 1335 T

Project Information

Project: STATEWIDE MONITORING
Drill Date: 06/20/1995
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-95-20
Samples:

Spontaneous Potential:
Natural Gamma:
Driller: D. IVERSON
Geologist: P. HAMMOND
Geologist's Log: X
Driller's Log:
Total Drill Hole Depth (ft.): 15.0

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>1335.00 - 1324.00</td>
<td>0.0 - 11.0</td>
<td>SAND, LIGHT-BROWN, MEDIUM, WELL-SORTED, WELL-ROUNDED; CLEAN</td>
</tr>
<tr>
<td>1324.00 - 1320.00</td>
<td>11.0 - 15.0</td>
<td>CLAY, GRAY; CALCAREOUS, SOME SAND, (WEATHERED PIERRE SHALE)</td>
</tr>
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* * * *
### Location Information

- **Legal Location:** NW NW SW SEC. 23, T. 042 N., R. 29 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140203
- **Land Owner:**

  - **Longitude:** 100 44' 52"
  - **Latitude:** 43 36' 00"
  - **Ground Surface Elevation (ft.):** 1936 T

### Project Information

- **Project:** USGS
- **Drill Date:** 08/12/1966
- **Company:** USGS
- **Drilling Method:**
- **Test Hole Number:**
- **Location:** 042N-29W-23CBB

  - **Total Drill Hole Depth (ft.):** 8.0

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**

  - **Single Point Resistivity:**

  - **Extra:**

### Geophysical Table

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>1936.00-1934.00</td>
<td>0.0-2.0</td>
<td>SILT</td>
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<td>1934.00-1932.00</td>
<td>2.0-4.0</td>
<td>SAND, MEDIUM</td>
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<tr>
<td>1932.00-1929.00</td>
<td>4.0-7.0</td>
<td>SAND, MEDIUM; GRAVEL, MEDIUM</td>
</tr>
<tr>
<td>1929.00-1928.00</td>
<td>7.0-8.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SW SW NW SW SEC. 23, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 042N-29W-23CBCC
Latitude: 43 35' 53"
Longitude: 100 44' 55"
Ground Surface Elevation (ft.): 1936 T

Project Information

Project: USGS
Drill Date: 08/01/1966
Company: USGS
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Geologist's Log: 
Driller:
Driller's Log: 
Total Drill Hole Depth (ft.): 26.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

Elevation (ft.) | Depth (ft.) | Description
----------------|-------------|----------------|
1936.00-1924.00 | 0.0-12.0    | SAND, FINE    |
1924.00-1921.00 | 12.0-15.0   | SAND, COARSE  |
1921.00-1916.00 | 15.0-20.0   | SAND, COARSE; GRAVEL, SMALL, MOIST |
1916.00-1914.00 | 20.0-22.0   | SHALE, DARK-GRAY, SANDY; WET |
1914.00-1910.00 | 22.0-26.0   | SHALE, DARK-GRAY |
* * * *
Location Information

Legal Location: SE SW NW SW SEC. 23, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 042N-29W-23C
Latitude: 43 35' 53"
Longitude: 100 44' 49"
Ground Surface Elevation (ft.): 1936 T

Project Information

Project: USGS
Drill Date: 08/12/1966
Company: USGS
Drilling Method: X
Test Hole Number: 10140203
Samples: 
Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 16.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<th>Description</th>
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<td>1936.00 - 1935.50</td>
<td>0.0 - 0.5</td>
<td>SILT</td>
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<td>1935.50 - 1926.00</td>
<td>0.5 - 10.0</td>
<td>SAND, LIGHT-BROWN TO TAN, MEDIUM</td>
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<td>1926.00 - 1921.00</td>
<td>10.0 - 15.0</td>
<td>SAND, DARK-BROWN, COARSE</td>
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<td>1921.00 - 1920.00</td>
<td>15.0 - 16.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SE SE NW NE SEC. 24, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 042N-29W-24ABDD
Latitude: 43 36' 18"
Longitude: 100 42' 55"
Ground Surface Elevation (ft.): 1916 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/21/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-27
Samples:

Driller: G. DUCHOSOIS
Geologist: M. JARRETT
Driller's Log: X
Geologist's Log: 

Total Drill Hole Depth (ft.): 23.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<td>0.0-1.0</td>
<td>TOPSOIL, BROWN</td>
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<td>1915.00-1912.00</td>
<td>1.0-4.0</td>
<td>CLAY, BROWNISH-GRAY</td>
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<tr>
<td>1912.00-1906.00</td>
<td>4.0-10.0</td>
<td>SAND, PALE-YELLOW-BROWN, FINE TO MEDIUM; HIGHLY QUARTZOSE, A LITTLE GRAVEL TO ONE AND ONE HALF INCHES IN DIAMETER</td>
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<td>1906.00-1899.00</td>
<td>10.0-17.0</td>
<td>SAND, YELLOW-BROWN, FINE TO COARSE; SOME FINE TO COARSE GRAVEL STRINGERS, SOME CLAYSTONE PEBBLES, SATURATED AT 12 FEET</td>
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<td>1899.00-1893.00</td>
<td>17.0-23.0</td>
<td>CLAYSTONE, DARK-GRAY (PIERRE SHALE)</td>
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Location Information

Legal Location: SE NE SW NW SEC. 24, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 042N-29W-24BCAD
Latitude: 43 36' 11"
Longitude: 100 43' 31"
Ground Surface Elevation (ft.): 1916 T

Project Information

Project: LITTE WHITE RIVER VALLYE
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method:
Test Hole Number: 19
Samples:

Geologist: A. BARARI
Geologist's Log: X
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 11.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

DEPTH TO WATER: 7 FEET.

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<td>1907.00 - 1905.00</td>
<td>9.0 - 11.0</td>
<td>SHALE, GRAY</td>
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Location Information

Legal Location: SE NW SEC. 31, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: ROSEBUD RESERVATION

Location: 042N-29W-31BD
Latitude: 43 34' 26"
Longitude: 100 49' 19"
Ground Surface Elevation (ft.): 2116 T

Project Information

Project:
Drill Date: 10/10/1975
Company: MINNESOTA DRILLERS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log:

Total Drill Hole Depth (ft.): 80.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<td>2116.00-2115.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
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<td>2115.00-2092.00</td>
<td>1.0-24.0</td>
<td>CLAY, YELLOW</td>
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<td>2092.00-2036.00</td>
<td>24.0-80.0</td>
<td>SHALE, BLUE</td>
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* * * *
Location Information

Legal Location: SW SE SEC. 31, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: ROSEBUD RESERVATION

Location: 042N-29W-31DC
Latitude: 43 34' 01"
Longitude: 100 49' 03"
Ground Surface Elevation (ft.): 2018 T

Project Information

Project:
Drill Date: 09/11/1975
Company: MINNESOTA DRILLERS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 40.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Description</th>
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<td>2018.00 - 2016.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL</td>
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<td>2016.00 - 1992.00</td>
<td>2.0 - 26.0</td>
<td>CLAY, YELLOW</td>
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<td>1992.00 - 1986.00</td>
<td>26.0 - 32.0</td>
<td>GRAVEL STREAKS AND CLAY</td>
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<td>1986.00 - 1978.00</td>
<td>32.0 - 40.0</td>
<td>SHALE, BLUE</td>
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* * * *
Location Information

Legal Location: NW SW SW SEC. 32, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Longitude: Hydrologic Unit Code: 042N-29W-32CCB
Latitude: 43 33' 06"
Longitude: 100 48' 30"
Ground Surface Elevation (ft.): 2018 T

Project Information

Project: USGS
Drill Date: 08/12/1966
Company: USGS
Drilling Method: 
Test Hole Number: 
Samples: 

Geologist: 
Geologist's Log: 
Driller: 
Driller's Log: X
Total Drill Hole Depth (ft.): 26.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 18.6 FEET MEASURED 08-12-1966.

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<td>2018.00 - 2003.00</td>
<td>0.0 - 15.0</td>
<td>SILT (TILL)</td>
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<td>2003.00 - 1994.00</td>
<td>15.0 - 24.0</td>
<td>CLAY, DARK-BROWN</td>
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<td>1994.00 - 1992.00</td>
<td>24.0 - 26.0</td>
<td>SAND, VERY FINE</td>
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* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140203  
Land Owner: CITY OF WHITE RIVER  
Location: 042N-29W-34BA  
Latitude: 43 34' 40"  
Longitude: 100 45' 43"  
Ground Surface Elevation (ft.): 1968 T

Project Information

Project:  
Drill Date: 12/05/1986  
Company: CHASE WELL DRILLING  
Drilling Method: ROTARY  
Test Hole Number:  
Samples:  
Geologist:  
Driller's Log:  
Driller:  
Total Drill Hole Depth (ft.): 16.0

Well Information

SDGS Well Name:  
Water Rights Well:  
Other Well Name: PRIVATE  
Casing Type: STEEL  
Screen Type: STAINLESS STEEL  
Total Casing and Screen (ft.): 16.0  
Well Maintenance Date:  
Aquifer:  
Management Unit:  
Casing Top Elevation:  
Casing Diameter (in.): 8.0  
Screen Length (ft.): 5.0  
Casing Stick-up (ft.):  
5 FEET OF STAINLESS STEEL SCREEN AND 1 FOOT OF TIGHTWIND BLANK STAINLESS STEEL SCREEN.

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

Elevation (ft.)  |  Depth (ft.)  |  Description  
--- | --- | ---  
1968.00-1962.00 | 0.0-6.0 | SAND, MEDIUM; TRACE OF SHALE  
1962.00-1952.00 | 6.0-16.0 | SAND, MEDIUM TO COARSE; WITH TRACE OF SHALE  
* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER
Location: 042N-29W-34BA 1
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project: 
Drill Date: 12/05/1986
Company: CHASE WELL DRILLING
Drilling Method: ROTARY
Test Hole Number: 
Samples: 
Total Drill Hole Depth (ft.): 14.5
Geologist: 
Geologist's Log: 
Driller: 
Driller's Log: X

Well Information

SDGS Well Name: 
Water Rights Well: 
Other Well Name: PRIVATE
Casing Type: STEEL
Screen Type: STAINLESS STEEL
Total Casing and Screen (ft.): 14.0
Casing Top Elevation: 
Casing Diameter (in.): 8.0
Screen Length (ft.): 5.0
Casing Stick-up (ft.): 
Well Maintenance Date: 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

5 FEET OF STAINLESS STEEL SCREEN, 1 FOOT OF TIGHTWIND BLANK STAINLESS STEEL SCREEN.

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>SAND, MEDIUM</td>
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<td>1960.50-1953.50</td>
<td>7.5-14.5</td>
<td>SAND, MEDIUM; WITH TRACE OF GRAVEL AND SHALE</td>
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* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLEETE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 042N-29W-34BA 2
Latitude: 43° 34' 40"
Longitude: 100° 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project: 
Drill Date: 12/05/1986
Company: CHASE WELL DRILLING
Drilling Method: ROTARY
Test Hole Number: 
Samples: 

Longitude: 
SDGS Well Name: 
Well Maintenance Date: 
Total Drill Hole Depth (ft.): 16.0

Driller's Log: X
Driller: 
Geologist's Log: 
Geologist: 

Well Information

SDGS Well Name: 
Water Rights Well: 
Other Well Name: PRIVATE
Casing Type: STEEL
Screen Type: STAINLESS STEEL
Total Casing and Screen (ft.): 16.0
Well Maintenance Date: 

Casing Top Elevation: 
Casing Diameter (in.): 8.0
Screen Length (ft.): 5.0
Casing Stick-up (ft.): 

Aquifer: 
Management Unit: 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

5 FEET OF STAINLESS STEEL SCREEN, 1 FOOT OF TIGHTWIND BLANK STAINLESS STEEL SCREEN.

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<td>1960.50 - 1952.00</td>
<td>7.5 - 16.0</td>
<td>SAND, MEDIUM TO COARSE; WITH TRACE OF SHALE</td>
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Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER
Location: 042N-29W-34BA
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number:
Samples:

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: 1 WEST
Casing Type: PVC
Screen Type: PVC, HM.
Total Casing and Screen (ft.): 12.5
Casing Top Elevation:
Casing Diameter (in.): 12.0
Screen Length (ft.): 3.0
Casing Stick-up (ft.): 1.16
Well Maintenance Date:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<td>TOPSOIL</td>
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<td>1965.50-1963.00</td>
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<td>1963.00-1960.50</td>
<td>5.0-7.5</td>
<td>SAND; 6-INCH SHALE LAYER</td>
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<td>1960.50-1955.00</td>
<td>7.5-13.0</td>
<td>SAND, MEDIUM</td>
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<td>1955.00-1953.00</td>
<td>13.0-15.0</td>
<td>SHALE</td>
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**Location Information**

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Location: 042N-29W-34BA  4
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

**Project Information**

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number: 
Samples: 

Geologist:
Driller:
Geologist's Log:
Driller's Log:
Total Drill Hole Depth (ft.): 15.0

**Well Information**

SDGS Well Name: 
Water Rights Well: 
Other Well Name: 2 WEST
Casing Type: PVC
Screen Type: PVC, HM.
Total Casing and Screen (ft.): 14.0
Well Maintenance Date: 

Aquifer:
Management Unit: 
Casing Top Elevation: 
Casing Diameter (in.): 12.0
Screen Length (ft.): 3.0
Casing Stick-up (ft.): 1.33

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

**Elevation (ft.)** | **Depth (ft.)** | **Description**
---|---|---
1968.00 - 1965.50 | 0.0 - 2.5 | TOPSOIL
1965.50 - 1963.00 | 2.5 - 5.0 | SAND; CLAY LAYER
1963.00 - 1960.50 | 5.0 - 7.5 | SAND; TRACE OF GRAVEL
1960.50 - 1958.00 | 7.5 - 10.0 | SAND, MEDIUM
1958.00 - 1953.50 | 10.0 - 14.5 | SAND, MEDIUM TO COARSE
1953.50 - 1953.00 | 14.5 - 15.0 | SHALE

* * * *
**Location Information**

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WEST
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Location: 042N-29W-34BA  5
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

**Project Information**

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number: 
Samples:

Geologist:
Driller: 
Driller's Log: X
Total Drill Hole Depth (ft.): 13.0

**Well Information**

SDGS Well Name: 
Water Rights Well: 
Other Well Name: 3 WEST
Casing Type: PVC
Screen Type: PVC, HM.
Total Casing and Screen (ft.): 12.0
Well Maintenance Date: 

Casing Top Elevation: 
Casing Diameter (in.): 12.0
Screen Length (ft.): 3.0
Casing Stick-up (ft.): 1.25

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra:

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<td>1960.50-1955.50</td>
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<td>SAND, COARSE; TRACE OF FINE GRAVEL, SHALE LAYERS</td>
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<td>1955.50-1955.00</td>
<td>12.5-13.0</td>
<td>SHALE</td>
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**Location Information**

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Location: 042N-29W-34BA 6
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

**Project Information**

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 12.5

**Well Information**

SDGS Well Name:
Water Rights Well:
Other Well Name: 2 SOUTH
Casing Type: PVC
Screen Type: PVC, HM.
Total Casing and Screen (ft.): 12.0
Casing Top Elevation:
Casing Diameter (in.): 12.0
Screen Length (ft.): 3.0
Casing Stick-up (ft.): 1.25
Well Maintenance Date:

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

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<td>1965.50-1963.00</td>
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<td>1963.00-1960.50</td>
<td>5.0-7.5</td>
<td>SAND, MEDIUM; TRACE OF FINE GRAVEL, SHALE LAYERS</td>
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<tr>
<td>1960.50-1955.50</td>
<td>7.5-12.5</td>
<td>SAND, MEDIUM TO COARSE; TRACE OF FINE GRAVEL, SHALE LAYERS; SHALE AT 12.5 FEET</td>
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Location Information
Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER
Location: 042N-29W-34BA 7
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information
Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number: 
Samples: 
Geologist:
Driller:
Driller's Log:

Well Information
SDGS Well Name: 
Water Rights Well: 
Other Well Name: 3 SOUTH
Casing Type: PVC
Screen Type: PVC, HM.
Total Casing and Screen (ft.): 14.0
Casing Top Elevation: 
Casing Diameter (in.): 12.0
Screen Diameter (ft.): 3.0
Casing Stick-up (ft.): 1.54
Well Maintenance Date:

Geophysical Information
Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968.00 - 1965.50</td>
<td>0.0 - 2.5</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>1965.50 - 1963.00</td>
<td>2.5 - 5.0</td>
<td>SAND, MEDIUM; CLAY LAYER</td>
</tr>
<tr>
<td>1963.00 - 1960.50</td>
<td>5.0 - 7.5</td>
<td>SAND, MEDIUM; TRACE OF FINE GRAVEL, SHALE LAYERS</td>
</tr>
<tr>
<td>1960.50 - 1953.50</td>
<td>7.5 - 14.5</td>
<td>SAND, MEDIUM TO COARSE; SHALE LAYERS, SHALE AT 14.5 FEET</td>
</tr>
</tbody>
</table>

* * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Longitude: 100 45' 43"
Latitude: 43 34' 40"
Location: 042N-29W-34BA 8
Ground Surface Elevation (ft.): 1968 T

Project Information

Project: MELLETTE
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number: 002 SOUTH.
Driller: CITY OF WHITE RIVER
Geologist: MELLETTE
Driller's Log: X
Geologist's Log: X
Total Drill Hole Depth (ft.): 14.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

TESTHOLE: #2 SOUTH.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968.00 - 1965.50</td>
<td>0.0 - 2.5</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>1965.50 - 1963.00</td>
<td>2.5 - 5.0</td>
<td>SAND; TRACE OF SHALE</td>
</tr>
<tr>
<td>1963.00 - 1954.00</td>
<td>5.0 - 14.0</td>
<td>SAND, MEDIUM; TRACE OF SHALE; SHALE AT 14 FEET</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTIE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER
Location: 042N-29W-34BA
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project: City of White River
Drill Date: 11/01/1985
Company: Sargent Irrigation
Drilling Method: ROTARY
Test Hole Number: 10140203
Total Drill Hole Depth (ft.): 1968 T
Samples:

Samples: 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra:

TESTHOLE: #1 NORTH.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968.00–1965.50</td>
<td>0.0–2.5</td>
<td>TOPSOIL</td>
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<td>1965.50–1963.00</td>
<td>2.5–5.0</td>
<td>SAND</td>
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<tr>
<td>1963.00–1960.50</td>
<td>5.0–7.5</td>
<td>SAND, MEDIUM; TRACE OF SHALE</td>
</tr>
<tr>
<td>1960.50–1958.00</td>
<td>7.5–10.0</td>
<td>SAND, MEDIUM TO COARSE; TRACE OF FINE GRAVEL, SHALE LAYERS</td>
</tr>
<tr>
<td>1958.00–1957.50</td>
<td>10.0–10.5</td>
<td>SHALE</td>
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* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE  Location: 042N-29W-34BA  10
Basin: WHITE  Latitude: 43 34' 40"
Hydrologic Unit Code: 10140203  Longitude: 100 45' 43"
Land Owner: CITY OF WHITE RIVER  Ground Surface Elevation (ft.): 1968 T

Project Information

Project:  Geologist:
Drill Date: 11/01/1985  Geologist's Log:
Company: SARGENT IRRIGATION  Driller:
Drilling Method: ROTARY  Driller's Log: X
Test Hole Number:  Total Drill Hole Depth (ft.): 15.0
Samples:

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

TESTHOLE: #1 EAST.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968.00 - 1965.50</td>
<td>0.0 - 2.5</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>1965.50 - 1963.00</td>
<td>2.5 - 5.0</td>
<td>SAND AND CLAY</td>
</tr>
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<td>1963.00 - 1960.50</td>
<td>5.0 - 7.5</td>
<td>SAND, FINE TO MEDIUM</td>
</tr>
<tr>
<td>1960.50 - 1955.50</td>
<td>7.5 - 12.5</td>
<td>SAND, MEDIUM; SHALE LAYERS</td>
</tr>
<tr>
<td>1955.50 - 1953.50</td>
<td>12.5 - 14.5</td>
<td>SAND, MEDIUM TO COARSE; SHALE LAYERS</td>
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<td>1953.50 - 1953.00</td>
<td>14.5 - 15.0</td>
<td>SHALE</td>
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* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Longitude: 100° 45' 43"
Latitude: 43° 34' 40"
Location: 042N-29W-34BA 11
Ground Surface Elevation (ft.): 1968 T

Project Information

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number:

Samples:
Geologist: Geologist's Log:
Driller: Driller's Log: X

Total Drill Hole Depth (ft.): 13.0

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

TESTHOLE: #2 SOUTHEAST.

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<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>1968.00 - 1965.50</td>
<td>0.0 - 2.5</td>
<td>TOPSOIL; CLAY</td>
</tr>
<tr>
<td>1965.50 - 1963.00</td>
<td>2.5 - 5.0</td>
<td>SAND, MEDIUM TO COARSE; CLAY LAYER</td>
</tr>
<tr>
<td>1963.00 - 1955.50</td>
<td>5.0 - 12.5</td>
<td>SAND, MEDIUM TO COARSE; TRACE OF FINE GRAVEL, SHALE LAYERS</td>
</tr>
<tr>
<td>1955.50 - 1955.00</td>
<td>12.5 - 13.0</td>
<td>SHALE</td>
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* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Location: 042N-29W-34BA 12
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 16.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: 1 SOUTH
Casing Type:
Screen Type:
Total Casing and Screen (ft.):
Well Maintenance Date:
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Aquifer:
Management Unit:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

TESTHOLE: #1 SOUTH.

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
1968.00 - 1965.50 | 0.0 - 2.5 | TOPSOIL
1965.50 - 1963.00 | 2.5 - 5.0 | SAND; CLAY LAYER
1963.00 - 1960.50 | 5.0 - 7.5 | SAND, MEDIUM; TRACE OF FINE GRAVEL, SHALE LAYERS
1960.50 - 1952.00 | 7.5 - 16.0 | SAND, MEDIUM TO COARSE; TRACE OF FINE GRAVEL, SHALE LAYERS; SHALE AT 16 FEET

* * * *
Location Information

Legal Location: NE NW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: CITY OF WHITE RIVER

Location: 042N-29W-34BA
Latitude: 43 34' 40"
Longitude: 100 45' 43"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project:
Drill Date: 11/01/1985
Company: SARGENT IRRIGATION
Drilling Method: ROTARY
Test Hole Number: Samples:

Driller: Geologist: Geologist's Log: Driller's Log: Total Drill Hole Depth (ft.): 14.0

Geophysical Information

Spontaneous Potential: Natural Gamma:
Single Point Resistivity: Extra:

TESTHOLE: #1.

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968.00 - 1966.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>1966.00 - 1964.00</td>
<td>2.0 - 4.0</td>
<td>CLAY</td>
</tr>
<tr>
<td>1964.00 - 1960.50</td>
<td>4.0 - 7.5</td>
<td>SAND; CLAY LAYER</td>
</tr>
<tr>
<td>1960.50 - 1954.00</td>
<td>7.5 - 14.0</td>
<td>SAND, MEDIUM; SHALE AT 14 FEET</td>
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</tbody>
</table>

* * * *
Location Information

Legal Location: NE NE NE SW SEC. 34, T. 042 N., R. 29 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Latitude: 43 34' 20"
Longitude: 100 45' 36"
Ground Surface Elevation (ft.): 1958 T

Project Information

Project: LITTE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 20
Samples: 

Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 23.0

Geophysical Information

Spontaneous Potential:
Natural Gamma: 

Single Point Resistivity:
Extra: 

DEPTH TO WATER: 9 FEET.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958.00–1953.00</td>
<td>0.0–5.0</td>
<td>CLAY AND SAND; BUILT UP AREA</td>
</tr>
<tr>
<td>1953.00–1938.00</td>
<td>5.0–20.0</td>
<td>SAND, COARSE</td>
</tr>
<tr>
<td>1938.00–1935.00</td>
<td>20.0–23.0</td>
<td>SHALE, GRAY</td>
</tr>
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</table>

* * * *
Location Information

Legal Location: NW SW SEC. 12, T. 042 N., R. 30 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: W. JENSEN
Location: 042N-30W-12CB
Latitude: 43 37' 40"
Longitude: 100 50' 47"
Ground Surface Elevation (ft.): 2005 T

Project Information

Project:
Drill Date: 02/27/1961
Company: HURON DRILLING
Drilling Method:
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 1930.0

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type:
Screen Type:
Total Casing and Screen (ft.):
Well Maintenance Date:
Aquifer:
Management Unit:
Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential: X
Natural Gamma:
Single Point Resistivity: X
Extra:

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<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005.00 - 1126.00</td>
<td>0.0 - 879.0</td>
<td>PIERRE SHALE</td>
</tr>
<tr>
<td>1126.00 - 985.00</td>
<td>879.0 - 1020.0</td>
<td>NIOBRARA FORMATION</td>
</tr>
<tr>
<td>985.00 - 630.00</td>
<td>1020.0 - 1375.0</td>
<td>CARLILE SHALE</td>
</tr>
<tr>
<td>630.00 - 515.00</td>
<td>1375.0 - 1490.0</td>
<td>GREENHORN LIMESTONE</td>
</tr>
<tr>
<td>515.00 - 333.00</td>
<td>1490.0 - 1672.0</td>
<td>GRANEROS SHALE</td>
</tr>
<tr>
<td>333.00 - 75.00</td>
<td>1672.0 - 1930.0</td>
<td>DAKOTA FORMATION</td>
</tr>
</tbody>
</table>

* * * *
### Location Information

Legal Location: SE SE SE NE SEC. 08, T. 042 N., R. 31 W.

- County: MELLETTE
- Basin: WHITE
- Hydrologic Unit Code: 10140203

| Land Owner: | Longitude: 101 01' 13"
|-------------|-----------------
| Ground Surface Elevation (ft.): 2253 T |

### Project Information

- Project: MELLETTE-TODD CO. STUDY
- Drill Date: 07/08/1996
- Company: SDGS
- Drilling Method: ROTARY
- Test Hole Number: R2-96-21

<table>
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<tr>
<th>Samples:</th>
<th>Total Drill Hole Depth (ft.): 62.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geologist: R. HAMMOND</td>
<td></td>
</tr>
<tr>
<td>Geologist's Log: X</td>
<td></td>
</tr>
<tr>
<td>Driller: G. JENSEN</td>
<td></td>
</tr>
<tr>
<td>Driller's Log:</td>
<td></td>
</tr>
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</table>

### Geophysical Information

- Spontaneous Potential: 
- Natural Gamma: 
- Single Point Resistivity: 
- Extra: 

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2253.00 - 2225.00</td>
<td>0.0 - 28.0</td>
<td>SILTSTONE, YELLOWISH-GRAY (5YR 7/2), CLAYEY; SOME EUHEDRAL GYPSUM; CALCAREOUS, MASSIVE (CHADRON FORMATION)</td>
</tr>
<tr>
<td>2225.00 - 2215.00</td>
<td>28.0 - 38.0</td>
<td>GRAVEL, LIGHT-OLIVE-GRAY, MEDIUM-GRAINED, SUBANGULAR TO SUBROUNDED, SILTY, SANDY; CALCAREOUS; COMPOSED OF WHITE SILTSTONE, SHALE, AND QUARTZ CLASTS (CHADRON FORMATION)</td>
</tr>
<tr>
<td>2215.00 - 2191.00</td>
<td>38.0 - 62.0</td>
<td>CLAYSTONE, DARK-GREENISH-GRAY; CALCAREOUS, FISSILE (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
**Location Information**

Legal Location: NE NW NE SEC. 34, T. 042 N., R. 31 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140202  
Land Owner: C. CHAMBERLAIN

Location: 042N-31W-34ABA  
Latitude: 43 34' 35"  
Longitude: 100 59' 11"  
Ground Surface Elevation (ft.): 2350 T

**Project Information**

Project:  
Drill Date:  
Company: HURON DRILLING  
Drilling Method:  
Test Hole Number:  
Samples:  
Geologist:  
Geologist's Log:  
Driller:  
Driller's Log:X  
Total Drill Hole Depth (ft.): 2300.0

**Well Information**

SDGS Well Name:  
Water Rights Well:  
Other Well Name: PRIVATE  
Casing Type:  
Screen Type:  
Total Casing and Screen (ft.):  
Well Maintenance Date:  
Aquifer:  
Management Unit:  
Casing Top Elevation:  
Casing Diameter (in.):  
Screen Length (ft.):  
Casing Stick-up (ft.):

**Geophysical Information**

Spontaneous Potential: X  
Natural Gamma:  
Single Point Resistivity: X  
Extra:

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2350.00 - 1056.00</td>
<td>0.0 - 1294.0</td>
<td>PIERRE SHALE</td>
</tr>
<tr>
<td>1056.00 - 930.00</td>
<td>1294.0 - 1420.0</td>
<td>NIOBRARA FORMATION</td>
</tr>
<tr>
<td>930.00 - 590.00</td>
<td>1420.0 - 1760.0</td>
<td>CARLILE SHALE</td>
</tr>
<tr>
<td>590.00 - 470.00</td>
<td>1760.0 - 1880.0</td>
<td>GREENHORN LIMESTONE</td>
</tr>
<tr>
<td>470.00 - 270.00</td>
<td>1880.0 - 2080.0</td>
<td>GRANEROS SHALE</td>
</tr>
<tr>
<td>270.00 - 50.00</td>
<td>2080.0 - 2300.0</td>
<td>DAKOTA FORMATION</td>
</tr>
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</table>

...
Location Information

Legal Location: SE SE SE NE SEC. 02, T. 042 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10110202
Land Owner:

Location: 042N-33W-02ADDD
Latitude: 43° 38' 37"
Longitude: 101° 11' 59"
Ground Surface Elevation (ft.): 2323 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 08/18/1992
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-92-34
Driller: D. IVerson
Geologist: M. JARRETT

Geologist's Log: X
Driller's Log:

Total Drill Hole Depth (ft.): 65.0

Samples:

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra:

HOLE CORED FROM 8 TO 65 FEET. HOLE ABANDONMENT: TREME PIPE TO 47 FEET, BENTONITE GROUT 65 FEET TO SURFACE. TWO BAGS GRANULES USED. TOP 5 FEET CEMENTED 10/92.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>2323.00-2319.00</td>
<td>0.0-4.0</td>
<td>CLAY, BROWN, SILTY</td>
</tr>
<tr>
<td>2319.00-2315.00</td>
<td>4.0-8.0</td>
<td>CLAY, TAN, SILTY</td>
</tr>
<tr>
<td>2315.00-2311.00</td>
<td>8.0-12.0</td>
<td>CLAY, TAN, BROWN AND ORANGE; 4 FEET CORE</td>
</tr>
<tr>
<td>2311.00-2308.00</td>
<td>12.0-15.0</td>
<td>SAND; NO CORE</td>
</tr>
<tr>
<td>2308.00-2292.00</td>
<td>15.0-31.0</td>
<td>GRAVEL AND SAND, MEDIUM SAND TO COARSE GRAVEL; NO CORE</td>
</tr>
<tr>
<td>2292.00-2288.00</td>
<td>31.0-35.0</td>
<td>CLAY, VARIEGATED RED, BROWN, ORANGE AND TAN; 3 FEET CORE</td>
</tr>
<tr>
<td>2288.00-2283.00</td>
<td>35.0-40.0</td>
<td>CLAY, VARIEGATED RED, BROWN, ORANGE AND TAN; 5 FEET CORE</td>
</tr>
<tr>
<td>2283.00-2268.00</td>
<td>40.0-55.0</td>
<td>CLAY, VARIEGATED RED, BROWN, ORANGE, TAN, LIGHT-GRAY TO BLUE; 15 FEET CORE</td>
</tr>
<tr>
<td>2268.00-2263.00</td>
<td>55.0-60.0</td>
<td>CLAY, LIGHT- TO DARK-GRAY-BROWN; 5 FEET CORE</td>
</tr>
<tr>
<td>2263.00-2258.00</td>
<td>60.0-65.0</td>
<td>CLAY, DARK-GRAY; 5 FEET CORE (PIERRE SHALE)</td>
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* * * *
Location Information

Legal Location: NE NE NW NW SEC. 25, T. 042 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Location: 042N-33W-25BBAA
Latitude: 43 35' 30"
Longitude: 101 11' 43"
Ground Surface Elevation (ft.): 2333 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 08/25/1992
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-92-35
Samples:

Geologist: R. HAMMOND/M. JARRETT
Driller: D. IVerson
Driller's Log:
Geologist's Log:

Total Drill Hole Depth (ft.): 247.0

THIS TEST WAS CONSIDERED TWO HOLES BY DRILLER, THEREFORE IT IS BOTH R20-92-35 AND R20-92-36. TWO 'E' LOGS EXIST: R20-92-35 AND R20-92-35A. PLUGGED FROM TOTAL DEPTH TO TOP WITH HIGH SOLIDS BENTONITE, SETTLED FOR TWO DAYS, FILLED WITH BENTONITE CRUMBLES TO 8 FEET, CEMENT FROM 8 FEET TO SURFACE.

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
2333.00-2316.00 | 0.0 - 17.0 | SILTSTONE, TAN TO REDDISH-BROWN, SANDY, SILTY; NONCALCAREOUS TO MODERATELY CALCAREOUS, NUMEROUS WHITE SUB- ANGULAR TO SUBROUNDED CALCAREOUS PEBBLES, UP TO 1.5 INCHES IN DIAMETER, MASSIVE, SOME CARBONACEOUS PARTING
2316.00-2302.00 | 17.0 - 31.0 | CLAYSTONE, WHITE TO LIGHT-BROWNISH-GRAY, SILTY; NONCALCAREOUS, SOME GRAY MOTTLES NEAR BASE
2302.00-2289.00 | 31.0 - 44.0 | CLAYSTONE, GRAYISH-GREEN, SLIGHTLY SILTY; MASSIVE, NONCALCAREOUS
2289.00-2256.00 | 44.0 - 77.0 | CLAYSTONE, LIGHT-OLIVE-GRAY; NON- CALCAREOUS, GRADES TO SLIGHTLY SILTY GRAYISH-OLIVE CLAYSTONE BELOW 52 FEET, MASSIVE; SAND FROM 76 TO 77 FEET, VERY COARSE TO COARSE, QUARTZOSE, SUBROUNDED (CHADRON FORMATION?)
2256.00-2242.00 | 77.0 - 91.0 | CLAYSTONE AND SILTSTONE, GREENISH-GRAY TO DARK-GREENISH-GRAY; MASSIVE, INTER- BEDDED, NONCALCAREOUS (CHADRON FORMATION?)
2242.00-2210.00 | 91.0 - 123.0 | CLAY, DARK-YELLOWISH-ORANGE MOTTLED WITH GRAY, RED AND PINK; NONCALCAREOUS, MASSIVE, GRADES TO YELLOWISH-BROWN FISSILE CLAYSTONE BY 100 FEET, DARK- YELLOWISH-ORANGE AND GREENISH-GRAY TO 110 FEET; PRIMARILY OLIVE-BLACK BY 120 FEET, WEATHERED (PIERRE SHALE)
2210.00 - 2086.00 123.0 - 247.0 SHALE, OLIVE-BLACK, SLIGHTLY SILTY; SLIGHTLY TO MODERATELY CALCAREOUS; POORLY FISSILE, BENTONITE LENSES AND CONCRETIONS NEAR 133 AND 135 FEET; WHITE BENTONITE AT 189 TO 191 FEET (MOBRIDGE MEMBER - PIERRE SHALE)

* * * *
Location Information

Legal Location: NW NW NW SE SEC. 07, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 043N-25W-07DBBB
Latitude: 43° 43' 00"
Longitude: 100° 20' 23"
Ground Surface Elevation (ft.): 1680 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Driller:
Drilling Method: 
Test Hole Number: 
Samples: 

Total Drill Hole Depth (ft.): 22.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra:

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<th>Depth (ft.)</th>
<th>Description</th>
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<td>TOPSOIL; SILT</td>
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<tr>
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<td>6.0-9.0</td>
<td>SILT AND SAND, COARSE SAND</td>
</tr>
<tr>
<td>1671.00-1669.00</td>
<td>9.0-11.0</td>
<td>SAND, FINE; SOME SMALL GRAVEL</td>
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<tr>
<td>1669.00-1665.00</td>
<td>11.0-15.0</td>
<td>SAND, TAN, MEDIUM</td>
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<tr>
<td>1665.00-1663.00</td>
<td>15.0-17.0</td>
<td>SAND, BROWN, MEDIUM</td>
</tr>
<tr>
<td>1663.00-1660.00</td>
<td>17.0-20.0</td>
<td>GRAVEL, MEDIUM TO LARGE</td>
</tr>
<tr>
<td>1660.00-1658.00</td>
<td>20.0-22.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SW NE NE SW SEC. 09, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:
Location: 043N-25W-09CAAC
Latitude: 43 42' 57"
Longitude: 100 18' 08"
Ground Surface Elevation (ft.): 1660 T

Project Information

Project: USBR
Drill Date: 05/21/1954
Company: USBR
Drilling Method: X
Test Hole Number:
Samples:
Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 30.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

DEPTH TO WATER: 17.0 FEET MEASURED 05-21-1954.

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<th>Description</th>
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<td>0.0 - 1.0</td>
<td>LOAM</td>
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<td>1659.00 - 1658.50</td>
<td>1.0 - 1.5</td>
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<td>1.5 - 2.5</td>
<td>LOAM, VERY FINE, SANDY</td>
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<td>1657.50 - 1654.50</td>
<td>2.5 - 5.5</td>
<td>LOAM, CLAYEY</td>
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<td>1654.50 - 1653.50</td>
<td>5.5 - 6.5</td>
<td>LOAM, FINE, SANDY</td>
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<td>1653.50 - 1651.00</td>
<td>6.5 - 9.0</td>
<td>LOAM, LIGHT, CLAYEY</td>
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<tr>
<td>1651.00 - 1648.00</td>
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<td>LOAM, FINE, SANDY</td>
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<tr>
<td>1648.00 - 1643.00</td>
<td>12.0 - 17.0</td>
<td>LOAM, SANDY</td>
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<tr>
<td>1643.00 - 1638.00</td>
<td>17.0 - 22.0</td>
<td>GRAVEL AND LOAM, COARSE GRAVEL, SANDY LOAM</td>
</tr>
<tr>
<td>1638.00 - 1630.00</td>
<td>22.0 - 30.0</td>
<td>SHALE</td>
</tr>
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* * * *
**Location Information**

Legal Location: NE SW NE SW SEC. 09, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 043N-25W-09CACA
Latitude: 43 42' 53"
Longitude: 100 18' 13"
Ground Surface Elevation (ft.): 1662 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/10/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-33
Samples:

Geologist: R. HAMMOND
Driller: G. JENSEN
Total Drill Hole Depth (ft.): 28.0

**Well Information**

SDGS Well Name: R2-96-33
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80
Screen Type: PVC, MFG., 0.018 IN. SLOT
Total Casing and Screen (ft.): 24.0
Well Maintenance Date:

Casing Top Elevation: 1664.00 T
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 2.00

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL WAS FILTER PACKED FROM 28 TO 10 FEET WITH GRADED SAND; GROUTED FROM 10 FEET TO LAND SURFACE WITH NEAT CEMENT GROUT.

**Elevation (ft.)**

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1662.00-1660.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, BROWN</td>
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<tr>
<td>1660.00-1652.00</td>
<td>2.0-10.0</td>
<td>SILT, BROWN (ALLUVIUM)</td>
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<tr>
<td>1652.00-1638.00</td>
<td>10.0-24.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>1638.00-1634.00</td>
<td>24.0-28.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NE SE NE SW SEC. 09, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: Location: 043N-25W-09CADA
Latitude: 43 42' 54"
Longitude: 100 18' 02"
Ground Surface Elevation (ft.): 1655 T

Project Information

Project: WATER RIGHTS
Drill Date: 08/08/1957
Company: GRIMSHAW DRILLING
Drilling Method: Geologist: D. DRISCOLL
Test Hole Number: Driller: J. HUTMACHER
Samples: Driller's Log:

Well Information

SDGS Well Name: Aquifer: ALLUVIUM
Water Rights Well: MT-57B Management Unit:
Other Well Name: W-4 Casing Top Elevation:
Casing Type: STEEL Casing Diameter (in.): 1.5
Screen Type: STEEL Screen Length (ft.):
Total Casing and Screen (ft.): 26.8 Casing Stick-up (ft.): 1.10
Well Maintenance Date: 06/21/1984

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

TWO SIZES OF CASING IN THIS WELL, 6 FEET OF 1.5 INCHES AND THE REST IS 1.25 INCHES.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>1655.00 - 1643.00</td>
<td>0.0 - 12.0</td>
<td>SAND, SILTY</td>
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<tr>
<td>1643.00 - 1632.00</td>
<td>12.0 - 23.0</td>
<td>SAND, FINE</td>
</tr>
<tr>
<td>1632.00 - 1625.00</td>
<td>23.0 - 30.0</td>
<td>CLAY (SHALE)</td>
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* * *
**Location Information**

Legal Location: NE SE NE SW SEC. 09, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 1014204
Land Owner:

Location: 043N-25W-09CADA 1
Latitude: 43 42' 57"
Longitude: 100 18' 08"
Ground Surface Elevation (ft.): 1655 T

**Project Information**

Project: USGS
Drill Date: 08/17/1966
Company: USGS
Drilling Method:
Test Hole Number: 043N25W09CADA 1
Driller: 01/31/2005
Geologist: Geologist's Log:
Driller: Driller's Log:
Total Drill Hole Depth (ft.): 34.0

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Samples:
Single Point Resistivity:
Extra:

DEPTH TO WATER: ABOUT 7 FEET ON 08-17-1966.

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<tbody>
<tr>
<td>1655.00 - 1650.00</td>
<td>0.0 - 5.0</td>
<td>SILT</td>
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<td>1650.00 - 1645.00</td>
<td>5.0 - 10.0</td>
<td>SAND, MEDIUM</td>
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<tr>
<td>1645.00 - 1637.00</td>
<td>10.0 - 18.0</td>
<td>SAND, BROWN, VERY COARSE</td>
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<tr>
<td>1637.00 - 1631.00</td>
<td>18.0 - 24.0</td>
<td>SAND, GRAY, VERY COARSE, SILTY</td>
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<td>1631.00 - 1621.00</td>
<td>24.0 - 34.0</td>
<td>SAND; GRAY SHALE</td>
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* * * *
**Location Information**

Legal Location: NE NW SE SW SEC. 09, T. 043 N., R. 25 W.

County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140204  
Land Owner:

Location: 043N-25W-09CDBA  
Latitude: 43 42' 47"  
Longitude: 100 18' 12"

Ground Surface Elevation (ft.): 1660 T

**Project Information**

Project: USGS  
Drill Date: 08/17/1966  
Company: USGS  
Drilling Method: X  
Test Hole Number:  
Samples:

Geologist:

Geologist's Log:

Driller:

Driller's Log:

Total Drill Hole Depth (ft.): 27.0

**Geophysical Information**

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:

DEPTH TO WATER: ABOUT 14 FEET ON 08-17-1966.

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<td>SILT</td>
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<tr>
<td>1658.00-1651.00</td>
<td>2.0-9.0</td>
<td>CLAY, BROWN</td>
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<tr>
<td>1651.00-1646.00</td>
<td>9.0-14.0</td>
<td>SAND, FINE</td>
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<tr>
<td>1646.00-1638.00</td>
<td>14.0-22.0</td>
<td>SAND AND GRAVEL, MEDIUM TO COARSE SAND, MEDIUM GRAVEL</td>
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<tr>
<td>1638.00-1634.00</td>
<td>22.0-26.0</td>
<td>GRAVEL AND SAND, FINE TO MEDIUM GRAVEL, COARSE SAND</td>
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<td>1634.00-1633.00</td>
<td>26.0-27.0</td>
<td>SHALE, DARK-GRAY</td>
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Spontaneous Potential: 
Natural Gamma: 
Samples: 

Longitude:Hydrologic Unit Code:10140204 
Test Hole Number: 

Latitude:County: 
South Dakota Basin: 
Land Owner: 
Ground Surface Elevation (ft.):1600 T

Project Information

Project:USGS 
Drill Date:08/17/1966 
Company:USGS 
Drilling Method: 
Test Hole Number: 

Ground Surface Elevation (ft.):1600 T 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 

Single Point Resistivity: 
Extra: 

DEPTH TO WATER: ABOUT 15 FEET ESTIMATED 08-17-1966.

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<td>0.0 - 4.0</td>
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<td>1596.00 - 1586.00</td>
<td>4.0 - 14.0</td>
<td>CLAY, BROWN</td>
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<td>1586.00 - 1581.00</td>
<td>14.0 - 19.0</td>
<td>SAND, MEDIUM TO FINE, SILTY</td>
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<tr>
<td>1581.00 - 1575.00</td>
<td>19.0 - 25.0</td>
<td>SAND AND GRAVEL, MEDIUM TO COARSE SAND, MEDIUM GRAVEL</td>
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<tr>
<td>1575.00 - 1570.00</td>
<td>25.0 - 30.0</td>
<td>GRAVEL, MEDIUM TO LARGE</td>
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<td>1570.00 - 1563.00</td>
<td>30.0 - 37.0</td>
<td>SHALE, DARK-GRAY</td>
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Messages from
Location Information

Legal Location: NE SE NW NW SEC. 16, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 043N-25W-16BBDA
Latitude: 43 42' 29"
Longitude: 100 18' 21"
Ground Surface Elevation (ft.): 1670 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Driller: 
Drilling Method: 
Test Hole Number: 043N-25W-16BBDA
Total Drill Hole Depth (ft.): 32.0
Samples: 

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 

Single Point Resistivity: 
Extra: 

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<th>Description</th>
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<tr>
<td>1660.00-1651.00</td>
<td>10.0-19.0</td>
<td>CLAY, BROWN</td>
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<td>1651.00-1641.00</td>
<td>19.0-29.0</td>
<td>SILT, SANDY</td>
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<td>1641.00-1639.00</td>
<td>29.0-31.0</td>
<td>SILT, BROWN, CLAYEY; MOIST AT 30 FEET</td>
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<td>1639.00-1638.00</td>
<td>31.0-32.0</td>
<td>CLAY, DARK-BROWN; SHALE, DARK-GRAY, BIT SAMPLE</td>
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Location Information

Legal Location: NW NW NW SE SEC. 17, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-25W-17DBBB
Latitude: 43 42' 09"
Longitude: 100 19' 12"
Ground Surface Elevation (ft.): 1844 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/27/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-34

Driller: J. REZAC
Driller’s Log:
Geologist: M. JARRETT
Geologist’s Log: X

Total Drill Hole Depth (ft.): 23.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<tr>
<td>1840.00–1838.00</td>
<td>4.0–6.0</td>
<td>SAND, LIGHT-BROWN, MEDIUM, CLAYEY</td>
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<tr>
<td>1838.00–1828.00</td>
<td>6.0–16.0</td>
<td>SAND, LIGHT-BROWN, MEDIUM; SOME GRAVEL TO ONE HALF INCH IN DIAMETER</td>
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<td>1828.00–1824.00</td>
<td>16.0–20.0</td>
<td>GRAVEL; WITH DARK-BROWN CLAY; SATURATED AT APPROXIMATELY 17 FEET</td>
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<td>1824.00–1821.00</td>
<td>20.0–23.0</td>
<td>SHALE, BLACK</td>
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**Location Information**

Legal Location: SE SE NE NE Sec. 22, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 
Location: 043N-25W-22AADD
Latitude: 43 41' 35"
Longitude: 100 16' 14"
Ground Surface Elevation (ft.): 1833

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/27/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-35
Driller: G. DUCHOSSOIS
Geologist: M. JARRETT
Driller's Log:
Geologist's Log:
Total Drill Hole Depth (ft.): 33.0

**Geophysical Information**

- Spontaneous Potential: Extra:
- Natural Gamma: Single Point Resistivity:

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1833.00-1831.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, BROWN</td>
</tr>
<tr>
<td>1831.00-1829.00</td>
<td>2.0-4.0</td>
<td>CLAY, BROWN, SANDY, SILTY</td>
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<tr>
<td>1829.00-1826.00</td>
<td>4.0-7.0</td>
<td>SAND, YELLOWISH-BROWN, VERY CLAYEY; DRY</td>
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<td>7.0-10.0</td>
<td>SAND, YELLOWISH-BROWN, FINE TO MEDIUM; DRY</td>
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<tr>
<td>1823.00-1818.00</td>
<td>10.0-15.0</td>
<td>CLAY, DARK-YELLOWISH-BROWN, SILTY, SANDY; DRY</td>
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<td>15.0-17.0</td>
<td>SAND, YELLOWISH-BROWN, FINE TO MEDIUM; DRY</td>
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<tr>
<td>1816.00-1814.00</td>
<td>17.0-19.0</td>
<td>CLAY, YELLOWISH-BROWN, SILTY</td>
</tr>
<tr>
<td>1814.00-1808.00</td>
<td>19.0-25.0</td>
<td>SAND AND GRAVEL, YELLOWISH-BROWN, FINE SAND TO GRAVEL ONE AND ONE HALF INCHES IN DIAMETER; DRY</td>
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<tr>
<td>1808.00-1806.00</td>
<td>25.0-27.0</td>
<td>CLAY, DARK-YELLOWISH-BROWN, SANDY, PEBBLY; SATURATED AT 26 FEET (REWORKED SHALE?)</td>
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<tr>
<td>1806.00-1804.00</td>
<td>27.0-29.0</td>
<td>CLAY, DARK-YELLOWISH-BROWN, SILTY; SATURATED (REWORKED SHALE)</td>
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<td>1804.00-1800.00</td>
<td>29.0-33.0</td>
<td>CLAYSTONE, DARK-GRAY; SATURATED (PIERRE SHALE)</td>
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### Location Information

- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140204
- **Land Owner:**

### Project Information

- **Project:** USGS
- **Drill Date:**
- **Company:** USGS
- **Drilling Method:**
- **Test Hole Number:**
- **Samples:**
- **Geologist:**
- **Geologist's Log:**
- **Driller:**
- **Driller's Log:** X
- **Total Drill Hole Depth (ft.):** 22.0

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

### Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
1970.00 - 1968.00 | 0.0 - 2.0 | CLAY, BROWN
1968.00 - 1966.00 | 2.0 - 4.0 | SAND, MEDIUM
1966.00 - 1960.00 | 4.0 - 10.0 | GRAVEL AND SAND, MEDIUM GRAVEL, COARSE SAND
1960.00 - 1956.00 | 10.0 - 14.0 | SAND AND GRAVEL, COARSE SAND, MEDIUM GRAVEL
1956.00 - 1952.00 | 14.0 - 18.0 | CLAY, YELLOW-BROWN
1952.00 - 1950.00 | 18.0 - 20.0 | CLAY, DARK-BROWN
1950.00 - 1948.00 | 20.0 - 22.0 | SHALE, DARK-GRAY

* * * *
**Location Information**

Legal Location: SE SW SE SE SEC. 31, T. 043 N., R. 25 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-25W-31DDCD
Latitude: 43° 39' 08"
Longitude: 100° 20' 10"
Ground Surface Elevation (ft.): 2050 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/21/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-29

Geologist: M. JARRETT
Driller: G. DUCHOSSOIS
Driller's Log: X
Total Drill Hole Depth (ft.): 33.0

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<td>SAND, YELLOW-BROWN, FINE TO MEDIUM, GRAVELLY AT BASE, DRY</td>
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<td>2044.00 - 2041.00</td>
<td>6.0 - 9.0</td>
<td>CLAY, YELLOWISH-BROWN, SANDY</td>
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<td>2041.00 - 2030.00</td>
<td>9.0 - 20.0</td>
<td>SAND AND GRAVEL, YELLOWISH-BROWN, FINE SAND TO FINE PEBBLE GRAVEL; HIGHLY QUARTZOSE SAND, DRY</td>
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<td>2030.00 - 2027.00</td>
<td>20.0 - 23.0</td>
<td>SILT, YELLOWISH-BROWN, VERY CLAYEY AND SANDY; SAND IS FINE-GRAINED, DRY</td>
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<td>2027.00 - 2025.00</td>
<td>23.0 - 25.0</td>
<td>CLAY, YELLOWISH-BROWN, SILTY; CALCAREOUS</td>
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<td>25.0 - 27.0</td>
<td>CLAYSTONE, YELLOWISH-BROWN; CALCAREOUS, WEATHERED (PIERRE SHALE)</td>
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<td>27.0 - 29.0</td>
<td>CLAYSTONE, GRAY AND YELLOWISH-BROWN; CALCAREOUS, WEATHERED (PIERRE SHALE)</td>
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<td>29.0 - 33.0</td>
<td>CLAYSTONE, DARK-GRAY; SLIGHTLY CALCAREOUS (PIERRE SHALE)</td>
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### Location Information

- **Legal Location:** SE SE SE Sec. 32, T. 043 N., R. 25 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140204
- **Land Owner:**
- **Location:** 043N-25W-32DDDD
- **Latitude:** 43° 39' 10"
- **Longitude:** 100° 18' 37"
- **Ground Surface Elevation (ft.):** 2017 T

### Project Information

- **Project:** USGS
- **Drill Date:** 01/31/2005
- **Company:** USGS
- **Driller:**
- **Drilling Method:**
- **Test Hole Number:**
- **Total Drill Hole Depth (ft.):** 102.0
- **Samples:**
- **Geologist:**
- **Geologist's Log:**
- **Driller:**
- **Driller's Log:** X

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

### Geophysical Information

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<th>Description</th>
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<td>TOPSOIL AND SAND, FINE SAND</td>
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<td>2016.00 - 2014.00</td>
<td>1.0 - 3.0</td>
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<td>2014.00 - 2007.00</td>
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<td>SAND, LIGHT-TAN, FINE TO MEDIUM</td>
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<td>2007.00 - 2003.00</td>
<td>10.0 - 14.0</td>
<td>SAND, VERY FINE TO FINE</td>
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<tr>
<td>2003.00 - 1993.00</td>
<td>14.0 - 24.0</td>
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<td>1993.00 - 1967.00</td>
<td>24.0 - 50.0</td>
<td>SAND AND GRAVEL, COARSE TO VERY COARSE SAND, FINE TO COARSE GRAVEL</td>
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<td>1967.00 - 1963.00</td>
<td>50.0 - 54.0</td>
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<td>1940.00 - 1918.00</td>
<td>77.0 - 99.0</td>
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<td>1918.00 - 1915.00</td>
<td>99.0 - 102.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
### Location Information

- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140204
- **Land Owner:**
- **Latitude:** 43 39' 07"
- **Longitude:** 100 18' 37"
- **Ground Surface Elevation (ft.):** 2015 T

### Project Information

- **Project:** MELLETTE-TODD CO. STUDY
- **Drill Date:** 07/21/1993
- **Company:** SDGS
- **Drilling Method:** AUGER
- **Test Hole Number:** A1-93-30
- **Driller:** J. REZAC
- **Geologist:** M. JARRETT
- **Geologist's Log:** X
- **Driller's Log:**
- **Total Drill Hole Depth (ft.):** 30.0

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**
- **Single Point Resistivity:**
- **Extra:**

### Elevation (ft.)

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<td>2013.00-2011.00</td>
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<td>1999.00-1997.00</td>
<td>16.0-18.0</td>
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Location Information

Legal Location: NE SW SW SW SEC. 06, T. 043 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-26W-06CCCA
Latitude: 43 43' 34"
Longitude: 100 28' 05"
Ground Surface Elevation (ft.): 1700 T

Project Information

Project: USBR
Drill Date: 05/21/1964
Company: USBR
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 30.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

DEPTH TO WATER: 12 FEET ON 05-21-1964.

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<td>SHALE</td>
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043N26W06CCCA Page 1 01/31/2005
Location Information

Legal Location: NW NW NW SW SEC. 12, T. 043 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 043N-26W-12CBBB
Latitude: 43 43' 01"
Longitude: 100 22' 13"
Ground Surface Elevation (ft.): 1866 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/10/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R-96-36
Samples:

Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log:
Total Drill Hole Depth (ft.): 22.0

Geophysical Information

Spontaneous Potential: Natural Gamma: Single Point Resistivity: Extra:

Elevation (ft.) Depth (ft.) Description
--- --- ---
1866.00-1864.00 0.0 - 2.0 TOPSOIL, BROWN
1864.00-1858.00 2.0 - 8.0 SILT, BROWN
1858.00-1849.00 8.0 - 17.0 SAND AND GRAVEL
1849.00-1844.00 17.0 - 22.0 SHALE, BLACK (PIERRE SHALE)

* * * *
Location Information

Legal Location: NW NW SW SW SEC. 24, T. 043 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-26W-24CCBB
Latitude: 43 41' 03"
Longitude: 100 22' 13"
Ground Surface Elevation (ft.): 1997 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/10/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-35

Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log: 
Total Drill Hole Depth (ft.): 42.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<td>1984.00 - 1955.00</td>
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<td>SHALE, BLACK (PIERRE SHALE)</td>
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Location Information

Legal Location: SE SE NE SEC. 33, T. 043 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: J. TILL

Project Information

Project:
Drill Date:
Company: HURON DRILLING
Drilling Method:
Test Hole Number:
Samples:

Well Information

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type:
Screen Type:
Total Casing and Screen (ft.):
Well Maintenance Date:

Geophysical Information

Spontaneous Potential: X
Natural Gamma:

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<td>714.0 - 844.0</td>
<td>NIOBRARA FORMATION</td>
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<td>844.0 - 1223.0</td>
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<td>677.00 - 570.00</td>
<td>1223.0 - 1330.0</td>
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<td>1330.0 - 1510.0</td>
<td>GRANEROS SHALE</td>
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<td>1510.0 - 1813.0</td>
<td>DAKOTA FORMATION</td>
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Location Information

Legal Location: NW NW SW SW SEC. 36, T. 043 N., R. 26 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-26W-36CCBB
Latitude: 43 39' 19"
Longitude: 100 22' 13"
Ground Surface Elevation (ft.): 2043 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/10/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-34
Samples:

Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log: 
Total Drill Hole Depth (ft.): 22.0

Geophysical Information

Spontaneous Potential:
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<td>2027.00-2021.00</td>
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<td>SHALE, BLACK (PIERRE SHALE)</td>
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**Location Information**

Legal Location: SE SE SE NE SEC. 08, T. 043 N., R. 27 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-27W-08ADDD
Latitude: 43 43' 04"
Longitude: 100 33' 00"
Ground Surface Elevation (ft.): 1968 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/27/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-38
Samples:

Geologist: M. JARRETT
Geologist's Log: X
Driller: J. REZAC
Driller's Log:
Total Drill Hole Depth (ft.): 48.0

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

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<td>SAND WITH SHALE PEBBLES</td>
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<td>1925.00-1920.00</td>
<td>43.0-48.0</td>
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Location Information

Legal Location: NE NW NW NW SEC. 21, T. 043 N., R. 27 W.
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140204  
Land Owner: 

Location: 043N-27W-21BBBA  
Latitude: 43 41' 46"  
Longitude: 100 32' 52"  
Ground Surface Elevation (ft.): 2065 T

Project Information

Project: MELLETTE-TODD CO. STUDY  
Drill Date: 07/27/1993  
Company: SDGS  
Drilling Method: AUGER  
Test Hole Number: A1-93-37  
Samples: 

Geologist: M. JARRETT  
Driller's Log: X  
Driller: G. DUCHOSOIS  
Total Drill Hole Depth (ft.): 33.0

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra: 

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<td>SAND AND GRAVEL, YELLOWISH-BROWN, FINE SAND TO ONE-INCH PEBBLES, CLAYEY FROM 8 TO 10 FEET</td>
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<td>SAND, YELLOWISH-BROWN, FINE</td>
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<td>2048.00-2036.00</td>
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**Location Information**

Legal Location: SW SW SEC. 27, T. 043 N., R. 27 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140204  
Land Owner: H. SHERWOOD  

Location: 043N-27W-27CC  
Latitude: 43° 40' 07"  
Longitude: 100° 31' 37"  
Ground Surface Elevation (ft.): 2140 T

**Project Information**

Project:  
Drill Date: 12/28/1984  
Company: JURACEK WELL BORING  
Drilling Method: BORED  
Test Hole Number:  
Samples:  

Geologist:  
Geologist's Log:  
Driller:  
Driller's Log: X  
Total Drill Hole Depth (ft.): 84.0

**Well Information**

SDGS Well Name:  
Water Rights Well:  
Other Well Name: PRIVATE  
Casing Type: CEMENT  
Screen Type: HAYDITE TILE  
Total Casing and Screen (ft.):  
Well Maintenance Date:  

Aquifer:  
Management Unit:  
Casing Top Elevation:  
Casing Diameter (in.):  
Screen Length (ft.): 30.0  
Casing Stick-up (ft.):

**Geophysical Information**

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

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<td>53.0 - 80.0</td>
<td>SAND AND WATER</td>
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<td>80.0 - 84.0</td>
<td>SHALE</td>
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### Location Information

| Legal Location: NE SE SEC. 30, T. 043 N., R. 27 W. | Hydrologic Unit Code: 10140204 |
| County: MELLETTE | Basin: WHITE |
| | Hydrologic Unit Code: 10140204 |
| Land Owner: D. OBRYAN | Location: 043N-27W-30DA |
| | Longitude: 100 34' 19" |
| | Ground Surface Elevation (ft.): 2100 T |

### Project Information

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<th>SDGS Well Name:</th>
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<tbody>
<tr>
<td>Drill Date: 09/14/1984</td>
<td>Geologist:</td>
</tr>
<tr>
<td>Company: SUMMERS DRILLING</td>
<td>Geologist's Log:</td>
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<tr>
<td>Drilling Method: BORED</td>
<td>Driller:</td>
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<tr>
<td>Test Hole Number:</td>
<td>Driller's Log: X</td>
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<td>Samples:</td>
<td>Total Drill Hole Depth (ft.): 30.0</td>
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### Well Information

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<td>Other Well Name: PRIVATE</td>
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<tr>
<td>Casing Type: CEMENT TILE</td>
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<td>Screen Type:</td>
<td>Screen Length (ft.):</td>
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<td>Total Casing and Screen (ft.):</td>
<td>Casing Stick-up (ft.):</td>
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### Geophysical Information

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<thead>
<tr>
<th>Spontaneous Potential:</th>
<th>Single Point Resistivity:</th>
</tr>
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<tbody>
<tr>
<td>Natural Gamma:</td>
<td>Extra:</td>
</tr>
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### Elevation (ft.) | Depth (ft.) | Description |
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<tr>
<td>2100.00-2099.00</td>
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<td>TOPSOIL</td>
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<tr>
<td>2099.00-2090.00</td>
<td>1.0-10.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>2090.00-2070.00</td>
<td>10.0-30.0</td>
<td>CLAY, GRAVEL AND SHALE</td>
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</tr>
</tbody>
</table>
Location Information

Legal Location: SW SW SW NW SEC. 01, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-28W-01BCCC
Latitude: 43 43' 55"
Longitude: 100 36' 33"
Ground Surface Elevation (ft.): 1968 T

Project Information

Project: USGS
Drill Date:
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Driller:
Geologist's Log:
Driller's Log: X
Total Drill Hole Depth (ft.): 30.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
1968.00-1965.00 | 0.0-3.0 | TOPSOIL
1965.00-1959.00 | 3.0-9.0 | SILT, SANDY
1959.00-1954.00 | 9.0-14.0 | SAND, FINE TO MEDIUM
1954.00-1949.00 | 14.0-19.0 | SAND AND GRAVEL, MEDIUM SAND, MEDIUM GRAVEL
1949.00-1946.00 | 19.0-22.0 | SAND AND GRAVEL, COARSE
1946.00-1938.00 | 22.0-30.0 | CLAY, LIGHT-TAN; DARK-GRAY SHALE, BIT SAMPLE
* * * *
Location Information
Legal Location: SE SE NE SEC. 02, T. 043 N., R. 28 W.
County: MELLEETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 
Location: 043N-28W-02ADDD
Latitude: 43 43' 56"
Longitude: 100 36' 36"
Ground Surface Elevation (ft.): 1965 T

Project Information
Project: MELLEETTE-TODD CO. STUDY
Drill Date: 07/28/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-41
Samples: 
Driller: G. DUCHOSSOIS
Geologist: M. JARRETT
Driller's Log: X
Geologist's Log: 
Total Drill Hole Depth (ft.): 28.0

Geophysical Information
Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>1965.00 - 1961.00</td>
<td>0.0 - 4.0</td>
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<tr>
<td>1961.00 - 1958.00</td>
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<td>1958.00 - 1954.00</td>
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<td>1954.00 - 1945.00</td>
<td>11.0 - 20.0</td>
<td>SAND, YELLOWISH-BROWN, FINE TO MEDIUM; SOME FINE PEBBLES, DRY</td>
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<td>1945.00 - 1943.00</td>
<td>20.0 - 22.0</td>
<td>SAND, MODERATE-BROWN, FINE TO MEDIUM, CLAYEY</td>
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<tr>
<td>1943.00 - 1940.00</td>
<td>22.0 - 25.0</td>
<td>GRAVEL, FINE; MOSTLY SHALE PEBBLES</td>
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<tr>
<td>1940.00 - 1937.00</td>
<td>25.0 - 28.0</td>
<td>CLAYSTONE, DARK-GRAY (PIERRE SHALE)</td>
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* * * *
Location Information

Legal Location: SW SE SE SW SEC. 03, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:
Location: 043N-28W-03CDDC
Latitude: 43 43' 31"
Longitude: 100 38' 34"
Ground Surface Elevation (ft.): 1975 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/28/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: AI-93-40
Samples:
Geologist: M. JARRETT
Geologist's Log: X
Driller: J. REZAC
Driller's Log:
Total Drill Hole Depth (ft.): 11.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Description</th>
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<td>1973.00-1970.00</td>
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<td>1970.00-1966.00</td>
<td>5.0-9.0</td>
<td>SAND, LIGHT-YELLOWISH-BROWN, FINE, SILTY</td>
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<td>1966.00-1964.00</td>
<td>9.0-11.0</td>
<td>SILT, LIGHT-OLIVE-GRAY, CLAYEY; DRY</td>
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* * * *
Location Information

Legal Location: SW SW SW SE SEC. 03, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-28W-03DCCC
Latitude: 43 43' 30"
Longitude: 100 38' 23"
Ground Surface Elevation (ft.): 1970 T

Project Information

Project: USGS
Drill Date: 08/15/1966
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Total Drill Hole Depth (ft.): 39.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

DEPTH TO WATER: ABOUT 33 FEET ON 08-15-1966.

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
1970.00 - 1968.00 | 0.0 - 2.0 | SILT
1968.00 - 1955.00 | 2.0 - 15.0 | SAND, LIGHT-BROWN, VERY FINE
1955.00 - 1945.00 | 15.0 - 25.0 | SAND, FINE, SILTY
1945.00 - 1940.00 | 25.0 - 30.0 | SAND AND GRAVEL, MEDIUM SAND, SMALL GRAVEL
1940.00 - 1934.00 | 30.0 - 36.0 | SAND AND GRAVEL, MEDIUM, CLAYEY
1934.00 - 1931.00 | 36.0 - 39.0 | SHALE, DARK-GRAY

* * * *
**Location Information**

Legal Location: SE SE SW SE SEC. 04, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 043N-28W-04DCDD
Latitude: 43 43' 30"
Longitude: 100 39' 19"
Ground Surface Elevation (ft.): 1785 T

**Project Information**

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 1
Samples:

Geologist: A. BARARI
Driller: 
Driller's Log: X

Total Drill Hole Depth (ft.): 28.0

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 

Depth to Water: 10 FEET.

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<tr>
<th>Elevation (ft.)</th>
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<th>Description</th>
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<tr>
<td>1785.00 - 1784.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>1784.00 - 1773.00</td>
<td>1.0 - 12.0</td>
<td>CLAY, YELLOWISH-BROWN</td>
</tr>
<tr>
<td>1773.00 - 1765.00</td>
<td>12.0 - 20.0</td>
<td>CLAY AND GRAVEL</td>
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<tr>
<td>1765.00 - 1760.00</td>
<td>20.0 - 25.0</td>
<td>GRAVEL</td>
</tr>
<tr>
<td>1760.00 - 1757.00</td>
<td>25.0 - 28.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information
Legal Location: NE SW SW SEC. 08, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: Location: 043N-28W-08CCA 1
Longitude: 100 41' 11"
Ground Surface Elevation (ft.): 1785 T

Project Information
Project: USGS
Drill Date: 08/09/1966
Company: USGS
Drilling Method: Driller:
Test Hole Number: Driller's Log: X
Samples:
Total Drill Hole Depth (ft.): 24.0

Geophysical Information
Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

DEPTH TO WATER: 10.5 FEET ON 08-09-1966.

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<tbody>
<tr>
<td>1785.00 - 1778.00</td>
<td>0.0 - 7.0</td>
<td>SILT, WHITE</td>
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<tr>
<td>1778.00 - 1775.00</td>
<td>7.0 - 10.0</td>
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<tr>
<td>1775.00 - 1770.00</td>
<td>10.0 - 15.0</td>
<td>SAND, MEDIUM; CLEAN</td>
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<tr>
<td>1770.00 - 1762.00</td>
<td>15.0 - 23.0</td>
<td>SAND, MEDIUM TO COARSE; CLEAN</td>
</tr>
<tr>
<td>1762.00 - 1761.00</td>
<td>23.0 - 24.0</td>
<td>SHALE, DARK-GRAY</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SE SW SW SEC. 08, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Location: 043N-28W-08CCD
Latitude: 43 42' 39"
Longitude: 100 41' 11"
Ground Surface Elevation (ft.): 1790 T

Project Information

Project: USGS
Drill Date: 08/09/1966
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log: X
Total Drill Hole Depth (ft.): 25.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

DEPT TO WATER: 11.1 FEET ON 08-09-1966.

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
1790.00 - 1783.00 | 0.0 - 7.0 | SILT
1783.00 - 1778.00 | 7.0 - 12.0 | CLAY, LIGHT-BROWN
1778.00 - 1773.00 | 12.0 - 17.0 | SAND, VERY FINE TO FINE
1773.00 - 1766.00 | 17.0 - 24.0 | SAND AND GRAVEL, COARSE SAND, MEDIUM GRAVEL; CLEAN
1766.00 - 1765.00 | 24.0 - 25.0 | SHALE, DARK-GRAY

* * * *
Location Information

Legal Location: SW SE SW SW SEC. 08, T. 043 N., R. 28 W.
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140202  
Land Owner:  
Location: 043N-28W-08CCDC  
Latitude: 43 42' 37"  
Longitude: 100 41' 11"  
Ground Surface Elevation (ft.): 1785 T

Project Information

Project: WATER RIGHTS  
Drill Date: 08/08/1957  
Company: GRIMSHAW DRILLING  
Drilling Method:  
Test Hole Number:  
Samples:  
Geologist: D. DRISCOLL  
Geologist's Log: X  
Driller: J. HUTMACHER  
Driller's Log:  
Total Drill Hole Depth (ft.): 30.0

Well Information

SDGS Well Name:  
Water Rights Well: MT-57A  
Other Well Name: W-3  
Casing Type: STEEL  
Screen Type: STEEL  
Total Casing and Screen (ft.): 23.6  
Well Maintenance Date: 06/14/1984  
Casing Top Elevation:  
Casing Diameter (in.): 1.5  
Screen Length (ft.):  
Casing Stick-up (ft.):  
Aquifer: ALLUVIUM  
Management Unit:  
Casing Type: STEEL  
Screen Type: STEEL  
Total Casing and Screen (ft.): 23.6  
Well Maintenance Date: 06/14/1984  
Casing Top Elevation:  
Casing Diameter (in.): 1.5  
Screen Length (ft.):  
Casing Stick-up (ft.):  
Aquifer: ALLUVIUM  
Management Unit:  

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

TWO CASING SIZES, 12 FEET OF 1.5 INCHES AND 9 FEET OF 1.25 INCHES.

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<th>Description</th>
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<td>1780.00-1769.00</td>
<td>5.0-16.0</td>
<td>CLAY, GRAY</td>
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<td>1769.00-1761.00</td>
<td>16.0-24.0</td>
<td>SAND, FINE</td>
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<tr>
<td>1761.00-1755.00</td>
<td>24.0-30.0</td>
<td>SHALE</td>
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Location Information

Legal Location: NE NE NE SE Sec. 09, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 043N-28W-09AAAA
Latitude: 43 43' 28"
Longitude: 100 39' 03"
Ground Surface Elevation (ft.): 1800 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/28/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-39
Samples:

Geologist: M. JARRETT
Driller: G. DUCHOSSOIS
Driller's Log:
Total Drill Hole Depth (ft.): 34.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Depth (ft.)</th>
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<td>1799.00 - 1798.00</td>
<td>1.0 - 2.0</td>
<td>SAND, FINE TO MEDIUM</td>
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<td>1798.00 - 1791.00</td>
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<td>SILT, YELLOWISH-BROWN, SANDY; DRY</td>
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<td>1791.00 - 1786.00</td>
<td>9.0 - 14.0</td>
<td>SILT, CLAYEY, SANDY; DRILLS HARD</td>
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<td>1786.00 - 1781.00</td>
<td>14.0 - 19.0</td>
<td>CLAY, DARK-YELLOW-BROWN, SILTY; DRY</td>
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<td>19.0 - 24.0</td>
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<td>1776.00 - 1773.00</td>
<td>24.0 - 27.0</td>
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<td>27.0 - 31.0</td>
<td>SILT, LIGHT-BROWN, SANDY; SATURATED, SOFT</td>
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<td>31.0 - 34.0</td>
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</tr>
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### Location Information

Legal Location: NW NW NW NE Sec. 09, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-28W-09ABBB
Latitude: 43 43' 27"
Longitude: 100 39' 35"

Ground Surface Elevation (ft.): 1782 T

### Project Information

Project: LITTE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 2
Samples: 

Geologist: A. BARARI
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 28.0

### Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 6 FEET.

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
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<td>1782.00 - 1781.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>1781.00 - 1778.00</td>
<td>1.0 - 4.0</td>
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<td>1778.00 - 1762.00</td>
<td>4.0 - 20.0</td>
<td>SAND, COARSE TO VERY COARSE</td>
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<td>1762.00 - 1756.00</td>
<td>20.0 - 26.0</td>
<td>SAND AND GRAVEL</td>
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<td>1756.00 - 1754.00</td>
<td>26.0 - 28.0</td>
<td>CLAY</td>
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043N28W09ABBB  Page 1  01/31/2005
### Location Information

- **Legal Location**: SW SE NW NE SEC. 09, T. 043 N., R. 28 W.
- **County**: MELLETTE
- **Basin**: WHITE
- **Hydrologic Unit Code**: 10140203
- **Land Owner**:  Location: 043N-28W-09ABDC
- **Latitude**: 43 43' 15"
- **Longitude**: 100 39' 25"
- **Ground Surface Elevation (ft.)**: 1782 T

### Project Information

- **Project**: LITTLE WHITE RIVER VALLEY
- **Drill Date**: 01/01/1969
- **Company**: FERGUSON-MEADOR
- **Drilling Method**:  Geologist: A. BARARI
- **Test Hole Number**: 3  Geologist's Log: X
- **Samples**:  Driller:
- **Total Drill Hole Depth (ft.)**: 24.0

### Geophysical Information

- **Spontaneous Potential**:  Single Point Resistivity: Extra:
- **Natural Gamma**:

DEPT TO WATER: 7 FEET.

### Elevation (ft.)

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
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<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>1781.00</td>
<td>1.0 - 7.0</td>
<td>SAND, MEDIUM</td>
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<tr>
<td>1775.00</td>
<td>7.0 - 14.0</td>
<td>SAND, MEDIUM TO COARSE</td>
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<td>1768.00</td>
<td>14.0 - 23.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>1759.00</td>
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<td>SHALE, GRAY</td>
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<tr>
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</tbody>
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Location Information

Legal Location: SE NE SW NE SEC. 09, T. 043 N., R. 28 W.
County: MELLETTE  
Basin: WHITE 
Hydrologic Unit Code: 10140203 
Land Owner: 

Location: 043N-28W-09ACAD 
Latitude: 43° 43' 09" 
Longitude: 100° 39' 17"
Ground Surface Elevation (ft.): 1791 T

Project Information

Project: LITTE WHITE RIVER VALLEY 
Drill Date: 01/01/1969 
Company: FERGUSON-MEADOR 
Drilling Method: 
Test Hole Number: 5 
Samples: 
Geologist: A. BARARI 
Geologist's Log: X
Driller: 
Total Drill Hole Depth (ft.): 26.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra:

DEPTH TO WATER: 6 FEET.

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<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>0.0-8.0</td>
<td>SAND, LIGHT-BROWN, GRADING TO GRAY, COARSE, WELL-SORTED</td>
</tr>
<tr>
<td>1783.00-1773.00</td>
<td>8.0-18.0</td>
<td>SAND, COARSE</td>
</tr>
<tr>
<td>1773.00-1770.00</td>
<td>18.0-21.0</td>
<td>SAND, COARSE TO VERY COARSE; SOME CLAY</td>
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<tr>
<td>1770.00-1765.00</td>
<td>21.0-26.0</td>
<td>CLAY, GRAY</td>
</tr>
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**Location Information**

Legal Location: SE SE NE SEC. 09, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 043N-28W-09ADD
Latitude: 43 43' 04"
Longitude: 100 39' 04"
Ground Surface Elevation (ft.): 1785 T

**Project Information**

Project: USGS
Drill Date: 08/10/1966
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Driller:
Geologist's Log:
Driller's Log: X
Total Drill Hole Depth (ft.): 22.0

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

DEPTH TO WATER: 4 FEET ON 08-10-1966.

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>1785.00-1780.00</td>
<td>0.0-5.0</td>
<td>SAND, WHITE, FINE</td>
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<tr>
<td>1780.00-1765.00</td>
<td>5.0-20.0</td>
<td>SAND, DARK-GRAY, FINE TO MEDIUM</td>
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<tr>
<td>1765.00-1763.00</td>
<td>20.0-22.0</td>
<td>SHALE, DARK-GRAY</td>
</tr>
</tbody>
</table>

* * *
**Location Information**

Legal Location: SE SE SE NE SEC. 09, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:
Location: 043N-28W-09ADDD
Latitude: 43 43' 02"
Longitude: 100 38' 30"
Ground Surface Elevation (ft.): 1799 T

**Project Information**

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method:
Test Hole Number: 6
Samples:
Geologist: A. BARARI
Geologist's Log: X
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 23.0

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 6 FEET.

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<td>1798.00 - 1794.00</td>
<td>1.0 - 5.0</td>
<td>SAND, MEDIUM</td>
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<tr>
<td>1794.00 - 1781.00</td>
<td>5.0 - 18.0</td>
<td>SAND, GRAY, MEDIUM; SOME CLAY</td>
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<tr>
<td>1781.00 - 1776.00</td>
<td>18.0 - 23.0</td>
<td>SHALE</td>
</tr>
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* * * *
Location Information

Legal Location: NE NE SE NW SEC. 09, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Longitude: 100 39' 36"
Latitude: 43 43' 01"
Ground Surface Elevation (ft.): 1783 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 4
Samples:

Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 25.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 7 FEET.

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<td>CLAY</td>
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<td>1779.00 - 1775.00</td>
<td>4.0 - 8.0</td>
<td>SAND, GRAY, MEDIUM TO FINE</td>
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<td>1775.00 - 1765.00</td>
<td>8.0 - 18.0</td>
<td>SAND, MEDIUM</td>
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<tr>
<td>1765.00 - 1762.00</td>
<td>18.0 - 21.0</td>
<td>SAND, COARSE; SOME PEBBLES</td>
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<tr>
<td>1762.00 - 1758.00</td>
<td>21.0 - 25.0</td>
<td>SHALE, GRAY</td>
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* * * *
Location Information

Legal Location: SE NW SE SEC. 09, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-28W-09DBD
Latitude: 43° 42' 53"
Longitude: 100° 39' 23"
Ground Surface Elevation (ft.): 1790 T

Project Information

Project: USGS
Drill Date: 
Company: USGS
Drilling Method: 
Test Hole Number: 
Samples: 

Geologist: 
Geologist's Log: 
Driller: 
Driller's Log: X
Total Drill Hole Depth (ft.): 27.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<td>1790.00–1770.00</td>
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<td>1770.00–1763.00</td>
<td>20.0–27.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SW SW NW SEC. 10, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Longitude: 043N-28W-10BCC
Latitude: 43 43' 04"
Longitude: 100 38' 53"
Ground Surface Elevation (ft.): 1790 T

Project Information

Project: USGS
Drill Date: 08/10/1966
Company: USGS
Drilling Method: Driller's Log:
Test Hole Number: Driller:
Samples: Geologist's Log:
Total Drill Hole Depth (ft.): 24.0

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

DEPTH TO WATER: 6.8 FEET ON 08-10-1966.

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<td>1789.50-1780.00</td>
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<td>CLAY, BROWN</td>
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<td>1780.00-1768.00</td>
<td>10.0-22.0</td>
<td>SAND, VERY FINE, SILTY</td>
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<td>1768.00-1766.00</td>
<td>22.0-24.0</td>
<td>SHALE, DARK-GRAY</td>
</tr>
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* * * *
Location Information

Legal Location: NE NE NE NE SEC. 11, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-28W-11AAAA
Latitude: 43 43' 27"
Longitude: 100 36' 37"
Ground Surface Elevation (ft.): 1980 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Geologist: USGS
Driller: USGS
Drilling Method:
Test Hole Number: 10140204
Samples:

Total Drill Hole Depth (ft.): 47.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Samples:

Single Point Resistivity:
Extra:

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<td>1970.00-1965.00</td>
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<td>CLAY, TAN</td>
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<td>1965.00-1963.00</td>
<td>15.0-17.0</td>
<td>CLAY, TAN; WITH PEBBLES</td>
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<td>1963.00-1960.00</td>
<td>17.0-20.0</td>
<td>SAND AND GRAVEL, COARSE SAND</td>
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<td>1960.00-1953.00</td>
<td>20.0-27.0</td>
<td>SAND, LIGHT-TAN, FINE TO VERY FINE; TRACE OF PEBBLES</td>
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<td>1945.00-1933.00</td>
<td>35.0-47.0</td>
<td>NO SAMPLES</td>
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* * * *
Location Information

Legal Location: SW SW SW NW Sec. 12, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:

Location: 043N-28W-12BCCC
Latitude: 43 43' 03"
Longitude: 100 36' 34"
Ground Surface Elevation (ft.): 2065 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Drilling Method: X
Test Hole Number: 10140204
Samples:

Geologist: USGS
Geologist's Log: USGS
Driller: USGS
Driller's Log: X
Total Drill Hole Depth (ft.): 27.0

Geophysical Information

Spontaneous Potential: Extra:
Natural Gamma: Single Point Resistivity:

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<th>Elevation (ft.)</th>
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<td>2062.00-2055.00</td>
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<td>2050.00-2045.00</td>
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<td>GRAVEL AND SAND, COARSE GRAVEL, MEDIUM SAND, CLAYEY</td>
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<td>2040.00-2038.00</td>
<td>25.0-27.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SW SW SW SEC. 12, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: 

Location: 043N-28W-12CCCCC
Latitude: 43' 42" 37"
Longitude: 100' 36" 34"
Ground Surface Elevation (ft.): 2075 T

Project Information

Project: USGS
Drill Date: 08/16/1966
Company: USGS
Drilling Method: 
Test Hole Number: 
Samples: 

Driller: 
Geologist: 
Geologist's Log: 
Driller's Log: X
Total Drill Hole Depth (ft.): 42.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: ABOUT 20 FEET ON 08-16-1966.

<table>
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<th>Elevation (ft.)</th>
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<td>SILT</td>
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<td>2072.00-2066.00</td>
<td>3.0-9.0</td>
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<td>2066.00-2059.00</td>
<td>9.0-16.0</td>
<td>SAND, MEDIUM; CLEAN</td>
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<td>2059.00-2055.00</td>
<td>16.0-20.0</td>
<td>SAND AND GRAVEL, MEDIUM TO COARSE SAND, FINE GRAVEL</td>
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<td>20.0-23.0</td>
<td>SAND AND GRAVEL, COARSE SAND, MEDIUM GRAVEL</td>
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<td>SAND, COARSE</td>
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<td>2048.00-2040.00</td>
<td>27.0-35.0</td>
<td>CLAY AND SAND, GRAY, MEDIUM SAND</td>
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<td>35.0-40.0</td>
<td>SAND, GRAY, MEDIUM, CLAYEY</td>
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<td>2035.00-2033.00</td>
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<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SE NW SW NE SEC. 15, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-28W-15ACBD
Latitude: 43 42' 19"
Longitude: 100 38' 15"
Ground Surface Elevation (ft.): 1795 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 9
Samples: 

Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 23.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 

Single Point Resistivity: 
Extra:

DEPTH TO WATER: 4 FEET.

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>TOPSOIL</td>
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<td>1793.00-1788.00</td>
<td>2.0-7.0</td>
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<tr>
<td>1788.00-1780.00</td>
<td>7.0-15.0</td>
<td>SAND, GRAY, MEDIUM TO COARSE</td>
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<tr>
<td>1780.00-1772.00</td>
<td>15.0-23.0</td>
<td>CLAY, GRAY</td>
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<tr>
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Location Information

Legal Location: SE SW SW NE SEC. 15, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Longitude: 043N-28W-15ACCD
Latitude: 43 42' 10"
Longitude: 100 38' 15"

Ground Surface Elevation (ft.): 1798 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method:
Test Hole Number: 10
Samples:

Geologist: A. BARARI
Geologist's Log: X
Driller: Driller's Log:
Total Drill Hole Depth (ft.): 17.0

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

DEPTH TO WATER: 6 FEET.

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<tr>
<td>1797.00 - 1791.00</td>
<td>1.0 - 7.0</td>
<td>SAND; SOME CLAY</td>
</tr>
<tr>
<td>1791.00 - 1783.00</td>
<td>7.0 - 15.0</td>
<td>SAND, MEDIUM TO COARSE, WELL-SORTED</td>
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<td>1783.00 - 1781.00</td>
<td>15.0 - 17.0</td>
<td>CLAY, GRAY</td>
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* * * *
Location Information

Legal Location: SW NE NE NW SEC. 15, T. 043 N., R. 28 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140203  
Land Owner:  
Location: 043N-28W-15BAAC  
Latitude: 43 42' 31"  
Longitude: 100 38' 32"  
Ground Surface Elevation (ft.): 1794 T

Project Information

Project: LITTLE WHITE RIVER VALLEY  
Drill Date: 01/01/1969  
Company: FERGUSON-MEADOR  
Drilling Method:  
Test Hole Number: 8  
Samples:  
Geologist: A. BARARI  
Driller's Log: X

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

DEPTH TO WATER: 4 FEET.

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>1794.00 - 1792.00</td>
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<td>TOPSOIL</td>
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<tr>
<td>1792.00 - 1790.00</td>
<td>2.0 - 4.0</td>
<td>SAND, BROWN, FINE TO MEDIUM</td>
</tr>
<tr>
<td>1790.00 - 1782.00</td>
<td>4.0 - 12.0</td>
<td>SAND, BROWN CHANGING TO GRAY, MEDIUM</td>
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<tr>
<td>1782.00 - 1776.00</td>
<td>12.0 - 18.0</td>
<td>CLAY, DARK-GRAY (SHALE)</td>
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Location Information

Legal Location: NW NE NW NW SEC. 15, T. 043 N., R. 28 W.
County: MELLETTE Location: 043N-28W-15BBAB
Basin: WHITE Latitude: 43 42' 35"
Hydrologic Unit Code: 10140203 Longitude: 100 37' 48"
Land Owner: Ground Surface Elevation (ft.): 1794 T

Project Information

Project: LITTLE WHITE RIVER VALLEY Geologist: A. BARARI
Drill Date: 01/01/1969 Geologist's Log: X
Company: FERGUSON-MEADOR Drill: Driller:
Drilling Method: Driller's Log:
Test Hole Number: 7 Total Drill Hole Depth (ft.): 27.0
Samples:

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

DEPTH TO WATER: 4 FEET.

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>TOPSOIL</td>
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<tr>
<td>1792.00 - 1790.00</td>
<td>2.0 - 4.0</td>
<td>SAND, FINE, SILTY</td>
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<td>1790.00 - 1785.00</td>
<td>4.0 - 9.0</td>
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<td>9.0 - 27.0</td>
<td>CLAY, DARK-GRAY (SHALE)</td>
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Location Information

Legal Location: SE NE NW SE SEC. 15, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-28W-15DBAD
Latitude: 43 42' 05"
Longitude: 100 38' 07"
Ground Surface Elevation (ft.): 1802 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method:
Test Hole Number: 11
Samples:

Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log:
Total Drill Hole Depth (ft.): 18.0

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

DEPTH TO WATER: 6 FEET.

Geophysical Information

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<th>Depth (ft.)</th>
<th>Description</th>
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<td>1801.00 - 1797.00</td>
<td>1.0 - 5.0</td>
<td>SAND, BROWN, MEDIUM TO COARSE</td>
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<td>1797.00 - 1785.00</td>
<td>5.0 - 17.0</td>
<td>SAND, GRAY; SOME PEBBLES</td>
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<td>1785.00 - 1784.00</td>
<td>17.0 - 18.0</td>
<td>SHALE</td>
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Location Information

Legal Location: SW NW SE SE SEC. 15, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 
Location: 043N-28W-15DDBC
Latitude: 43 41' 53"
Longitude: 100 38' 03"
Ground Surface Elevation (ft.): 1805 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 12
Samples: 
Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 23.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 7 FEET.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1805.00-1804.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td>1804.00-1801.00</td>
<td>1.0-4.0</td>
<td>SAND, BROWN, FINE</td>
</tr>
<tr>
<td>1801.00-1797.00</td>
<td>4.0-8.0</td>
<td>SAND, MEDIUM</td>
</tr>
<tr>
<td>1797.00-1787.50</td>
<td>8.0-17.5</td>
<td>SAND, MEDIUM; SOME CLAY</td>
</tr>
<tr>
<td>1787.50-1782.00</td>
<td>17.5-23.0</td>
<td>CLAY, DARK-GRAY (SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location:  NE NW NW SEC. 17, T. 043 N., R. 28 W.
County: MELLETTE  Location: 043N-28W-17BBA
Basin: WHITE  Latitude: 43 42' 33"
Hydrologic Unit Code: 10140202  Longitude: 100 41' 08"
Land Owner:  Ground Surface Elevation (ft.): 1795 T

Project Information

Project: USGS  Geologist:  
Drill Date: 08/09/1966  Geologist's Log:  
Company: USGS  Driller:  
Drilling Method:  Driller's Log: X  
Test Hole Number:  Total Drill Hole Depth (ft.): 27.0
Samples:  

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  Single Point Resistivity:  

Extra:  

DEPTH TO WATER: 11.6 FEET ON 08-09-1966.

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1795.00-1785.00</td>
<td>0.0-10.0</td>
<td>SILT, LIGHT-BROWN</td>
</tr>
<tr>
<td>1785.00-1780.00</td>
<td>10.0-15.0</td>
<td>CLAY, BROWN</td>
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<tr>
<td>1780.00-1774.00</td>
<td>15.0-21.0</td>
<td>SAND, COARSE</td>
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<tr>
<td>1774.00-1772.00</td>
<td>21.0-23.0</td>
<td>SAND, COARSE; FINE GRAVEL</td>
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<tr>
<td>1772.00-1768.00</td>
<td>23.0-27.0</td>
<td>SHALE, DARK-GRAY</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW NW SE SEC. 18, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: location:043N-28W-18DBC
Latitude: 43 42' 00"
Longitude: 100 41' 55"
Ground Surface Elevation (ft.): 1990 T

Project Information

Project: USGS
Drill Date: Geologist:
Company: USGS
Driller:
Drilling Method: Driller's Log:
Test Hole Number: Total Drill Hole Depth (ft.): 37.0
Samples:

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>1990.00-1982.00</td>
<td>0.0-8.0</td>
<td>SILT</td>
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<tr>
<td>1982.00-1979.00</td>
<td>8.0-11.0</td>
<td>SAND AND GRAVEL, COARSE SAND, FINE GRAVEL</td>
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<tr>
<td>1979.00-1976.00</td>
<td>11.0-14.0</td>
<td>GRAVEL, COARSE</td>
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<td>1976.00-1971.00</td>
<td>14.0-19.0</td>
<td>CLAY AND GRAVEL, MEDIUM GRAVEL</td>
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<td>1971.00-1963.00</td>
<td>19.0-27.0</td>
<td>CLAY AND SAND, COARSE SAND</td>
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<td>1963.00-1960.00</td>
<td>27.0-30.0</td>
<td>CLAY, DARK-BROWN TO GRAY</td>
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<tr>
<td>1960.00-1953.00</td>
<td>30.0-37.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
**Location Information**

Legal Location: NE SE NW NE SEC. 22, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: Location: 043N-28W-22ABDA

Latitude: 43 41' 37"
Longitude: 100 38' 03"
Ground Surface Elevation (ft.): 1814 T

**Project Information**

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: Driller:
Test Hole Number: 14
Samples: Geologist: A. BARARI
Geologist's Log: X
Driller's Log: Total Drill Hole Depth (ft.): 18.0

**Geophysical Information**

Spontaneous Potential: Single Point Resistivity: Extra:
Natural Gamma: Depth TO WATER: 7 FEET.

**Elevation (ft.)** | **Depth (ft.)** | **Description**
--- | --- | ---
1814.00 - 1813.00 | 0.0 - 1.0 | TOPSOIL
1813.00 - 1810.00 | 1.0 - 4.0 | SAND, BROWN, FINE
1810.00 - 1808.00 | 4.0 - 6.0 | SAND, MEDIUM; SOME CLAY
1808.00 - 1802.00 | 6.0 - 12.0 | SAND, MEDIUM TO COARSE
1802.00 - 1799.00 | 12.0 - 15.0 | SAND; SOME CLAY
1799.00 - 1796.00 | 15.0 - 18.0 | CLAY, GRAY (SHALE)

* * * *
Location Information

Legal Location: SE SE NW NE SEC. 22, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-28W-22ABDD
Latitude: 43 41' 32"
Longitude: 100 38' 03"
Ground Surface Elevation (ft.): 1813 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method: 
Test Hole Number: 13
Samples: 

Geologist: A. BARARI
Geologist's Log: X
Driller: 
Driller's Log: 
Total Drill Hole Depth (ft.): 21.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 8 FEET.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1813.00-1812.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>1812.00-1806.00</td>
<td>1.0-7.0</td>
<td>SAND, BROWN, FINE</td>
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<tr>
<td>1806.00-1805.00</td>
<td>7.0-8.0</td>
<td>SAND, MEDIUM</td>
</tr>
<tr>
<td>1805.00-1793.50</td>
<td>8.0-19.5</td>
<td>CLAY, GRAY; SOFT DRILLING</td>
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<tr>
<td>1793.50-1792.00</td>
<td>19.5-21.0</td>
<td>SHALE</td>
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</tbody>
</table>

* * * *
### Location Information

Legal Location: NE SE NE SEC. 23, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-28W-23AADA
Latitude: 43 41' 36"
Longitude: 100 36' 36"
Ground Surface Elevation (ft.): 2092 T

### Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/28/1993
Company: SDGS
Drilling Method: AUGER
Test Hole Number: A1-93-42
Samples:

Geologist: M. JARRETT
Geologist's Log: X
Driller: J. REZAC
Driller's Log:
Total Drill Hole Depth (ft.): 36.0

### Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tr>
<td>2092.00-2091.00</td>
<td>0.0-1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>2091.00-2087.00</td>
<td>1.0-5.0</td>
<td>CLAY, OLIVE-GRAY</td>
</tr>
<tr>
<td>2087.00-2085.00</td>
<td>5.0-7.0</td>
<td>SAND, BROWN, SILTY</td>
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<td>2085.00-2082.00</td>
<td>7.0-10.0</td>
<td>CLAY, GRAYISH-BROWN, SILTY</td>
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<tr>
<td>2082.00-2079.00</td>
<td>10.0-13.0</td>
<td>SAND, LIGHT-BROWN, FINE; SOME GRAVEL</td>
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<tr>
<td>2079.00-2070.00</td>
<td>13.0-22.0</td>
<td>SAND AND GRAVEL, LIGHT-BROWN, COARSE SAND TO FINE GRAVEL, CLAYEY</td>
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<tr>
<td>2070.00-2062.00</td>
<td>22.0-30.0</td>
<td>SAND, LIGHT-BROWN, FINE, SOMEWHAT CLAYEY</td>
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<td>2062.00-2056.00</td>
<td>30.0-36.0</td>
<td>GRAVEL, BROWN, COARSE, CLAYEY; SOME SHALE PEBBLES</td>
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* * * *
Legal Location: SW NE NW NW SEC. 27, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 043N-28W-27BBAC
Latitude: 43 40' 45"
Longitude: 100 38' 49"
Ground Surface Elevation (ft.): 1822 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method:
Test Hole Number: 15
Samples:
Geologist: A. BARARI
Geologist's Log: X
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 16.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

DEPTH TO WATER: 5 FEET.

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<th>Elevation (ft.)</th>
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<tbody>
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<td>1822.00 - 1821.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL</td>
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<tr>
<td>1821.00 - 1818.00</td>
<td>1.0 - 4.0</td>
<td>SAND, FINE; SOME CLAY</td>
</tr>
<tr>
<td>1818.00 - 1809.00</td>
<td>4.0 - 13.0</td>
<td>SAND, MEDIUM TO COARSE</td>
</tr>
<tr>
<td>1809.00 - 1806.00</td>
<td>13.0 - 16.0</td>
<td>CLAY, DARK-GRAY</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW NW SE NE SEC. 28, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-20W-28ADBC
Latitude: 43 40' 33"
Longitude: 100 39' 16"
Ground Surface Elevation (ft.): 1823 T

Project Information

Project: LITTLE WHITE RIVER VALLEY
Drill Date: 01/01/1969
Company: FERGUSON-MEADOR
Drilling Method:
Test Hole Number: 8
Samples: 

Geologist: A. BARARI
Driller: 
Driller's Log: 
Geologist's Log: X

Total Drill Hole Depth (ft.): 21.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 

Single Point Resistivity: 
Extra: 

DEPTH TO WATER: 8 FEET.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
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<td>TOPSOIL</td>
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<tr>
<td>1822.00-1818.00</td>
<td>1.0-5.0</td>
<td>SAND, FINE</td>
</tr>
<tr>
<td>1818.00-1815.00</td>
<td>5.0-8.0</td>
<td>SAND, MEDIUM</td>
</tr>
<tr>
<td>1815.00-1811.00</td>
<td>8.0-12.0</td>
<td>SAND, COARSE</td>
</tr>
<tr>
<td>1811.00-1810.00</td>
<td>12.0-13.0</td>
<td>CLAY, GRAY</td>
</tr>
<tr>
<td>1810.00-1804.00</td>
<td>13.0-19.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>1804.00-1802.00</td>
<td>19.0-21.0</td>
<td>SHALE</td>
</tr>
<tr>
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</tbody>
</table>
Location Information

Legal Location: SE NW SEC. 33, T. 043 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner: A. STROMER
Location: 043N-28W-33BD
Latitude: 43°39'41"
Longitude: 100°39'43"
Ground Surface Elevation (ft.): 1840 T

Project Information

Project: Geologist:
Drill Date: 11/26/1984 Geologist's Log:
Company: SUMMERS DRILLING Driller:
Drilling Method: BORED Driller's Log: X
Test Hole Number: Total Drill Hole Depth (ft.): 16.0
Samples:

Well Information

SDGS Well Name: Aquifer:
Water Rights Well: Management Unit:
Other Well Name: PRIVATE Casing Top Elevation:
Casing Type: CEMENT TILE Casing Diameter (in.):
Screen Type: Screen Length (ft.):
Total Casing and Screen (ft.):
Well Maintenance Date: Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>TOPSOIL</td>
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<tr>
<td>1839.00 - 1824.00</td>
<td>1.0 - 16.0</td>
<td>SAND</td>
</tr>
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</table>
**Location Information**

Legal Location: NW NE NW NW SEC. 09, T. 043 N., R. 32 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner: 

Location: 043N-32W-09BBAB
Latitude: 43 43' 19"
Longitude: 101 08' 12"
Ground Surface Elevation (ft.): 2358 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/09/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-28
Samples:

Geologist: R. HAMMOND
Driller: G. JENSEN
Driller's Log:
Geologist's Log: X
Total Drill Hole Depth (ft.): 122.0

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra:

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>0.0-2.0</td>
<td>TOPSOIL, BROWN</td>
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<tr>
<td>2356.00-2313.00</td>
<td>2.0-45.0</td>
<td>SILT, TAN-BROWN TO REDDISH-BROWN</td>
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<tr>
<td>2313.00-2310.00</td>
<td>45.0-48.0</td>
<td>SILT, OLIVE-GREEN</td>
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<td>2310.00-2303.00</td>
<td>48.0-55.0</td>
<td>SILT, TAN-BROWN</td>
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<td>55.0-77.0</td>
<td>SILT, LIGHT-GRAY TO BLUE-GRAY</td>
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<td>2281.00-2264.00</td>
<td>77.0-94.0</td>
<td>SILT, LIGHT-GREEN</td>
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<td>2264.00-2259.00</td>
<td>94.0-99.0</td>
<td>SAND</td>
</tr>
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<td>2259.00-2243.00</td>
<td>99.0-115.0</td>
<td>CLAY, YELLOWISH-BROWN</td>
</tr>
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<td>2243.00-2236.00</td>
<td>115.0-122.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW NE SE SE SEC. 02, T. 043 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: 
Location: 043N-33W-02DDAC
Latitude: 43 43' 27"
Longitude: 101 12' 06"
Ground Surface Elevation (ft.): 2285 T

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 08/18/1992
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-92-32
Samples: 
Geologist: M. JARRETT
Driller: D. IVerson
Geologist's Log: X
Driller's Log: 
Total Drill Hole Depth (ft.): 50.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

PLUGGED FROM TOTAL DEPTH TO TOP WITH HIGH SOLIDS BENTONITE PLUGGING FLUID, SETTLED FOR TWO DAYS, FILLED WITH BENTONITE CRUMBLES TO AROUND 8 FEET, CEMENT FROM 8 FEET TO SURFACE.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>2284.00-2280.00</td>
<td>1.0-5.0</td>
<td>CLAY, BROWN TO LIGHT-GRAY, SILTY</td>
</tr>
<tr>
<td>2280.00-2264.00</td>
<td>5.0-21.0</td>
<td>CLAY, LIGHT-GRAY, SILTY</td>
</tr>
<tr>
<td>2264.00-2235.00</td>
<td>21.0-50.0</td>
<td>CLAY, DARK-GRAY; GREASY (PIERRE SHALE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* * * * *</td>
</tr>
</tbody>
</table>
Spontaneous Potential:  
Natural Gamma:  

Samples:

Longitude:
Latitude:

County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Ground Surface Elevation (ft.): 2331 T

Location Information

Legal Location: NW SE NE SW SEC. 25, T. 043 N., R. 33 W.
Location: 043N-33W-25CADB
Latitude: 43°40'11"
Longitude: 101°11'30"

Project Information

Project: MELLETTE-TODD CO. STUDY
Drill Date: 08/18/1992
Company: SDGS
Drill Date: 01/31/2005
Drilling Method: ROTARY
Test Hole Number: R20-92-33
Driller: D. IVERSON
Geologist: M. JARRETT
Driller's Log: 
Geologist's Log: X
Total Drill Hole Depth (ft.): 67.0

Samples:

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

Plugged from total depth to top with high solids bentonite plugging fluid, settled two days, filled with bentonite crumbles to 8 feet, cement from 8 feet to surface.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2331.00 - 2330.00</td>
<td>0.0 - 1.0</td>
<td>TOPSOIL, TAN</td>
</tr>
<tr>
<td>2330.00 - 2328.00</td>
<td>1.0 - 3.0</td>
<td>CLAY, TAN, VERY SILTY</td>
</tr>
<tr>
<td>2328.00 - 2325.00</td>
<td>3.0 - 6.0</td>
<td>SAND, YELLOWISH-BROWN, FINE TO MEDIUM</td>
</tr>
<tr>
<td>2325.00 - 2318.00</td>
<td>6.0 - 13.0</td>
<td>CLAY, WHITE TO LIGHT-TAN, VERY SILTY</td>
</tr>
<tr>
<td>2318.00 - 2311.00</td>
<td>13.0 - 20.0</td>
<td>SAND, FINE TO MEDIUM; HIGHLY QUARTZOSE, CLEAN</td>
</tr>
<tr>
<td>2311.00 - 2303.00</td>
<td>20.0 - 28.0</td>
<td>CLAY, RED, TAN, BUFF, AND GREEN LAMINATIONS, SILTY</td>
</tr>
<tr>
<td>2303.00 - 2288.00</td>
<td>28.0 - 43.0</td>
<td>CLAY, LIGHT-GRAY TO YELLOWISH-BROWN; WEATHERED (PIERRE SHALE)</td>
</tr>
<tr>
<td>2288.00 - 2264.00</td>
<td>43.0 - 67.0</td>
<td>CLAY, DARK-GRAY; GREASY (PIERRE SHALE)</td>
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* * * *
Location Information

Legal Location: SW NW NW SW SEC. 36, T. 044 N., R. 28 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140204
Land Owner:
Longitude: 100 36' 34"
Latitude: 43 44' 42"
Ground Surface Elevation (ft.): 1950 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Drilling Method: Driller:
Test Hole Number: Driller's Log: X
Samples: Total Drill Hole Depth (ft.): 34.0

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950.00 - 1947.00</td>
<td>0.0 - 3.0</td>
<td>TOPSOIL, DARK-BROWN</td>
</tr>
<tr>
<td>1947.00 - 1934.00</td>
<td>3.0 - 16.0</td>
<td>SILT, LIGHT-TAN; SAND, VERY FINE</td>
</tr>
<tr>
<td>1934.00 - 1931.00</td>
<td>16.0 - 19.0</td>
<td>CLAY, LIGHT-BROWN</td>
</tr>
<tr>
<td>1931.00 - 1928.00</td>
<td>19.0 - 22.0</td>
<td>GRAVEL, MEDIUM TO COARSE, CLAYEY</td>
</tr>
<tr>
<td>1928.00 - 1922.00</td>
<td>22.0 - 28.0</td>
<td>CLAY, BROWN</td>
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<tr>
<td>1922.00 - 1916.00</td>
<td>28.0 - 34.0</td>
<td>SHALE, DARK-GRAY</td>
</tr>
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* * * *
Location Information

Legal Location: SE NW NW SE SEC. 33, T. 044 N., R. 30 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Location: 044N-30W-33DBBD
Latitude: 43 44' 37"
Longitude: 100 54' 00"
Ground Surface Elevation (ft.): 2185 T

Project Information

Project: USBR
Drill Date: 05/20/1954
Company: USBR
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 30.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

DEPTH TO WATER: 10.0 FEET MEASURED 05-20-1954.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2185.00-2184.00</td>
<td>0.0-1.0</td>
<td>LOAM</td>
</tr>
<tr>
<td>2184.00-2181.00</td>
<td>1.0-4.0</td>
<td>LOAM, VERY FINE, SANDY</td>
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<tr>
<td>2181.00-2179.00</td>
<td>4.0-6.0</td>
<td>LOAM, SANDY</td>
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<tr>
<td>2179.00-2178.00</td>
<td>6.0-7.0</td>
<td>LOAM, FINE, SILTY</td>
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<tr>
<td>2178.00-2174.00</td>
<td>7.0-11.0</td>
<td>LOAM, SANDY</td>
</tr>
<tr>
<td>2174.00-2164.00</td>
<td>11.0-21.0</td>
<td>SAND, COARSE</td>
</tr>
<tr>
<td>2164.00-2155.00</td>
<td>21.0-30.0</td>
<td>SHALE</td>
</tr>
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* * *
Location Information

Legal Location: SW NE SEC. 35, T. 044 N., R. 30 W.
County: MELLETTE  Location: 044N-30W-35AC
Basin: WHITE  Latitude: 43 44' 50"
Hydrologic Unit Code: 10140202  Longitude: 100 51' 25"
Land Owner: W. ASTELFORD  Ground Surface Elevation (ft.): 2000 T

Project Information

Project:  Geologist:
Drill Date: 09/10/1983  Geologist's Log:
Company: JURACEK WELL BORING  Driller:
Drilling Method: BORED  Driller's Log: X
Test Hole Number:  Total Drill Hole Depth (ft.): 60.0
Samples:  

Well Information

SDGS Well Name:  Aquifer:
Water Rights Well:  Management Unit:
Other Well Name: PRIVATE  Casing Top Elevation:
Casing Type: CEMENT  Casing Diameter (in.):
Screen Type:  Screen Length (ft.):
Total Casing and Screen (ft.):  Casing Stick-up (ft.):
Well Maintenance Date:  

Geophysical Information

Spontaneous Potential:  Single Point Resistivity:  Extra:
Natural Gamma:  

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<td>2000.00-1997.00</td>
<td>0.0-3.0</td>
<td>TOPSOIL</td>
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<tr>
<td>1997.00-1981.00</td>
<td>3.0-19.0</td>
<td>CLAY</td>
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<tr>
<td>1981.00-1979.00</td>
<td>19.0-21.0</td>
<td>CLAY, WATER AND GRAVEL</td>
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<tr>
<td>1979.00-1940.00</td>
<td>21.0-60.0</td>
<td>SHALE</td>
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<td></td>
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**Location Information**

Legal Location: NW NW NW SEC. 09, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:
Location: 044N-31W-09BBBB
Latitude: 43 48' 32"
Longitude: 101 01' 10"
Ground Surface Elevation (ft.): 2335 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/09/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-25
Samples:
Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log:
Total Drill Hole Depth (ft.): 22.0

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2335.00 - 2333.00</td>
<td>0.0 - 2.0</td>
<td>TOPSOIL, BLACK</td>
</tr>
<tr>
<td>2333.00 - 2317.00</td>
<td>2.0 - 18.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>2317.00 - 2313.00</td>
<td>18.0 - 22.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NW NW NW SEC. 20, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: G. ENGLAND

Location: 044N-31W-20BBB
Latitude: 43 46' 47"
Longitude: 101 02' 20"
Ground Surface Elevation (ft.): 2340 T

Project Information

Project:
Drill Date:
Company: HURON DRILLING
Drilling Method:
Test Hole Number:
Samples:

Casing Diameter (in.):
Screen Length (ft.):
Total Casing and Screen (ft.):
Well Maintenance Date:

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type:
Screen Type:

Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
2340.00-2300.00 | 0.0-40.0 | SOIL AND ALLUVIUM
2300.00-1080.00 | 40.0-1260.0 | SHALE
1080.00-880.00 | 1260.0-1460.0 | UNREPORTED; CHANGE OF FORMATION
880.00-820.00 | 1460.0-1520.0 | CODELL SANDSTONE MEMBER - CARLILE SHALE
820.00-665.00 | 1520.0-1675.0 | GREENHORN LIMESTONE
665.00-540.00 | 1675.0-1800.0 | SHALE
540.00-510.00 | 1800.0-1830.0 | UNREPORTED; CHANGE OF FORMATION
510.00-390.00 | 1830.0-1950.0 | SHALE
390.00-380.00 | 1950.0-1960.0 | SHALE; WITH MANY HARD SANDY STREAKS
380.00-320.00 | 1960.0-2020.0 | SANDSTONE
320.00-260.00 | 2020.0-2080.0 | SHALE, SANDY
260.00-180.00 | 2080.0-2160.0 | SANDSTONE

Location Information

Legal Location: NW NW NW SEC. 20, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: G. ENGLAND

Location: 044N-31W-20BBB
Latitude: 43 46' 47"
Longitude: 101 02' 20"
Ground Surface Elevation (ft.): 2340 T

Project Information

Project:
Drill Date:
Company: HURON DRILLING
Drilling Method:
Test Hole Number:
Samples:

Casing Diameter (in.):
Screen Length (ft.):
Total Casing and Screen (ft.):
Well Maintenance Date:

SDGS Well Name:
Water Rights Well:
Other Well Name: PRIVATE
Casing Type:
Screen Type:

Casing Top Elevation:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
2340.00-2300.00 | 0.0-40.0 | SOIL AND ALLUVIUM
2300.00-1080.00 | 40.0-1260.0 | SHALE
1080.00-880.00 | 1260.0-1460.0 | UNREPORTED; CHANGE OF FORMATION
880.00-820.00 | 1460.0-1520.0 | CODELL SANDSTONE MEMBER - CARLILE SHALE
820.00-665.00 | 1520.0-1675.0 | GREENHORN LIMESTONE
665.00-540.00 | 1675.0-1800.0 | SHALE
540.00-510.00 | 1800.0-1830.0 | UNREPORTED; CHANGE OF FORMATION
510.00-390.00 | 1830.0-1950.0 | SHALE
390.00-380.00 | 1950.0-1960.0 | SHALE; WITH MANY HARD SANDY STREAKS
380.00-320.00 | 1960.0-2020.0 | SANDSTONE
320.00-260.00 | 2020.0-2080.0 | SHALE, SANDY
260.00-180.00 | 2080.0-2160.0 | SANDSTONE
<table>
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<tr>
<th>Depth Range</th>
<th>Interval</th>
<th>Description</th>
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<tbody>
<tr>
<td>180.00 - 160.00</td>
<td>2160.0 - 2180.0</td>
<td>SANDSTONE; WITH SHALEY STREAKS</td>
</tr>
<tr>
<td>160.00 - 150.00</td>
<td>2180.0 - 2190.0</td>
<td>SHALE</td>
</tr>
<tr>
<td>150.00 - 35.00</td>
<td>2190.0 - 2305.0</td>
<td>SAND</td>
</tr>
<tr>
<td>35.00 - 25.00</td>
<td>2305.0 - 2315.0</td>
<td>SHALE</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NE NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER
Location: 044N-31W-26AABA
Latitude: 43 45' 57"
Longitude: 100 57' 46"
Ground Surface Elevation (ft.): 2345 T

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/11/1990
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R20-90-44
Samples: 

Geologist: D. ILES
Driller: D. IVerson
Driller's Log: 
Total Drill Hole Depth (ft.): 118.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: X
Single Point Resistivity: X
Extra: 

Elevation (ft.) Depth (ft.) Description
--- --- --------------------------------------------------
2345.00 - 2300.00 0.0 - 45.0 SAND, LIGHT-BROWN TO BROWN, FINE TO VERY COARSE; WITH SOME VERY FINE TO VERY COARSE PEBBLE GRAVEL, WITH MINOR AMOUNTS OF CLAY AND SILT, SOME OF THE GRAVEL WAS COMPOSED OF CARBONATE CLASTS
2300.00 - 2263.00 45.0 - 82.0 SAND, LIGHT-BROWN TO BROWN, FINE TO VERY COARSE; VERY MINOR AMOUNTS OF WHITE CLAY APPEARED IN THE CUTTINGS, SOME ANGULAR SHALE CLASTS WERE EVIDENT BELOW 50 FEET
2263.00 - 2260.00 82.0 - 85.0 CLAY, LIGHT-BROWN
2260.00 - 2240.00 85.0 - 105.0 CLAY, GRAY; GREASY, SOFT (PIERRE SHALE)
2240.00 - 2227.00 105.0 - 118.0 CLAY, GRAY WITH SOME DARK-GRAY TO BLACK; NOT GREASY, HARDER THAN IN INTERVAL FROM 85 TO 105 FEET (PIERRE SHALE)
* * * *
Location Information

Legal Location: SE NW NE NE SEC. 26, T. 044 N., R. 31 W.

County: MELLETTE

Basin: WHITE

Hydrologic Unit Code: 10140202

Land Owner: R. VOLLMER

Location: 044N-31W-26AABD

Latitude: 43 45' 53"

Longitude: 100 57' 46"

Ground Surface Elevation (ft.): 2347.01

Project Information

Project: MEDICAL WASTE INVEST.

Drill Date: 10/22/1990

Company: SDGS

Drilling Method: HOLLOWSTEM

Test Hole Number: R20-90-63

Samples: Total Drill Hole Depth (ft.): 55.0

SDGS Well Name: R20-90-63

Water Rights Well:

Other Well Name:

Casing Type: PVC, SCH. 80, FLUSH

Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT

Total Casing and Screen (ft.): 56.8

Well Maintenance Date:

Casing Top Elevation: 2348.84

Casing Diameter (in.): 2.0

Screen Length (ft.): 10.0

Casing Stick-up (ft.): 1.83

Geophysical Information

Spontaneous Potential:

Natural Gamma:

Single Point Resistivity:

Extra:

WELL DATA: NATURAL SEDIMENT - 55.0 TO 40.0 FEET; GRANULAR BENTONTIE - 40.0 TO 39.0 FEET; BENTONITE SLURRY - 39.0 TO 20.0 FEET; CEMENT - 20.0 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2347.01-2343.01</td>
<td>0.0 - 4.0</td>
<td>SAND, DARK-BROWN TO TAN, FINE TO MEDIUM, SILTY, PEBBLY; NONCALCAREOUS</td>
</tr>
<tr>
<td>2343.01-2339.01</td>
<td>4.0 - 8.0</td>
<td>SILT, TAN; SOME FINE TO MEDIUM SAND; CALCAREOUS (LOESS?)</td>
</tr>
<tr>
<td>2339.01-2334.01</td>
<td>8.0 - 13.0</td>
<td>SAND, TAN, FINE TO COARSE, SILTY; WEAKLY CALCAREOUS; SCATTERED PEBBLES; LENSES OF CALCAREOUS SANDY SILT</td>
</tr>
<tr>
<td>2334.01-2296.01</td>
<td>13.0 - 51.0</td>
<td>SAND, TAN TO LIGHT-BROWN, FINE TO COARSE; WEAKLY CALCAREOUS; MINOR AMOUNTS OF SILT AND CLAY; SCATTERED CALCAREOUS SANDY SILT LAYERS; SOME PEBBLES, MOSTLY QUARTZ AND SHALE, WITH SHALE CLASTS DOMINANT IN LOWER PART OF INTERVAL</td>
</tr>
<tr>
<td>2296.01-2292.01</td>
<td>51.0 - 55.0</td>
<td>CLAY, DARK-GRAY WITH BROWN MOTTLING; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>
CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 10 TO 11.5 FEET, 18 TO 20 FEET, 23 TO 25 FEET, 33 TO 35 FEET, 43 TO 45 FEET AND 53 TO 55 FEET.

* * * *
Location Information

Legal Location: SE SW NE NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: R. VOLLMER

Location: 044N-31W-26AACD
Latitude: 43 45' 47"
Longitude: 100 57' 48"
Ground Surface Elevation (ft.): 2335.28

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 10/23/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-64
Samples:

Total Drill Hole Depth (ft.): 30.0

Total Casing and Screen (ft.): 30.0

Casing Top Elevation (ft.): 2338.28
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 3.00

Well Information

SDGS Well Name: R20-90-64
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80, FLUSH
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT

Casing Top Elevation (ft.): 2338.28
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 3.00

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL DATA: NATURAL SEDIMENT - 30 TO 24 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 24 TO 15 FEET; GRANULAR BENTONITE - 15 TO 14 FEET; CEMENT - 14 TO 0.5 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2335.28 - 2331.28</td>
<td>0.0 - 4.0</td>
<td>SAND, BROWN TO TAN, MEDIUM TO COARSE; NONCALCAREOUS; SOME PEBBLES</td>
</tr>
<tr>
<td>2331.28 - 2326.28</td>
<td>4.0 - 9.0</td>
<td>SAND, TAN, FINE TO MEDIUM; WEAKLY CALCAREOUS; MINOR SILT AND CLAY; SCATTERED PEBBLES</td>
</tr>
<tr>
<td>2326.28 - 2322.28</td>
<td>9.0 - 13.0</td>
<td>SILT, TAN TO LIGHT-BROWN, VERY SANDY, PEBBLY; CALCAREOUS; SMALL, LESS THAN 2 MM, SECONDARY CARBONATE NODULES</td>
</tr>
<tr>
<td>2322.28 - 2310.28</td>
<td>13.0 - 25.0</td>
<td>SAND, TAN TO LIGHT-BROWN, FINE TO COARSE; WEAKLY CALCAREOUS; MINOR SILT AND CLAY; SCATTERED PEBBLES, MOSTLY CARBONATE AND SHALE</td>
</tr>
<tr>
<td>2310.28 - 2309.28</td>
<td>25.0 - 26.0</td>
<td>CLAY, GRAY WITH BROWN MOTTLES; NON-CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2309.28 - 2305.28</td>
<td>26.0 - 30.0</td>
<td>CLAY, GRAY; NONCALCAREOUS (PIERRE SHALE)</td>
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</table>
CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 9 TO 10 FEET, 18 TO 20 FEET, AND 28 TO 30 FEET.

* * * *
Location Information

Legal Location: NE NE NW NE SEC. 26, T. 044 N., R. 31 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140202  
Land Owner: R. VOLLMER

Location: 044N-31W-26ABAA  
Latitude: 43 45' 57"  
Longitude: 100 57' 53"

Ground Surface Elevation (ft.): 2317.33

Project Information

Project: MEDICAL WASTE INVEST.  
Drill Date: 10/23/1990  
Company: SDGS  
Drilling Method: HOLLOWSTEM  
Test Hole Number: R20-90-65

Samples:  
SDGS Well Name: R20-90-65  
Water Rights Well:  
Other Well Name:  
Casing Type: PVC, SCH. 80, FLUSH  
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT

Casing Top Elevation: 2319.19 I  
Casing Diameter (in.): 2.0  
Screen Length (ft.): 10.0  
Casing Stick-up (ft.): 1.86

Well Maintenance Date:

Well Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  
Total Drill Hole Depth (ft.): 86.0

SDGS Well Name: R20-90-65  
Casing Top Elevation: 2319.19 I  
Casing Diameter (in.): 2.0  
Screen Length (ft.): 10.0  
Casing Stick-up (ft.): 1.86

Geophysical Information

WELL DATA: NATURAL SEDIMENT - 86 TO 59 FEET; GRANULAR BENTONITE - 59 TO 38 FEET; BENTONITE SLURRY - 38 TO 20 FEET; CEMENT - 20 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2317.33-2313.33</td>
<td>0.0 - 4.0</td>
<td>SILT, BROWN, PEBBLY; NONCALCAREOUS; MINOR SAND</td>
</tr>
<tr>
<td>2313.33-2311.33</td>
<td>4.0 - 6.0</td>
<td>SAND, BROWN, FINE TO MEDIUM, SILTY; NON-CALCAREOUS</td>
</tr>
<tr>
<td>2311.33-2310.33</td>
<td>6.0 - 7.0</td>
<td>SILT, TAN, SANDY; CALCAREOUS</td>
</tr>
<tr>
<td>2310.33-2297.33</td>
<td>7.0 - 20.0</td>
<td>SAND, TAN TO LIGHT-BROWN, FINE TO COARSE; NONCALCAREOUS; FEW PEBBLES; MINOR SILT AND CLAY</td>
</tr>
<tr>
<td>2297.33-2281.33</td>
<td>20.0 - 36.0</td>
<td>SAND, TAN TO LIGHT-BROWN, FINE TO COARSE; NONCALCAREOUS; ABUNDANT FINE TO MEDIUM PEBBLES; SOME SILT AND CLAY</td>
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<tr>
<td>2281.33-2244.33</td>
<td>36.0 - 73.0</td>
<td>SAND, TAN TO LIGHT-BROWN, FINE TO COARSE; NONCALCAREOUS; FEW PEBBLES; MINOR SILT AND CLAY</td>
</tr>
<tr>
<td>2244.33-2237.33</td>
<td>73.0 - 80.0</td>
<td>SILT, TAN TO LIGHT-BROWN; CALCAREOUS; SOME FINE SAND</td>
</tr>
</tbody>
</table>
2237.33-2235.33  80.0 - 82.0  SILT, TAN TO LIGHT-BROWN; CALCAREOUS; LENSES OF DARK-GRAY, SANDY CLAY

2235.33-2232.33  82.0 - 85.0  CLAY, DARK-GRAY, SANDY, SILTY; CALCAREOUS; SOME FINE PEBBLES; LENSES OF TAN, CALCAREOUS SILT

2232.33-2231.33  85.0 - 86.0  CLAY, DARK-GRAY; NONCALCAREOUS (PIERRE SHALE)

CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 8 TO 10 FEET, 18 TO 19.5 FEET, 28 TO 30 FEET, 38 TO 40 FEET, 48 TO 50 FEET, 58 TO 60 FEET, 68 TO 70 FEET, 78 TO 80 FEET, AND 81 TO 85 FEET.

* * * *
Location Information

Legal Location: NW NE NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER
Location: 044N-31W-26ABAB
Latitude: 43 45' 57"
Longitude: 100 58' 00"
Ground Surface Elevation (ft.): 2306.45 I

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/18/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-45
SDGS Well Name: R20-90-45
Water Rights Well: Water Rights Well
Other Well Name: Other Well Name
Casing Type: PVC, SCH. 80, FLUSH
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT
Total Casing and Screen (ft.): 62.0
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 1.92
Total Drill Hole Depth (ft.): 63.5

Well Information

Aquifer:
Management Unit:
Casing Top Elevation: 2308.37 I
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 1.92

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL DATA: NATURAL SEDIMENT - 63.5 TO 45.4 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 45.4 TO 43.4 FEET; GRANULAR BENTONITE - 43.4 TO 40 FEET; BENTONITE SLURRY - 40 TO 21 FEET; CEMENT - 21 TO 1 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2306.45-2299.85</td>
<td>0.0 - 6.6</td>
<td>SAND, BROWN, MEDIUM TO VERY COARSE; NONCALCAREOUS, WITH SOME VERY FINE TO COARSE PEBBLE GRAVEL</td>
</tr>
<tr>
<td>2299.85-2299.25</td>
<td>6.6 - 7.2</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; CALCAREOUS, WITH SOME SILT</td>
</tr>
<tr>
<td>2299.25-2298.95</td>
<td>7.2 - 7.5</td>
<td>SAND, LIGHT-BROWN, FINE; CALCAREOUS</td>
</tr>
<tr>
<td>2298.95-2294.95</td>
<td>7.5 - 11.5</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; NONCALCAREOUS, WITH SOME COARSE SAND TO FINE PEBBLE GRAVEL</td>
</tr>
<tr>
<td>2294.95-2282.75</td>
<td>11.5 - 23.7</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; CALCAREOUS, WITH SOME COARSE SAND TO FINE PEBBLE GRAVEL</td>
</tr>
<tr>
<td>2282.75-2266.25</td>
<td>23.7 - 40.2</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; CALCAREOUS, WITH SOME FINE PEBBLE GRAVEL</td>
</tr>
<tr>
<td>Depth Range</td>
<td>Percentage</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>2266.25-2263.35</td>
<td>40.2-43.1</td>
<td>Sand, light-brown, medium; calcareous, with coarse sand to very coarse pebble gravel including many shale clasts</td>
</tr>
<tr>
<td>2263.35-2255.75</td>
<td>43.1-50.7</td>
<td>Sand, light-brown, medium; calcareous</td>
</tr>
<tr>
<td>2255.75-2252.95</td>
<td>50.7-53.5</td>
<td>Sand, light-brown, fine to medium; calcareous</td>
</tr>
<tr>
<td>2252.95-2251.65</td>
<td>53.5-54.8</td>
<td>Sand, light-brown, medium; calcareous, with some coarse sand to medium pebble gravel</td>
</tr>
<tr>
<td>2251.65-2247.95</td>
<td>54.8-58.5</td>
<td>Sand, light-brown, medium to coarse; calcareous, with some fine to very coarse pebble gravel including some shale clasts</td>
</tr>
<tr>
<td>2247.95-2242.95</td>
<td>58.5-63.5</td>
<td>Clay, gray; noncalcareous (Pierre Shale)</td>
</tr>
</tbody>
</table>

Continuous core taken with split-spoon sampler from 5.5 to 63.5 feet.

* * * *
## Location Information

Legal Location: NE NW NW NE SEC. 26, T. 044 N., R. 31 W.  
County: MELLEETE  
Basin: WHITE  
Hydrologic Unit Code: 10140202  
Land Owner: R. VOLLMER  
Location: 044N-31W-26ABBA  
Latitude: 43 45' 57"  
Longitude: 100 58' 05"  
Ground Surface Elevation (ft.): 2307.76

## Project Information

Project: MEDICAL WASTE INVEST.  
Drill Date: 10/24/1990  
Company: SDGS  
Drilling Method: HOLLOWSTEM  
Test Hole Number: R20-90-66  
SDGS Well Name: R20-90-66  
Water Rights Well:  
Other Well Name:  
Casing Type: PVC, SCH. 80, FLUSH  
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT  
Total Casing and Screen (ft.): 60.0  
Well Maintenance Date:  
Casing Top Elevation: 2309.80 I  
Casing Diameter (in.): 2.0  
Screen Length (ft.): 10.0  
Casing Stick-up (ft.): 2.04  
Total Drill Hole Depth (ft.): 60.0

## Well Information

Samples:  
Spontaneous Potential:  
Natural Gamma:  
Well Data: Natural Sediment - 60 to 48 feet; Filter Pack (grain size 0.65 to 0.75 mm) - 48 to 46 feet; Granular Bentonite - 46 to 37 feet, Bentonite Slurry - 37 to 21 feet; Cement - 21 to 0 feet; Locking Steel Well Protector Installed.

## Geophysical Information

Single Point Resistivity:  
Extra:  
WELL DATA: Natural Sediment - 60 to 48 feet; Filter Pack (grain size 0.65 to 0.75 mm) - 48 to 46 feet; Granular Bentonite - 46 to 37 feet, Bentonite Slurry - 37 to 21 feet; Cement - 21 to 0 feet; Locking Steel Well Protector Installed.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2307.76-2303.76</td>
<td>0.0-4.0</td>
<td>Sand, brown, fine to medium, very silty; noncalcaceous</td>
</tr>
<tr>
<td>2303.76-2299.76</td>
<td>4.0-8.0</td>
<td>Silty, tan, sandy; calcareous</td>
</tr>
<tr>
<td>2299.76-2289.76</td>
<td>8.0-18.0</td>
<td>Sand, tan to light-brown, fine to coarse; weakly calcareous; minor silt and clay; scattered pebbles</td>
</tr>
<tr>
<td>2289.76-2281.76</td>
<td>18.0-26.0</td>
<td>Sand, tan, fine to medium, silty; calcareous</td>
</tr>
<tr>
<td>2281.76-2259.76</td>
<td>26.0-48.0</td>
<td>Sand, tan to light-brown, fine to coarse; weakly calcareous; minor silt and sand; scattered pebbles</td>
</tr>
<tr>
<td>2259.76-2249.76</td>
<td>48.0-58.0</td>
<td>Silty, tan to brown, sandy; calcareous; lenses of pebbly, silty sand</td>
</tr>
<tr>
<td>2249.76-2247.76</td>
<td>58.0-60.0</td>
<td>Clay, dark-gray; noncalcaceous (Pierre Shale)</td>
</tr>
</tbody>
</table>
CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 9 TO 10 FEET, 18 TO 20 FEET, 28 TO 30 FEET, 38 TO 40 FEET, AND 48 TO 50 FEET.

* * * *

044N31W26ABBB 01/31/2005
### Location Information

- **Legal Location:** NW NW NW NE SEC. 26, T. 044 N., R. 31 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140202
- **Land Owner:** VOLLMER

- **Location:** 044N-31W-26ABBB
- **Latitude:** 43 45' 57"
- **Longitude:** 100 58' 11"
- **Ground Surface Elevation (ft.):** 2289 T

### Project Information

- **Project:** MEDICAL WASTE INVEST.
- **Drill Date:** 09/12/1990
- **Company:** SDGS
- **Drilling Method:** HOLLOWSTEM
- **Test Hole Number:** R20-90-47
- **Samples:**

- **Geologist:** L. SCHULZ
- **Geologist's Log:** X
- **Driller:** D. IVERSON
- **Driller's Log:**
- **Total Drill Hole Depth (ft.):** 37.0

### Geophysical Information

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2289.00-2269.20</td>
<td>0.0-19.8</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; CALCAREOUS, WITH SOME COARSE SAND TO MEDIUM PEBBLE GRAVEL</td>
</tr>
<tr>
<td>2269.20-2266.90</td>
<td>19.8-22.1</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; CALCAREOUS, WITH MUCH COARSE SAND TO MEDIUM PEBBLE GRAVEL</td>
</tr>
<tr>
<td>2266.90-2266.50</td>
<td>22.1-22.5</td>
<td>CLAY, LIGHT-OLIVE-GREEN</td>
</tr>
<tr>
<td>2266.50-2261.00</td>
<td>22.5-28.0</td>
<td>SAND AND GRAVEL, LIGHT-BROWN, FINE SAND TO COARSE PEBBLE GRAVEL, CLAYEY IN SPOTS; CALCAREOUS, WITH SOME SHALE CLASTS</td>
</tr>
<tr>
<td>2261.00-2259.10</td>
<td>28.0-29.9</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM, CLAYEY IN SPOTS; CALCAREOUS</td>
</tr>
<tr>
<td>2259.10-2255.10</td>
<td>29.9-33.9</td>
<td>SAND, LIGHT-BROWN TO LIGHT-OLIVE-GREEN, FINE TO MEDIUM, SILTY, CLAYEY; SOMETIMES VERY SILTY AND CLAYEY, CALCAREOUS</td>
</tr>
<tr>
<td>2255.10-2252.00</td>
<td>33.9-37.0</td>
<td>CLAY, GRAY WITH SOME BROWN MOTTLING (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

CONTINUOUS CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 5 TO 37 FEET.

* * * *
**Location Information**

Legal Location: SW NW NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: R. VOLLMER

Location: 044N-31W-26ABBC
Latitude: 43 45' 52"
Longitude: 100 58' 11"
Ground Surface Elevation (ft.): 2285.47

**Project Information**

Project: MEDICAL WASTE INVEST.
Drill Date: 10/18/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-62

Geologist: J. GILBERTSON
Driller: D. IVESON
Driller's Log: X
Total Drill Hole Depth (ft.): 19.5

**Well Information**

SDGS Well Name: R20-90-62
Water Rights Well: 
Other Well Name: 
Casing Type: PVC, SCH. 80, FLUSH
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT
Total Casing and Screen (ft.): 20.0
Casing Diameter (in.): 2.0
Casing Stick-up (ft.): 1.88

Spontaneous Potential: 
Natural Gamma: 
Casing Top Elevation: 2287.35
Screen Length (ft.): 10.0
Casing Top Elevation (ft.): 
Casing Diameter (in.): 
Casing Stick-up (ft.): 

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

WELL DATA: NATURAL SEDIMENT - 19.5 TO 17.0 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 17.0 TO 6.0 FEET; GRANULAR BENTONITE - 6.0 TO 5.25 FEET; CEMENT - 5.25 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2285.47-2276.47</td>
<td>0.0-9.0</td>
<td>CLAY, GRAY, VERY SANDY, SILTY; SCATTERED PEBBLES; NONCALCAREOUS; MINOR SAND OR CLAYEY SILT LENSES (ALLUVIUM)</td>
</tr>
<tr>
<td>2276.47-2273.17</td>
<td>9.0-12.3</td>
<td>CLAY, GRAY WITH ABUNDANT BROWN MOTTLING; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2273.17-2267.97</td>
<td>12.3-17.5</td>
<td>CLAY, GRAY TO DARK-GRAY WITH SOME BROWN MOTTLING; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2267.97-2265.97</td>
<td>17.5-19.5</td>
<td>CLAY, DARK-GRAY; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 10 TO 14 FEET AND 18.5 TO 19.5 FEET.

* * * *
**Location Information**

Legal Location: NE SW NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: R. VOLLMER

Location: 044N-31W-26ABCA
Latitude: 43 45' 49"
Longitude: 100 58' 03"
Ground Surface Elevation (ft.): 2293.58

**Project Information**

Project: MEDICAL WASTE INVEST.
Drill Date: 10/24/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-67
Samples:

Geologist: J. GILBERTSON
Driller: D. IVerson
Driller's Log: X

Total Drill Hole Depth (ft.): 25.0

**Well Information**

SDGS Well Name: R20-90-67
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80, FLUSH
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT
Total Casing and Screen (ft.): 26.5
Well Maintenance Date:

Casing Top Elevation: 2295.39
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 1.81

**Geophysical Information**

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

**WELL DATA:** NATURAL SEDIMENT - 25 TO 22 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 22 TO 12.5 FEET; GRANULAR BENTONITE - 12.5 TO 12.0 FEET; CEMENT - 12.0 TO 0.5 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2293.58-2285.58</td>
<td>0.0-8.0</td>
<td>SILT, DARK-BROWN, SANDY, PEBBLY; NON-CALCAREOUS (ALLUVIUM/COLLOUVIUM)</td>
</tr>
<tr>
<td>2285.58-2277.08</td>
<td>8.0-16.5</td>
<td>CLAY, DARK-GRAY, SANDY, PEBBLY; CALCAREOUS; SOME GRAY AND TAN MOTTLING (COLLOUVIUM)</td>
</tr>
<tr>
<td>2277.08-2271.58</td>
<td>16.5-22.0</td>
<td>CLAY, DARK-GRAY WITH BROWN MOTTLES; NON-CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2271.58-2268.58</td>
<td>22.0-25.0</td>
<td>CLAY, DARK-GRAY; NONCALCAREOUS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 8 TO 10 FEET, 17.5 TO 19 FEET, AND 24 TO 25 FEET.

* * * *
Location Information

Legal Location: NW SW NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER
Location: 044N-31W-26ABCB 1
Latitude: 43 45' 50"
Longitude: 100 58' 08"
Ground Surface Elevation (ft.): 2288 T

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/12/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-46
Driller: D. IVERSON
Geologist: L. SCHULZ
Geologist's Log: X
Driller's Log: 
Total Drill Hole Depth (ft.): 20.0

Geophysical Information

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2288.00 - 2283.00</td>
<td>0.0 - 5.0</td>
<td>CLAY, BROWN-GRAY; WITH SOME SAND AND GRAVEL</td>
</tr>
<tr>
<td>2283.00 - 2281.60</td>
<td>5.0 - 6.4</td>
<td>CLAY, GRAY; WITH SOME GYPSUM FILLED FRACTURES AND ROOT CASTS, WITH SOME VERY MINOR AMOUNTS OF SAND</td>
</tr>
<tr>
<td>2281.60 - 2279.60</td>
<td>6.4 - 8.4</td>
<td>CLAY, GRAY WITH SOME BROWN MOTTLING, SANDY</td>
</tr>
<tr>
<td>2279.60 - 2279.20</td>
<td>8.4 - 8.8</td>
<td>SAND, BROWN, MEDIUM TO COARSE, SLIGHTLY CLAYEY</td>
</tr>
<tr>
<td>2279.20 - 2276.30</td>
<td>8.8 - 11.7</td>
<td>CLAY, GRAY WITH BROWN MOTTLING, SANDY TO VERY SANDY; WITH SOME GRAVEL</td>
</tr>
<tr>
<td>2276.30 - 2275.70</td>
<td>11.7 - 12.3</td>
<td>CLAY, DARK-GRAY WITH SOME BROWN MOTTLING</td>
</tr>
<tr>
<td>2275.70 - 2275.30</td>
<td>12.3 - 12.7</td>
<td>CLAY, GRAY WITH BROWN MOTTLING; WITH SOME COARSE GRAVEL INCLUDING SOME CARBONATE CLASTS</td>
</tr>
<tr>
<td>2275.30 - 2272.80</td>
<td>12.7 - 15.2</td>
<td>CLAY, GRAY WITH MUCH BROWN MOTTLING (PIERRE SHALE)</td>
</tr>
<tr>
<td>2272.80 - 2272.00</td>
<td>15.2 - 16.0</td>
<td>CLAY, GRAY WITH SOME BROWN MOTTLING (PIERRE SHALE)</td>
</tr>
<tr>
<td>2272.00 - 2268.00</td>
<td>16.0 - 20.0</td>
<td>CLAY, GRAY (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

CONTINUOUS CORE TAKEN WITH SPLIT-SPOON SAMPLER FROM 5 TO 20 FEET.

* * * *
Location Information

Legal Location: NW SW NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER
Location: 044N-31W-26 ABCB 2
Latitude: 43 45' 50"
Longitude: 100 58' 08"
Ground Surface Elevation (ft.): 2289.03

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/18/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-49
Geologist: L. SCHULZ
Driller: D. IVerson
Driller's Log:
Total Drill Hole Depth (ft.): 19.0

Well Information

SDGS Well Name: R20-90-49
Water Rights Well:
Other Well Name:
Casing Type: PVC, SCH. 80, FLUSH
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT
Total Casing and Screen (ft.): 20.0
Casing Top Elevation: 2290.77
Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Casing Stick-up (ft.): 1.74
Well Maintenance Date:

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Extra:
Single Point Resistivity:
WELL DATA: FILTER PACK - 18 TO 6 FEET (GRAIN SIZE 0.65 TO 0.75 MM); GRANULAR BENTONITE - 6 TO 5 FEET; CEMENT - 5 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2289.03 - 2281.03</td>
<td>0.0 - 8.0</td>
<td>CLAY, BROWN TO BLACK, SILTY; SOME SAND AND PEBBLES, DRY (ALLUVIUM)</td>
</tr>
<tr>
<td>2281.03 - 2276.03</td>
<td>8.0 - 13.0</td>
<td>CLAY, OLIVE-BROWN, SILTY, SANDY; MANY PEBBLES, CALCAREOUS, MANY SMALL GYPSUM CRYSTALS PRESENT, NUMEROUS SHALE CLASTS, MOSTLY OXIDIZED, SATURATED AT APPROXIMATELY 13 FEET (ALLUVIUM)</td>
</tr>
<tr>
<td>2276.03 - 2273.03</td>
<td>13.0 - 16.0</td>
<td>CLAY, GRAY AND BROWN MOTTLED; MUCH GYPSUM, CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2273.03 - 2270.03</td>
<td>16.0 - 19.0</td>
<td>CLAY, GRAY-BLACK; LACKS BROWN MOTTLING, MUCH GYPSUM, CALCAREOUS; THIS INTERVAL INTERPRETED FROM CORE TAKEN FROM 18 TO 19 FEET AND CUTTINGS FROM AUGER FLIGHTS (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SE SE NW NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER

Location: 044N-31W-26ABDD
Latitude: 43° 45' 47"
Longitude: 100° 57' 56"
Ground Surface Elevation (ft.): 2336 T

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/18/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-48
Samples:

Geologist: L. SCHULZ
Geologist's Log: X
Driller: D. IVerson
Driller's Log: Total Drill Hole Depth (ft.): 25.0

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2336.00-2330.10</td>
<td>0.0-5.9</td>
<td>SAND, LIGHT-TAN-BROWN, FINE TO MEDIUM, WELL-ROUNDED; SOME GRAVEL AND PEBBLES, MANY SHALE CLASTS, CALCAREOUS, SOME SILT</td>
</tr>
<tr>
<td>2330.10-2329.20</td>
<td>5.9-6.8</td>
<td>CLAY, LIGHT-TAN, VERY SANDY, VERY SILTY; CALCAREOUS, MANY SMALL SHALE CLASTS, SOME SMALL GYPSUM CRYSTALS PRESENT</td>
</tr>
<tr>
<td>2329.20-2318.40</td>
<td>6.8-17.6</td>
<td>SAND, LIGHT-BROWN, FINE TO MEDIUM; SOME GRAVEL AND COBBLES FROM 12 TO 12.6 FEET, SILT AND CLAY FROM 12.6 TO 13 FEET, COARSE GRAVEL AND LARGE SHALE CLASTS FROM 13 TO 17.6 FEET, CALCAREOUS</td>
</tr>
<tr>
<td>2318.40-2316.50</td>
<td>17.6-19.5</td>
<td>CLAY, OLIVE-BROWN TO GRAY WITH SOME BROWN MOTTLING; FISSILE, NONCALCAREOUS, SOME IRON STAINING AND GYPSUM IN HORIZONTAL FRACTURES (PIERRE SHALE)</td>
</tr>
<tr>
<td>2316.50-2311.00</td>
<td>19.5-25.0</td>
<td>CLAY, DARK-GRAY TO BLACK, SOME TAN-BROWN MOTTLING; BLOCKY, SEMI-FISSL LE, NON-CALCAREOUS, IRON STAINING IN HORIZONTAL FRACTURES WITH SOME GYPSUM, SMALL BAND OF ORANGE-BROWN LIMONITE AND IRON FROM 20.0 TO 20.4 FEET, LAYERS OF TAN-BROWN CLAY THROUGHOUT (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

TEST-HOLE CORED FROM 5 TO 25 FEET; SAMPLES FROM 7 TO 9 FEET MISSING.

* * * *

044N31W26ABDD  Page 1  01/31/2005
**Location Information**

Legal Location: NW SW SE NE SEC. 26, T. 044 N., R. 31 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140202  
Land Owner: VOLLMER  
Location: 044N-31W-26ADCB  
Latitude: 43 45' 35"  
Longitude: 100 57' 52"  
Ground Surface Elevation (ft.): 2319 T

**Project Information**

Project: MEDICAL WASTE INVEST.  
Drill Date: 09/19/1990  
Company: SDGS  
Drilling Method: HOLLOWSTEM  
Test Hole Number: R20-90-54  
Samples:  
Driller: D. IVERSON  
Geologist: L. SCHULZ  
Geologist's Log:  
Driller's Log: X  
Total Drill Hole Depth (ft.): 14.0

**Geophysical Information**

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2319.00-2316.00</td>
<td>0.0-3.0</td>
<td>CLAY, BROWN</td>
</tr>
<tr>
<td>2316.00-2315.00</td>
<td>3.0-4.0</td>
<td>CLAY, TAN TO LIGHT-TAN</td>
</tr>
<tr>
<td>2315.00-2307.00</td>
<td>4.0-12.0</td>
<td>CLAY, TAN, SILTY</td>
</tr>
<tr>
<td>2307.00-2305.00</td>
<td>12.0-14.0</td>
<td>CLAY, GRAY (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW SW SE NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER

Location: 044N-31W-26ADCC
Latitude: 43 45' 32"
Longitude: 100 57' 53"
Ground Surface Elevation (ft.): 2305 T

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/19/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-51
Samples:

Geologist: L. SCHULZ
Geologist's Log: X
Driller: D. IVerson
Driller's Log:
Total Drill Hole Depth (ft.): 10.0

Geophysical Information

Spontaneous Potential:
Natural Gamma: 
Single Point Resistivity: 
Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2305.00 - 2302.00</td>
<td>0.0 - 3.0</td>
<td>CLAY, BROWN WITH SOME GRAY MOTTLING; MINOR AMOUNT OF GYPSUM (PIERRE SHALE)</td>
</tr>
<tr>
<td>2302.00 - 2297.00</td>
<td>3.0 - 8.0</td>
<td>CLAY, OLIVE-GRAY TO GRAY WITH SOME BROWN MOTTLING (PIERRE SHALE)</td>
</tr>
<tr>
<td>2297.00 - 2295.00</td>
<td>8.0 - 10.0</td>
<td>CLAY, GRAY TO BLACK, VERY LITTLE BROWN MOTTLING; SOME GYPSUM (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NW SE SE NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER

Location: 044N-31W-26ADDB
Latitude: 43° 45' 35"
Longitude: 100° 57' 44"
Ground Surface Elevation (ft.): 2330 T

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/19/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-53
Samples:

Geologist: L. SCHULZ
Driller: D. IVERSON

Driller's Log: X
Geologist's Log:
Total Drill Hole Depth (ft.): 17.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

<table>
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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2330.00-2327.00</td>
<td>0.0-3.0</td>
<td>CLAY, BROWN</td>
</tr>
<tr>
<td>2327.00-2325.00</td>
<td>3.0-5.0</td>
<td>CLAY, TAN</td>
</tr>
<tr>
<td>2325.00-2316.00</td>
<td>5.0-14.0</td>
<td>CLAY, TAN, SILTY</td>
</tr>
<tr>
<td>2316.00-2313.00</td>
<td>14.0-17.0</td>
<td>CLAY, GRAY (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: SW SE SE NE SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER

Location: 044N-31W-26ADDC
Latitude: 43 45' 32"
Longitude: 100 57' 41"
Ground Surface Elevation (ft.): 2328 T

Project Information

Project: MEDICAL WASTE INVEST.
Drill Date: 09/19/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-52
Samples:

Geologist: L. SCHULZ
Driller: D. IVESON
Driller's Log: X
Total Drill Hole Depth (ft.): 8.0

Geophysical Information

Spontaneous Potential: Extra:
Natural Gamma: Single Point Resistivity:

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<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2328.00 - 2325.00</td>
<td>0.0 - 3.0</td>
<td>CLAY, BROWN</td>
</tr>
<tr>
<td>2325.00 - 2323.00</td>
<td>3.0 - 5.0</td>
<td>CLAY, TAN</td>
</tr>
<tr>
<td>2323.00 - 2320.00</td>
<td>5.0 - 8.0</td>
<td>CLAY, GRAY (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
**Location Information**

Legal Location: NE NE NE NW SEC. 26, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: VOLLMER
Location: 044N-31W-26BAAA
Latitude: 43 45' 57"
Longitude: 100 58' 13"
Ground Surface Elevation (ft.): 2285.27

**Project Information**

Project: MEDICAL WASTE INVEST.
Drill Date: 09/19/1990
Company: SDGS
Drilling Method: HOLLOWSTEM
Test Hole Number: R20-90-50
Samples: Total Drill Hole Depth (ft.): 35.0
Geologist: L. SCHULZ
Driller: D. IVIERSON
Driller's Log: Extra:
Geologist's Log: Total Casing and Screen (ft.): 37.0
Well Maintenance Date:

**Well Information**

SDGS Well Name: R20-90-50
Water Rights Well: Aquifer:
Other Well Name: Management Unit:
Casing Type: PVC, SCH. 80, FLUSH Casing Top Elevation: 2287.39
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT Casing Diameter (in.): 2.0
Screen Length (ft.): 10.0
Total Casing and Screen (ft.): 37.0 Casing Stick-up (ft.): 2.12
Well Maintenance Date:

**Geophysical Information**

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:
WELL DATA: NATURAL SEDIMENT - 35 TO 26.3 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75
MM) - 26.3 TO 22.0 FEET; GRANULAR BENTONITE - 22 TO 21 FEET; CEMENT - 21 TO 0 FEET;
LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2285.27-2280.27</td>
<td>0.0 - 5.0</td>
<td>CLAY, BROWN-GRAY, SILTY, SANDY; SOME PEBBLES AND GRAVEL, CALCAREOUS, DRY (ALLUVIUM)</td>
</tr>
<tr>
<td>2280.27-2278.27</td>
<td>5.0 - 7.0</td>
<td>CLAY, LIGHT-BROWN-GRAY, SILTY; POWDERY AND DRY, CALCAREOUS (ALLUVIUM)</td>
</tr>
<tr>
<td>2278.27-2269.27</td>
<td>7.0 - 16.0</td>
<td>SAND, LIGHT-BROWN, FINE TO COARSE, WELL-ROUNDED; SOME COBBLES AND GRAVEL FROM 11 TO 15 FEET, CALCAREOUS, MANY SHALE CLASTS THROUGHOUT</td>
</tr>
<tr>
<td>2269.27-2262.27</td>
<td>16.0 - 23.0</td>
<td>SAND AND GRAVEL, BROWN, COARSE GRAVEL, FINE TO MEDIUM SAND, WELL-ROUNDED; SMALL STRINGERS OF OLIVE-BROWN, NONCLACAREOUS CLAY FROM 16 TO 19 FEET, SAND AND GRAVEL IS CALCAREOUS</td>
</tr>
<tr>
<td>2262.27-2254.27</td>
<td>23.0 - 31.0</td>
<td>SAND, LIGHT-TAN-BROWN, VERY FINE, SILTY, WELL-ROUNDED; SOME CLAY STRINGERS AT TOP OF</td>
</tr>
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</table>
INTERVAL, MANY SMALL SHALE CLASTS, COBBLES FROM 28 TO 29 FEET

<table>
<thead>
<tr>
<th>Interval</th>
<th>Depth Range</th>
<th>Description</th>
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<tbody>
<tr>
<td>2254.27–2252.27</td>
<td>31.0–33.0</td>
<td>CLAY, DARK-BROWN TO GRAY MOTTLED; SEMI-FISSILE, HARD AND DRY (PIERRE SHALE)</td>
</tr>
<tr>
<td>2252.27–2250.27</td>
<td>33.0–35.0</td>
<td>CLAY, DARK-GRAY TO BLACK, SOME OLIVE-BROWN WEATHERING; SOME GYPSUM, THIS INTERVAL INTERPRETED FROM CORE SAMPLE TAKEN FROM 33 TO 35 FEET (PIERRE SHALE)</td>
</tr>
</tbody>
</table>

* * * *
Location Information

Legal Location: NW SE NW NW SEC. 28, T. 044 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: 
Location: 044N-31W-28BBDB
Latitude: 43 45' 51"
Longitude: 101 01' 03"
Ground Surface Elevation (ft.): 1950 T

Project Information

Project: USGS
Drill Date:
Company: USGS
Drilling Method:
Test Hole Number: 
Samples: 
Geologist:
Geologist's Log: 
Driller: 
Driller's Log: X
Total Drill Hole Depth (ft.): 27.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>1950.00 - 1940.00</td>
<td>0.0 - 10.0</td>
<td>SILT, WHITE</td>
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<tr>
<td>1940.00 - 1938.00</td>
<td>10.0 - 12.0</td>
<td>CLAY, BROWN</td>
</tr>
<tr>
<td>1938.00 - 1930.00</td>
<td>12.0 - 20.0</td>
<td>SILT, WHITE; MOIST AT 14 FEET</td>
</tr>
<tr>
<td>1930.00 - 1926.00</td>
<td>20.0 - 24.0</td>
<td>SILT, GRAY</td>
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<tr>
<td>1926.00 - 1923.00</td>
<td>24.0 - 27.0</td>
<td>SHALE, DARK-GREY</td>
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</tbody>
</table>

* * * *
**Location Information**

Legal Location: NW SW SW SW SEC. 28, T. 044 N., R. 31 W.  
County: MELLETTE  
Basin: WHITE  
Hydrologic Unit Code: 10140203  
Land Owner:  
Location: 044N-31W-28CCCB  
Latitude: 43 45' 11"  
Longitude: 101 01' 11"  
Ground Surface Elevation (ft.): 2333 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY  
Drill Date: 07/09/1996  
Company: SDGS  
Drilling Method: ROTARY  
Test Hole Number: R2-96-24  
Samples:  
Geologist: R. HAMMOND  
Geologist's Log: X  
Driller: G. JENSEN  
Driller's Log:  
Total Drill Hole Depth (ft.): 42.0

**Geophysical Information**

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2333.00-2331.00</td>
<td>0.0-2.0</td>
<td>TOPSOIL, BLACK</td>
</tr>
<tr>
<td>2331.00-2323.00</td>
<td>2.0-10.0</td>
<td>SAND, FINE</td>
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<tr>
<td>2323.00-2315.00</td>
<td>10.0-18.0</td>
<td>SILT, DARK-BROWN</td>
</tr>
<tr>
<td>2315.00-2291.00</td>
<td>18.0-42.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
</tr>
<tr>
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</table>
Casing Type: Screen Type:
Casing Stick-up (ft.):
Spontaneous Potential:
Natural Gamma:
Samples:

Longitude:
Hydrologic Unit Code:

County:
Basin:
Hydrologic Unit Code:
Land Owner:

Location: Location:

Project:
Drill Date:
Company:
Drilling Method:
Test Hole Number:
Samples:

Casing Top Elevation:
Total Casing and Screen (ft.):
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Aquifer:
Management Unit:
Casing Diameter (in.):
Screen Length (ft.):
Casing Stick-up (ft.):

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

WELL DATA: NATURAL SEDIMENT - 54 TO 48.9 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 48.9 TO 41.9; GRANULAR BENTONITE - 41.9 TO 38.3 FEET; BENTONITE SLURRY - 38.3 TO 20.3 FEET; CEMENT - 20.3 TO 0; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2222.00-2217.00</td>
<td>0.0-5.0</td>
<td>CLAY, BROWN AND BLACK MOTTLED; SOME LAYERING; WEATHERED, DRILLED WITH PLUG IN HOLLOWSTEM AUGERS TO 5 FEET (PIERRE SHALE)</td>
</tr>
<tr>
<td>2217.00-2209.00</td>
<td>5.0-13.0</td>
<td>CLAY, GRAY WITH BROWN MOTTLING; MANY GYPSUM FILLED HORIZONTAL FRACTURES, LESS FRACTURING FROM 10 TO 11 FEET (PIERRE SHALE)</td>
</tr>
<tr>
<td>2209.00-2207.00</td>
<td>13.0-15.0</td>
<td>CLAY, GRAY TO DARK-GRAY AT 14 FEET, SOME BROWN MOTTLING; SOME HORIZONTAL FRACTURES WITH GYPSUM, CALCAREOUS, FISSILE (PIERRE SHALE)</td>
</tr>
<tr>
<td>2207.00-2201.00</td>
<td>15.0-21.0</td>
<td>CLAY, DARK-GRAY, LITTLE BROWN MOTTLING; VERTICAL FRACTURE SHOWING IRON STAINING FROM 15 TO 17 FEET, VERY LITTLE GYPSUM, FISSILE, CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2201.00-2168.00</td>
<td>21.0-54.0</td>
<td>CLAY, DARK-GRAY TO BLACK; SOME GYPSUM, FISSILE,</td>
</tr>
</tbody>
</table>
CALCAREOUS, SMALL LAYER OF LIGHT-GRAY TO WHITE, HIGHLY CALCAREOUS CLAY FROM 32 TO 32.4 FEET AND 43.6 TO 43.9 FEET

* * * *
Location Information

Legal Location: NW SE NE NE SEC. 36, T. 044 N., R. 31 W.
County: MELLETTE Location: 044N-31W-36AADB 2
Basin: WHITE Latitude: 43 44' 58"
Hydrologic Unit Code: 10140202 Longitude: 100 56' 33"
Land Owner: VOLLMER Ground Surface Elevation (ft.): 2222 T

Project Information

Project: MEDICAL WASTE INVEST. Geologist: L. SCHULZ
Drill Date: 09/26/1990 Geologist's Log: X
Company: SDGS Driller: D. IVerson
Drilling Method: HOLLOWSTEM Driller's Log: 
Test Hole Number: R20-90-56 Total Drill Hole Depth (ft.): 25.0
Samples: 

Well Information

SDGS Well Name: R20-90-56 Aquifer:
Water Rights Well: Management Unit:
Other Well Name: Casing Top Elevation:
Casing Type: PVC, SCH. 80, FLUSH Casing Diameter (in.): 2.0
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT Screen Length (ft.): 10.0
Total Casing and Screen (ft.): 26.7 Casing Stick-up (ft.): 2.31
Well Maintenance Date: 

Geophysical Information

Spontaneous Potential: Single Point Resistivity: 
Natural Gamma: Extra: 

WELL DATA: NATURAL SEDIMENT - 25 TO 22 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 22 TO 12 FEET; GRANULAR BENTONITE - 12 TO 11.1 FEET; CEMENT - 11.1 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2222.00 - 2217.00</td>
<td>0.0 - 5.0</td>
<td>CLAY, BROWN AND GRAY MOTTLED; SOME ORANGE-BROWN LAYERING (PIERRE SHALE)</td>
</tr>
<tr>
<td>2217.00 - 2206.00</td>
<td>5.0 - 16.0</td>
<td>CLAY, DARK-BROWN TO GRAY MOTTLED; SOME GYPSUM, MUCH ORANGE-BROWN IRON STAINING IN FRACTURES, CALCAREOUS (PIERRE SHALE)</td>
</tr>
<tr>
<td>2206.00 - 2201.00</td>
<td>16.0 - 21.0</td>
<td>CLAY, GRAY-BLACK WITH SOME OLIVE-BROWN MOTTLING; CALCAREOUS, FISSILE AND PARTLY BLOCKY, SOME SMALL GYPSUM CRYSTALS PRESENT, LOSING THE IRON STAINED FRACTURING (PIERRE SHALE)</td>
</tr>
<tr>
<td>2201.00 - 2197.00</td>
<td>21.0 - 25.0</td>
<td>CLAY, GRAY-BLACK; CALCAREOUS, FISSILE, NOT AS BLOCKY AS PREVIOUS INTERVAL, DRY AND HARD (PIERRE SHALE)</td>
</tr>
</tbody>
</table>
### Location Information

- **Legal Location:** SW SE NE NE SEC. 36, T. 044 N., R. 31 W.
- **County:** MELLETTE
- **Basin:** WHITE
- **Hydrologic Unit Code:** 10140202
- **Land Owner:** VOLLMER

- **Location:** 044N-31W-36AADC 1
- **Latitude:** 43 44' 57"
- **Longitude:** 100 56' 33"
- **Ground Surface Elevation (ft.):** 2198 T

### Project Information

- **Project:** MEDICAL WASTE INVEST.
- **Drill Date:** 09/27/1990
- **Company:** SDGS
- **Drilling Method:** HOLLOWSTEM
- **Test Hole Number:** R20-90-57

- **Geologist:** L. SCHULZ
- **Geologist's Log:** X
- **Driller:** D. IVerson
- **Driller's Log:**

- **Total Drill Hole Depth (ft.):** 55.0

### Well Information

- **SDGS Well Name:** R20-90-57
- **Water Rights Well:**
- **Other Well Name:**

- **Casing Type:** PVC, SCH. 80, FLUSH
- **Screen Type:** PVC, SCH. 80, MFG., 0.018 SLOT

- **Casing Diameter (in.):** 2.0
- **Screen Length (ft.):** 5.0
- **Total Casing and Screen (ft.):** 49.7
- **Casing Stick-up (ft.):** 1.71

### Geophysical Information

- **Spontaneous Potential:**
- **Natural Gamma:**

- **Well Data:**
  - **NATURAL SEDIMENT - 55 TO 47.6 FEET:**
  - **FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 47.6 TO 40.3 FEET:**
  - **GRANULAR Bentonite - 40.3 TO 29.7 FEET:**
  - **CEMENT - 29.7 TO 0 FEET:**
  - **LOCKING STEEL WELL PROTECTOR INSTALLED.**

### Elevation (ft.) Depth (ft.) Description

<table>
<thead>
<tr>
<th>Elevation (ft.)</th>
<th>Depth (ft.)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2198.00 - 2192.40</td>
<td>0.0 - 5.6</td>
<td>CLAY, BROWN WITH SOME GRAY MOTTLING; SLIGHTLY CALCAREOUS, VERY DRY, HARD, SOME PLANT ROOTS PRESENT (PIERRE SHALE)</td>
</tr>
<tr>
<td>2192.40 - 2187.00</td>
<td>5.6 - 11.0</td>
<td>CLAY, DARK-BROWN WITH SOME GRAY MOTTLING; SLIGHTLY CALCAREOUS, VERTICAL AND HORIZONTAL FRACTURING WITH GYPSUM AND IRON STAINING, SOME PLANT ROOTS, BLOCKY (PIERRE SHALE)</td>
</tr>
<tr>
<td>2187.00 - 2185.70</td>
<td>11.0 - 12.3</td>
<td>CLAY, DARK-BROWN TO BLACK; CALCAREOUS, VERTICAL AND HORIZONTAL FRACTURES WITH GYPSUM AND IRON STAINING, BLOCKY TO SLIGHTLY FISSILE (PIERRE SHALE)</td>
</tr>
<tr>
<td>2185.70 - 2181.00</td>
<td>12.3 - 17.0</td>
<td>CLAY, DARK-GRAY TO BLACK; CALCAREOUS, HORIZONTAL FRACTURING, SOME VERTICAL FRACTURES WITH IRON STAINING AND GYPSUM, FISSILE (PIERRE SHALE)</td>
</tr>
</tbody>
</table>
2181.00-2143.00  17.0 - 55.0  CLAY, DARK-GRAY TO BLACK; CALCAREOUS, PISSILE,
A VERY CALCAREOUS OLIVE-GREEN TO BROWN LAYER
FROM 20.6 TO 20.7 FEET (PIERRE SHALE)

CONTINUOUS CORE TAKEN TO 26 FEET; DRILLED WITH PLUG AND SPLIT-SPOON SAMPLER
ALTERNATING EACH TO A DEPTH OF 55 FEET; BOTTOM HOLE SAMPLE SHOWED A GRAY SHALE.

* * * *
Location Information

Legal Location: SW SE NE NE SEC. 36, T. 044 N., R. 31 W.
County: MELLETTE Location: 044N-31W-36NADC 2
Basin: WHITE Latitude: 43 44' 57"
Hydrologic Unit Code: 10140202 Longitude: 100 56' 33"
Land Owner: VOLLMER Ground Surface Elevation (ft.): 2198 T

Project Information

Project: MEDICAL WASTE INVEST. Geologist: L. SCHULZ
Drill Date: 09/27/1990 Geologist's Log: X
Company: SDGS Driller: D. IVerson
Drilling Method: HOLLOWSTEM Driller's Log:
Test Hole Number: R20-90-58 Total Drill Hole Depth (ft.): 23.0
Samples:

Well Information

SDGS Well Name: R20-90-58 Aquifer:
Water Rights Well: Management Unit:
Other Well Name: Casing Top Elevation:
Casing Type: PVC, SCH. 80, FLUSH Casing Diameter (in.): 2.0
Screen Type: PVC, SCH. 80, MFG., 0.018 SLOT Screen Length (ft.): 10.0
Total Casing and Screen (ft.): 22.0 Casing Stick-up (ft.): 1.79
Well Maintenance Date:

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

WELL DATA: NATURAL SEDIMENT - 23 TO 17.6 FEET; FILTER PACK (GRAIN SIZE 0.65 TO 0.75 MM) - 17.6 TO 8.3 FEET; GRANULAR BENTONITE - 8.3 TO 7.8 FEET; CEMENT - 7.8 TO 0 FEET; LOCKING STEEL WELL PROTECTOR INSTALLED.

Elevation (ft.) | Depth (ft.) | Description
--- | --- | ---
2198.00 - 2192.00 | 0.0 - 6.0 | CLAY, BROWN AND GRAY MOTTLED; SEMI- FISSLILE, BLOCKY, CALCAREOUS, SOME GYPSUM (PIERRE SHALE)
2192.00 - 2185.00 | 6.0 - 13.0 | CLAY, DARK-BROWN AND GRAY MOTTLED; CALCAREOUS, MUCH IRON STAINING, SEMI- FISSLILE, SOME GYPSUM (PIERRE SHALE)
2185.00 - 2182.00 | 13.0 - 16.0 | CLAY, GRAY-BLACK WITH SOME BROWN MOTTLING; CALCAREOUS, LESS IRON STAINING WITH DEPTH, SOME GYPSUM, BLOCKY, SEMI-FISSLILE (PIERRE SHALE)
2182.00 - 2175.00 | 16.0 - 23.0 | CLAY, GRAY-BLACK; CALCAREOUS, FISSLILE, VERY SMALL AMOUNT OF IRON STAINING, NO BROWN MOTTLING PRESENT, SOME GYPSUM (PIERRE SHALE)

* * * *
**Location Information**

Legal Location: NE SW SE SE SEC. 10, T. 044 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: 

Location: 044N-33W-10DDCA
Latitude: 43 47' 47"
Longitude: 101 13' 23"
Ground Surface Elevation (ft.): 2025 T

**Project Information**

Project: USGS
Drill Date: 
Company: USGS
Drilling Method: 
Test Hole Number: 
Samples: 

Geologist: 
Geologist's Log: 
Driller: 
Driller's Log: X
Total Drill Hole Depth (ft.): 29.0

**Geophysical Information**

Spontaneous Potential: 
Natural Gamma: 
Single Point Resistivity: 
Extra: 

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<th>Description</th>
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<td>2025.00-2016.00</td>
<td>0.0-9.0</td>
<td>SILT</td>
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<td>2016.00-2010.00</td>
<td>9.0-15.0</td>
<td>SAND, COARSE; GRAVEL, FINE</td>
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<tr>
<td>2010.00-2004.00</td>
<td>15.0-21.0</td>
<td>SAND, COARSE; GRAVEL, COARSE</td>
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<tr>
<td>2004.00-1996.00</td>
<td>21.0-29.0</td>
<td>SAND, LIGHT-GRAY, SILTY; DARK-GRAY SHALE BIT SAMPLE</td>
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Location Information

Legal Location: SW NW SW NW SEC. 14, T. 044 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Longitude: 044N-33W-14BCBC
Latitude: 43 47' 23"
Longitude: 101 13' 04"

Ground Surface Elevation (ft.): 2020 T

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist: USGS
Driller: USGS
Geologist's Log:
Driller's Log: X
Total Drill Hole Depth (ft.): 34.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:
Single Point Resistivity:
Extra:

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<th>Description</th>
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<td>2020.00-2010.00</td>
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<td>SILT; FINE SAND</td>
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<tr>
<td>2010.00-2005.00</td>
<td>10.0-15.0</td>
<td>SAND, VERY FINE; MOIST AT 12 FEET</td>
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<tr>
<td>2005.00-2001.00</td>
<td>15.0-19.0</td>
<td>SAND, MEDIUM</td>
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<td>2001.00-1986.00</td>
<td>19.0-34.0</td>
<td>SAND, COARSE; FINE GRAVEL; DARK-GRAY SHALE BIT SAMPLE</td>
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* * * *
**Location Information**

Legal Location: NW NE NE NE SEC. 15, T. 044 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Location: 044N-33W-15AAAB
Latitude: 43 47' 40"
Longitude: 101 13' 19"
Ground Surface Elevation (ft.): 2015 T

**Project Information**

Project: USGS
Drill Date:
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist: Geologist's Log: Driller: Driller's Log: Total Drill Hole Depth (ft.): 32.0

**Geophysical Information**

Spontaneous Potential: Natural Gamma: Single Point Resistivity: Extra:

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<th>Elevation (ft.)</th>
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<th>Description</th>
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<td>2015.00 - 2007.00</td>
<td>0.0 - 8.0</td>
<td>SILT, BROWN TO LIGHT-TAN</td>
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<td>2007.00 - 2005.00</td>
<td>8.0 - 10.0</td>
<td>SAND, MEDIUM</td>
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<td>2005.00 - 2003.00</td>
<td>10.0 - 12.0</td>
<td>SAND, MEDIUM; GRAVEL, MEDIUM</td>
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<tr>
<td>2003.00 - 1994.00</td>
<td>12.0 - 21.0</td>
<td>SAND, MEDIUM; GRAVEL, MEDIUM, MOIST AT 13 FEET</td>
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<tr>
<td>1994.00 - 1986.00</td>
<td>21.0 - 29.0</td>
<td>GRAVEL, SMALL TO MEDIUM, SILTY</td>
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<td>1986.00 - 1983.00</td>
<td>29.0 - 32.0</td>
<td>SHALE, DARK-GRAY</td>
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**Location Information**

Legal Location: NE SE NE NE SEC.15, T. 044 N., R. 33 W.
County: MELLETTTE Location: 044N-33W-15AADA
Basin: WHITE Latitude: 43 47' 34"
Hydrologic Unit Code: 10140202 Longitude: 101 13' 12"
Land Owner: Ground Surface Elevation (ft.): 2015 T

**Project Information**

Project: USGS Geologist:
Drill Date: Geologist's Log:
Company: USGS Driller:
Drilling Method: Driller's Log:
Test Hole Number: Total Drill Hole Depth (ft.): 27.0
Samples:

**Geophysical Information**

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

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<th>Description</th>
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<td>0.0-5.0</td>
<td>SILT</td>
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<td>2010.00-1997.00</td>
<td>5.0-18.0</td>
<td>SAND, MEDIUM; GRAVEL, MEDIUM, MOIST AT 13 FEET</td>
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<td>1997.00-1992.00</td>
<td>18.0-23.0</td>
<td>SAND, COARSE; GRAVEL, FINE</td>
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<td>1992.00-1989.00</td>
<td>23.0-26.0</td>
<td>GRAVEL, GRAY, MEDIUM, SILTY</td>
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<td>1989.00-1988.00</td>
<td>26.0-27.0</td>
<td>SHALE, DARK-GRAY</td>
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Location Information

Legal Location: NW NE SW NE SEC. 22, T. 044 N., R. 33 W.
County: MELLETTTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Longitude: 044N-33W-22ACAB
Latitude: 43 46' 36"
Longitude: 101 13' 38"
Ground Surface Elevation (ft.): 2040 T

Project Information

Project: USGS
Drill Date:
Company: USGS
Drilling Method:
Test Hole Number:
Samples:

Geologist:
Geologist's Log:
Driller:
Driller's Log:
Total Drill Hole Depth (ft.): 32.0

Geophysical Information

Spontaneous Potential:
Natural Gamma:

Single Point Resistivity:
Extra:

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<tr>
<td>2040.00-2028.00</td>
<td>0.0-12.0</td>
<td>SILT, LIGHT-GRAY</td>
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<td>2028.00-2025.00</td>
<td>12.0-15.0</td>
<td>SILT AND CLAY</td>
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<td>2025.00-2023.00</td>
<td>15.0-17.0</td>
<td>CLAY, LIGHT-BROWN; WITH WHITE SILT PEBBLES</td>
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<td>2023.00-2021.00</td>
<td>17.0-19.0</td>
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<td>2021.00-2011.00</td>
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<td>CLAY, BROWN; GRAVEL, MEDIUM</td>
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<td>2011.00-2008.00</td>
<td>29.0-32.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
**Location Information**

Legal Location: NW SW NE SEC. 22, T. 044 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner: 

Location: 044N-33W-22ACB
Latitude: 43 46' 32"
Longitude: 101 13' 39"
Ground Surface Elevation (ft.): 2030 T

**Project Information**

Project: USGS
Drill Date: 08/18/1966
Company: USGS
Drilling Method: Driller's Log:
Test Hole Number: Driller's Log: X
Samples: Total Drill Hole Depth (ft.): 22.0

**Geophysical Information**

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

DEPTH TO WATER: 11.1 FEET MEASURED 08-18-1966.

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<td>2030.00-2023.00</td>
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<td>SILT AND CLAY, BROWN</td>
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<td>SAND, FINE</td>
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<td>2017.00-2015.00</td>
<td>13.0-15.0</td>
<td>SAND, MEDIUM TO COARSE</td>
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<td>2015.00-2011.00</td>
<td>15.0-19.0</td>
<td>SAND AND GRAVEL; SHALE</td>
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<tr>
<td>2011.00-2008.00</td>
<td>19.0-22.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: NE NW SE NE SEC. 22, T. 044 N., R. 33 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:

Longitude: 101 13' 21"
Latitude: 43 46' 35"
Ground Surface Elevation (ft.): 2353 T

Location: 044N-33W-22ADBA

Project Information

Project: USGS
Drill Date: 01/31/2005
Company: USGS
Driller: Driller's Log:
Drilling Method: Driller's Log:
Test Hole Number: Total Drill Hole Depth (ft.): 32.0
Samples:

Geophysical Information

Spontaneous Potential: Single Point Resistivity:
Natural Gamma: Extra:

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<td>0.0 - 15.0</td>
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<td>2338.00 - 2334.00</td>
<td>15.0 - 19.0</td>
<td>CLAY, BROWN</td>
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<td>2334.00 - 2329.00</td>
<td>19.0 - 24.0</td>
<td>SAND, COARSE; GRAVEL, FINE, SILTY</td>
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<td>2329.00 - 2326.00</td>
<td>24.0 - 27.0</td>
<td>GRAVEL, MEDIUM</td>
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<td>2326.00 - 2324.00</td>
<td>27.0 - 29.0</td>
<td>CLAY, BROWN</td>
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<td>2324.00 - 2321.00</td>
<td>29.0 - 32.0</td>
<td>SHALE, DARK-GRAY</td>
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* * * *
Location Information

Legal Location: SW SE NE NE SEC. 27, T. 044 N., R. 33 W.
County: MELLETTTE
Basin: WHITE
Hydrologic Unit Code: 10140202
Land Owner:  
Location: 044N-33W-27AADC  
Latitude: 43 45' 44"
Longitude: 101 13' 19"
Ground Surface Elevation (ft.): 2050 T

Project Information

Project: USGS
Drill Date:  
Company: USGS
Drilling Method:  
Test Hole Number:  
Samples:  
Geologist:  
Geologist's Log:  
Driller:  
Driller's Log: X  
Total Drill Hole Depth (ft.): 14.0

Geophysical Information

Spontaneous Potential:  
Natural Gamma:  
Single Point Resistivity:  
Extra:  

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<td>2048.00-2045.00</td>
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<td>SAND, MEDIUM</td>
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<td>2045.00-2040.00</td>
<td>5.0-10.0</td>
<td>SAND, FINE, SILTY</td>
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<td>2040.00-2036.00</td>
<td>10.0-14.0</td>
<td>SILT AND CLAY, DARK-BROWN; SHALE, BIT SAMPLE</td>
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**Location Information**

Legal Location: SE SE NE NW SEC. 33, T. 045 N., R. 31 W.
County: MELLETTE
Basin: WHITE
Hydrologic Unit Code: 10140203
Land Owner:

Location: 045N-31W-33BADD
Latitude: 43 50' 09"
Longitude: 101 01' 56"
Ground Surface Elevation (ft.): 2120 T

**Project Information**

Project: MELLETTE-TODD CO. STUDY
Drill Date: 07/09/1996
Company: SDGS
Drilling Method: ROTARY
Test Hole Number: R2-96-27

Geologist: R. HAMMOND
Geologist's Log: X
Driller: G. JENSEN
Driller's Log:
Total Drill Hole Depth (ft.): 42.0

**Samples:**

Spontaneous Potential:
Natural Gamma:

**Geophysical Information**

Single Point Resistivity:
Extra:

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<td>TOPSOIL, BLACK</td>
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<td>2118.00-2114.00</td>
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<td>2114.00-2095.00</td>
<td>6.0-25.0</td>
<td>SAND AND GRAVEL</td>
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<td>2095.00-2078.00</td>
<td>25.0-42.0</td>
<td>SHALE, BLACK (PIERRE SHALE)</td>
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