

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 74

Summary of the Los Nietos Company,  
Union Central Life Insurance Company - Ellis #1  
Cavalier County, North Dakota  
Permit #52, Well #36

By Carole Smith  
May, 1954

Los Nietos Company--UCLI-Ellis #1, Cavalier County, North Dakota,  
Section 12, T. 161N., R. 60W. (660 feet from North line, 1980 feet from East  
line, Section 12.) Elevation: 1646 feet K.B.

The UCLI - Ellis #1 was spudded August 13, 1951 and abandoned as a dry  
hole September 3, 1951 at a total depth of 2271'. Surface casing (10 3/4") was  
set at 158' with 125 sacks; 15 sack plugs were set at 2140'-2090'; 1780'-  
1730'; 1060'-1010'; 180'-142'; a five sack plug was set 18'-8'.

TESTS

DST #1 - 1007-1027

Packer set at 1007' - open 20 minutes - shut in 15 minutes. Recovered  
270' fluid, 180' mud, 90' salt water. Hydrostatic pressure: 510#; flowing  
pressure: 0#; no shut in pressure packer pulled loose.

CORES

|               |           |
|---------------|-----------|
| 771- 780      | 1081-1140 |
| 1018-1027     | 1387-1666 |
| 1060-1062 1/2 | 1850-1886 |
| 1069-1070     | 2235-2271 |

Formation tops were called from samples and electric log; not all  
lithographic tops were picked. Colors were determined from rock color chart.

FORMATION TOPS

|                      |                 |
|----------------------|-----------------|
| Cretaceous System    |                 |
| Niobrara             | 370             |
| Greenhorn            | 725             |
| Dakota               | 910 (?) samples |
| Mississippian System | 1055            |
| Devonian System      |                 |
| Nisku                | 1095            |
| Duperow              | 1160            |
| Souris River         | 1480            |
| Dawson Bay           | 1530            |
| Ashern               | 1762            |
| Interlake            | 1795            |
| Upper Story Mountain | 2000            |
| Lower Stony Mountain | 2060            |
| Red River            | 2150            |
| Total depth          | 2271            |

0-158 Shale; medium gray, firm.  
 158-170 Limey shale and shaly limestone; brownish black; traces of coarse sand.  
 170-360 Shale; medium gray, firm, slightly green.  
 360-380 Shale; medium gray to dark gray, flaky; much bentonite at 360.  
 380-600 Limey shale; medium gray with white specks, lumpy rather firm (510-550).  
 600-630 Limey shale; medium gray to medium dark gray, flaky to firm.  
 630-710 Shale; medium gray to medium dark gray, rather firm partly limey.  
 710-740 Shale; medium gray, rather firm, slightly limey, becoming somewhat more limey at 730.  
 740- Limey shale; medium dark gray, firm; small amounts of Inoceramus prisms; partly silty at 770.

Cored Interval: 771-780

771-780 Limey shale; medium dark gray with white spots, rather firm; traces of Inoceramus prisms.  
 780-920 Shale as above; traces of Inoceramus prisms; many Inoceramus prisms (780-790); some Inoceramus prisms (810-840); small amounts of dense, gray, shaly limestone; at 910.  
 920-970 Limey shale; dark gray to gray black, firm to lumpy, pyritic, small amounts of Inoceramus prisms and dense, shaly limestone.  
 970-980 Shale; as above, becoming decreasingly limey; some Inoceramus prisms and Inoceramus limestone; partly sandy at 975.  
 980-1015 Shale; medium gray to medium dark gray, firm to lumpy; slightly limey, becoming silty at 985; traces of Inoceramus prisms.

Cored Interval: 1018-1027

1018-1027 Sand; coarse to very coarse, subangular to subround quartz; some fine sandstone and silt.  
 1030-1040 Silty, sandy gray shale; traces of Inoceramus fragments and pyrite; missing samples: 1035-1040.  
 1040-1045 Shaly siltstone and silty shale; light gray; some sand as above.  
 1045-1050 Shaly siltstone; light gray.  
 1050-1055 Silty shale; medium dark gray to dark gray, small amounts of sand and sandstone.  
 1055-1060 Chert; almost white; small amounts of shale, pyrite, and dense dolomite.

Cored Interval: 1060-1062

1060-1062 Limestone; light gray to light brown, fine to coarse crystalline, dense, some chert; traces of pyrite.  
 1062-1081 Limestone; almost white, micro-sugary to sublithographic; much dark gray shale; (1060-1065); traces of pyrite and chert; missing samples: 1070-1081.

Cored Interval: 1081-1140

1081-1093 Limestone; pale yellow gray with dusky yellow spots, fragmental crystalline increasingly coarse, becoming grayish orange pink; some reddish brown, sandy shale and purple red, sandy; dense, dolomitic limestone at 1000-1003.

1093-1096 Dolomitic limestone; very light gray, micro-sugary to sub-lithographic.

1096-1101 Dolomite; very pale orange to very pale yellow brown, sugary, many tiny vugs.

1101-1112 Dolomite; very pale yellow brown to very pale yellow gray, micro-sugary to medium sugary, partly vuggy.

1112-1115 Dolomite; very pale yellow gray, micro-sugary.

1115-1122 Dolomite; very pale yellow brown, fine sugary to dense, partly vuggy.

1122-1128 Limestone; very pale yellow brown, micro-sugary to sub-lithographic.

1128-1131 Limestone; very light gray and pink mottled, micro-sugary to sublithographic.

1131-1134 Limestone; very pale yellow gray and very pale yellow brown, micro-sugary to dense.

1134-1140 Limestone; pale grayish orange pink, dense to sublithographic; traces of pyrite.

1140-1155 Limestone; very pale yellow brown and very pale yellow gray, micro-sugary to dense; a small amount of limey dolomite at 1150.

1155-1160 Dolomite; very pale yellow brown and very pale yellow gray, fine sugary to dense.

1160-1165 Limestone; very pale yellow brown, micro-sugary to dense.

1165-1170 Limestone; very pale, yellow gray, dense to sublithographic; much shaly; pink and pale red limestone.

1170-1180 Dolomite; very pale yellow gray, fine sugary to micro-sugary, becoming limey.

1180-1190 Limey dolomite; pale red, becoming very pale yellow gray; fine sugary to micro-sugary.

1190-1210 Dolomitic limestone; very pale orange and very pale yellow gray with much purple and red mottling; shaly, fine sugary to micro-sugary; some white lithographic limestone at 1205.

1210-1215 Dolomitic limestone; very pale yellow gray to very pale pink, sugary to dense; traces of lithographic limestone.

1215-1235 Limestone; very pale yellow gray and very pale yellow brown, sugary, becoming much denser at 1225; partly dolomitic.

1235-1245 Limestone; very pale yellow brown, fine sugary to dense.

1245-1250 Dolomitic limestone and limey dolomite; yellow brown, sugary, porous; traces of pyrite.

1250-1260 Limey dolomite; yellow brown, fine sugary.

1260-1265 Dolomite; pale yellow brown, sugary.

1265-1270 Limestone; very pale yellow brown to white; fine sugary to lithographic.

1270-1280 Limestone; very pale grayish orange pink, becoming pale yellow brown, sugary becoming slightly vuggy at 1275; traces of pyrite.

1280-1285 Dolomitic limestone; pale yellow brown, fine sugary to sub-lithographic, tiny vugs.

1285-1295 Dolomite; pale yellow brown, fine sugary to dense, tiny vugs, becoming somewhat limey at 1290.

1295-1305 Limey dolomite; grayish orange pink, fine sugary to dense, somewhat vuggy at 1300.

1305-1315 Dolomite; grayish orange pink, sugary to dense, vuggy.  
 1315-1320 Limey dolomite to dolomitic limestone; very pale red, micro-sugary to sublithographic.  
 1320-1325 Limey dolomite; very pale yellow brown, partly pinkish, fine sugary to micro-sugary.  
 1325-1335 Limestone; pale yellow gray to pale red, micro-sugary to sublithographic, somewhat dolomitic at 1330; small amounts of dense, reddish brown dolomite.  
 1335-1340 Limestone to limey dolomite; light gray to pale red, micro-sugary to lithographic.  
 1340-1365 Limestone; almost white, sublithographic; some limestone as above (1340-1360); some dense, pale reddish brown limestone beginning at 1345.  
 1365-1385 Limestone; pale yellow gray to very pale yellow brown, sublithographic to dense.

Core Interval: 1387-1666

1387-1396 Limestone; very light gray to very pale yellow gray, micro-sugary to sublithographic.  
 1396-1399 Dolomitic limestone; light brown, sugary.  
 1399-1414 Limestone; very pale yellow gray, lithographic, becoming micro-sugary.  
 1414-1417 Dolomite; light brown, sugary, vuggy, reef like.  
 1417-1420 Dolomitic limestone; grayish orange pink, micro-sugary.  
 1420-1429 Limestone; very pale yellow brown, becoming very pale yellow gray at 1426, micro-sugary to sublithographic.  
 1429-1432 Limestone; very pale yellow brown, sublithographic to dense, partly crystalline.  
 1432-1434 Limey shale; reddish, firm to soft, partly purple mottled.  
 1434-1437 Dolomite; very pale yellow brown, micro-sugary, somewhat limey.  
 1437-1440 Dolomite; very pale brown, fine to micro-sugary  
 1440-1446 Limey dolomite; very light gray, slightly green, micro-sugary, reddish stain.  
 1446-1449 Limey dolomite; pale green, micro-sugary, pale red and gray mottled, limey dolomite.  
 1449-1452 Limestone; almost white, micro-sugary to sublithographic.  
 1452-1455 Limey dolomite; pale red, micro-sugary to sublithographic.  
 1455-1458 Limestone; pale red with many purple veinlets, micro-sugary; some green and reddish shales.  
 1458-1461 Dolomitic limestone to limey dolomite; very light gray and very pale pink mottled, micro-sugary to sublithographic.  
 1461-1469 Dolomite; very light gray and very pale pink mottled, some rust colored streaks, micro-sugary, slightly limey.  
 1469-1473 Dolomite; grayish orange pink with, pale red splotches, micro-sugary to sublithographic.  
 1473-1476 Dolomite; very pale purple, micro-sugary to sublithographic.  
 1476-1479 Dolomite; pale red, sugary to fine sugary, vuggy slightly limey.  
 1479-1482 Dolomite; very pale orange brown, micro-sugary.  
 1482-1485 Dolomite; pale red, partly reddish purple, micro-sugary.  
 1485-1488 Dolomite; very light gray and pale red, micro-sugary to sublithographic, somewhat limey.  
 1488-1494 Dolomite; grayed red purple to reddish purple, micro-sugary to sublithographic, somewhat limey.

1494-1503 Dolomite; pale red, dense, few purple splotches, partly pale green at 1500.

1503-1506 Dolomite; pale red to moderate red with green spots, sugary, somewhat limey.

1506-1515 Dolomite; pale red, micro-sugary; pale reddish purple, somewhat sugary and vuggy at 1509.

1515-1518 Dolomite; yellow brown, sugary.

1518-1524 Limey dolomite; pale red, sugary to dense.

1524-1526 Limey dolomite; white to yellow gray, sugary.

1526-1528 Limey dolomite and dolomitic limestone; pale pink and very pale green, sublithographic.

1528-1531 Dolomite; grayed pink, micro-sugary, somewhat limey, pinpoint vugs.

1531-1534 Limey dolomite; pale red and pale green, sublithographic, rather limey.

1534-1540 Shaly limestone; pale red purple, sublithographic to lithographic, slightly dolomitic.

1540-1543 Dolomitic limestone; white, sublithographic; some pale green, dense dolomite.

1543-1546 Limey dolomite; pale pink with rust spots, micro-sugary.

1546-1549 Dolomitic limestone; white, micro-sugary.

1549-1552 Limestone; yellow gray and pale red banded, micro-sugary, slightly dolomitic.

1552-1555 Shaly limestone; pale purple to pale red, sublithographic.

1555-1558 Dolomite; grayish orange pink to moderate reddish orange, fine sugary to sugary.

1558-1564 Limey dolomite; pale red, becoming very light gray with purple splotches fine sugary to sublithographic.

1564-1567 Dolomitic shale; pale red purple with darker banding.

1567-1570 Dolomitic limestone; very pale yellow gray, micro-sugary with small vugs.

1570-1573 Dolomitic limestone; pale red and light gray banded, micro-sugary.

1573-1576 Dolomitic limestone; pale purple, partly banded, micro-sugary.

1576-1578 Dolomitic limestone and limey dolomite; very light gray and very pale pink, micro-sugary.

1578-1581 Dolomite; moderate yellow brown, partly reddish, dense, much pale green, very sandy limestone.

1581-1584 Limey dolomite; very light gray, sublithographic.

1584-1587 Dolomite; very pale orange to very pale yellow brown, micro-sugary.

1587-1593 Dolomitic limestone; very pale yellow brown, micro-sugary, vuggy at 1587.

1593-1596 Dolomite; light olive gray, fine sugary to micro-sugary; much very pale red, fine to medium sugary, dolomitic limestone.

1596-1599 Limey dolomite; very pale yellow gray, sugary.

1599-1602 Dolomite; very light brown, sugary and dense.

1602-1605 Limestone; pink and purple mottled, micro-sugary to sublithographic.

1605-1611 Limestone; almost white, becoming pale orange, micro-sugary to sublithographic.

1611-1617 Limestone; grayish pink to grayish orange pink, sublithographic, partly chalky.

1617-1620 Limey dolomite; very light gray with rusty veinlets, sublithographic.

1620-1623 Limey dolomite; very light gray to very light brown, micro-sugary with tiny vugs.

1623-1626 Limey dolomite; very light gray to very pale orange with some rust bands, micro-sugary to sublithographic.

1626-1629 Limey dolomite; very pale orange to very pale yellow brown with much rust spotting, dense with tiny vugs.

1629-1635 Limestone; white, micro-sugary, many tiny vugs at 1632.

1635-1638 Limestone; very pale orange pink, micro-sugary to sublithographic.

1638-1645 Limestone; moderate orange pink to grayish orange pink, fine sugary to chalky, few small vugs.

1645-1651 Limestone; white, micro-sugary to chalky, vuggy.

1651-1654 Limestone; white to very pale orange, micro-sugary to chalky, partly crystalline.

1654-1657 Limestone; very pale yellow gray, sugary to dense; some vugs.

1657-1660 Limey dolomite; very pale yellow gray to white, dense vuggy.

1660-1666 Dolomite; very pale yellow brown, sugary, dense, and crystalline, vuggy.

1670-1690 Dolomite; very pale orange to very pale yellow gray, sugary to dense; slightly vuggy beginning at 1675, slightly limey.

1690-1695 Limestone; pinkish, micro-sugary to dense, partly vuggy.

1695-1710 Dolomite; grayish orange pink, dense, slightly vuggy.

1710-1730 Dolomite; yellow brown, party pinkish, dense, slightly vuggy, much purple and rust spotting beginning at 1720; brachiopod traces at 1725.

1730-1735 Limestone and dolomite; very pale yellow brown to pale pink, dense to lithographic, tiny vugs; traces of brachiopods.

1735-1745 Limestone; very pale yellow brown, dense to lithographic; brachiopod traces.

1745-1765 Limestone; very pale yellow brown to white, micro-sugary to sublithographic fossiliferous; small amounts of moderate red, partly limey shale beginning at 1760.

1765-1770 Limey shale; moderate red to pale purple; some dolomite and limestone as above.

1770-1775 Limey dolomite and limestone and limey shale; all moderate red to pale purple and shaly.

1775-1780 Dolomite; very pale yellow brown, dense; much soft, reddish brown, limey shale.

1780-1795 Limey shale and silt; moderate reddish brown; some dense limestone and dolomite; much dense, almost white limestone at 1790.

1795-1810 Shaly limestone; moderate reddish brown, micro-sugary; some dense white limestone and dolomite beginning at 1800.

1810-1840 Limestone; white, partly very pale yellow brown and very pale orange, very dense; some limestone and shale as above.

1840-1845 Shale; medium gray to medium dark gray; small amounts of dense dolomite and limestone.

1845 1850 Dolomite limestone; grayish orange pink, fine sugary to dense.

Cored Interval: 1850-1940

1850-1853 Dolomite; very pale orange, dense to lithographic, slightly limey; somewhat fractured.

1853-1859 Limey dolomite; very pale yellow gray to white, micro-sugary to dense, fractured.

1859-1862 Dolomite; grayish orange pink, very dense.

1862-1865 Dolomitic limestone; very light gray with pale red mottling, micro-sugary to sublithographic.

1865-1868 Limey dolomite; very light yellow gray, fine sugary to micro-sugary.

1868-1871 Dolomitic limestone and limey dolomitic white, slightly pink in part, micro-sugary.

1871-1874 Dolomitic limestone; very light yellow gray, fine sugary to micro-sugary.

1874-1877 Dolomite; very light brown and pink mottled, sugary to dense.

1877-1880 Limey dolomite; very light gray tinged with pink, sugary, vuggy.

1880-1883 Limey dolomite; very light gray; micro-sugary to sublithographic.

1883-1886 Dolomite; yellow brown, dense, tiny vugs.

1886-1890 Dolomite; very pale orange, partly pink, fine sugary to dense, occasional minute vugs.

1890-1895 Dolomitic limestone; white, partly pinkish, micro-sugary, partly dense.

1895-1900 Dolomite; very pale yellow brown, oolitic, partly micro-sugary, somewhat limey.

1900-1905 Dolomite; white, micro-sugary; some oolitic limestone as above.

1905-1910 Dolomitic limestone; white, micro-sugary and chalky.

1910-1940 Limestone; white; oolitic, partly micro-sugary, partly somewhat dolomitic much dense, sublithographic to lithographic, white, dolomitic limestone at 1930-1935.

1940-1970 Dolomitic limestone; white, micro-sugary to sublithographic; small amounts of oolitic limestone.

1970-1985 Dolomitic limestone; white, partly grayish orange pink, lithographic; small amounts of oolitic limestone.

1985-1995 Dolomitic limestone; white to very pale pink and yellow gray, micro-sugary partly sublithographic; small amounts of shale and oolitic limestone.

1995-2000 Limey dolomite; very pale yellow brown, slightly pink, micro-sugary to dense.

2000-2005 Dolomitic limestone; very pale yellow brown to very pale orange, micro-sugary to dense, partly vuggy.

2005-2020 Dolomite; white, lithographic to dense, partly limey, increasingly pink and sandy.

2020-2030 Dolomitic limestone to limey dolomite; pale red, partly yellow gray, some purple mottling, fine sugary to sublithographic.

2030-2035 Dolomitic limestone; yellow gray, fine sugary to micro-sugary, partly pink and sandy.

2035-2050 Dolomite; very pale yellow brown, micro-sugary to dense, vuggy at 2045.

2050-2060 Dolomite; very pale yellow and very pale pink, micro-sugary to dense, partly limey; small amounts of dense limestone at 2055.

2060-2065 Limestone; yellow gray and grayish orange pink partly pink mottled, micro-sugary to dense.

2065-2075 Dolomite; very pale yellow brown, dense, small amounts are pink and limey; small amounts of hematite (?); small amounts of purplish, micro-sugary fossiliferous limestone at 2070.

2075-2085 Dolomite as above; small amounts of grayish, fossiliferous, crystalline and chalky limestone; small amounts of dark red, dense limestone; small amounts of micro-sugary, pinkish orange limestone.

2085-2090 Dolomite; grayish orange pink, dense; much gray, pale purple and green, shaly, fossiliferous, chalky and crystalline.

2090-2100 Limestone; medium gray to light gray, purple, very shaly, crystalline and chalky, fossiliferous; some dolomite as above.

2100-2160 Limestone as above; small amounts of dolomite; bryozoa and brachiopods; much lithographic, white limestone beginning at 2150.

2160-2175 Limestone; almost white, lithographic, traces of minute vugs; some dense pink dolomite as 2170.

2175-2180 Limestone; very pale yellow to pale grayish orange pink, lithographic, partly micro-sugary and dolomitic.

2180-2190 Dolomitic limestone; grayish orange pink to pale pink, micro-sugary.

2190-2195 Limestone; moderate yellow brown, dense, partly vuggy; some sugary, pinkish dolomitic limestone.

2195-2205 Limestone; very pale yellow brown with much pink and red splotches, dense vuggy.

2205-2210 Limestone; very pale red purple, dense, much is sublithographic and chalky.

2210-2215 Dolomite; white with pale purple splotches dense.

2215-2220 Dolomitic limestone and dolomite; very pale red to pale pink, lithographic and sublithographic.

2220-2225 Dolomitic limestone; white to pale red, lithographic and sublithographic.

2225-2235 Dolomitic limestone and limey dolomite; almost white with much pink tinge, sublithographic to lithographic, increasingly dolomitic and splotched with purple; small amounts of pinkish orange, dense, vuggy dolomite.

Cored Interval: 2235-2271

2235-2239 Limestone; pale red purple, partly light gray with purple streaks, dense somewhat dolomitic.

2239-2245 Dolomite; light yellow gray and light gray, micro-sugary to dense, vuggy and purple stained (2239-2242).

2245-2251 Dolomite; very light gray with purple streaks and spots, slightly limey, micro-sugary increasingly vuggy.

2251-2254 Dolomite; grayish orange pink to pale purple with dark purple streaks, micro-sugary to dense.

2254-2257 Dolomite; very pale yellow brown, micro-sugary.

2257-2260 Limestone; pale yellow brown, lithographic.

2260-2263 Limestone; light gray with many little rust colored veinlets, micro-sugary to sublithographic.

2263-2266 Limestone; grayish orange pink with moderate brown spots, micro-sugary to sublithographic.

2266-2269 Limestone; very light brown, slightly grayish orange pink in part, fossiliferous; micro-sugary to sublithographic.

2269-2271 Limestone; yellow brown to white, micro-sugary to dense.

2271 Total depth.