

GEOLOGIC MAP OF THE GREER QUADRANGLE, OREGON COUNTY, MISSOURI

By
Robert C. McDowell
1998
Digital Compilation by
David J. Weary, 2000

EXPLANATION OF MAP SYMBOLS

- Fault — Approximately located
- Contact --- Approximately located, dotted where concealed; bar and ball on downthrown side
- Structure contour --- Drawn on base of Roubidoux Formation, projected where above land surface; hachures indicate closed basin. Contour interval 20 ft.
- Strike and dip of beds ---
- Incline --- Horizontal
- Strike and dip of joints --- point of observation at intersection of multiple symbols. Arrows are narrow (0.5-2 ft) except where noted by
- Throughgoing, vertical ---
- Moderately spaced (2-6 ft) ---
- Closely spaced (<2 ft) ---
- Throughgoing, inclined ---
- Widely spaced (>6 ft) ---
- Moderately spaced (2-6 ft) ---
- Closely spaced (<2 ft) ---
- Non-throughgoing, vertical ---
- Widely spaced (>6 ft) ---
- Moderately spaced (2-6 ft) ---
- Closely spaced (<2 ft) ---
- Non-throughgoing, inclined ---
- Widely spaced (>6 ft) ---
- Moderately spaced (2-6 ft) ---
- Closely spaced (<2 ft) ---
- Breccias flow ---
- Current direction --- indicated by crosshatching (x) or ripple marks (r)
- Macrofossil locality --- Locosites only, identified by John Pijeta and Ellis Yochelson
- Macrofossil locality --- Corvids identified by John Pijeta are found in the following USGS fossil collections: A. 11475 CO, B. 11476 CO, C. 11477 CO, D. 11478 CO
- Corehole --- w, water level monitoring; s, stratigraphic; numbered, mineral explanation
- Sinkhole ---
- Spring ---
- Abandoned prospect pit ---
- Earthquake epicenter --- 1, occurred on August 11, 1974, with a body wave magnitude of 2.5, at a depth of 5.0 km; 2, occurred on August 11, 1974, with a body-wave magnitude of 3.6, at a depth of 5.0 km

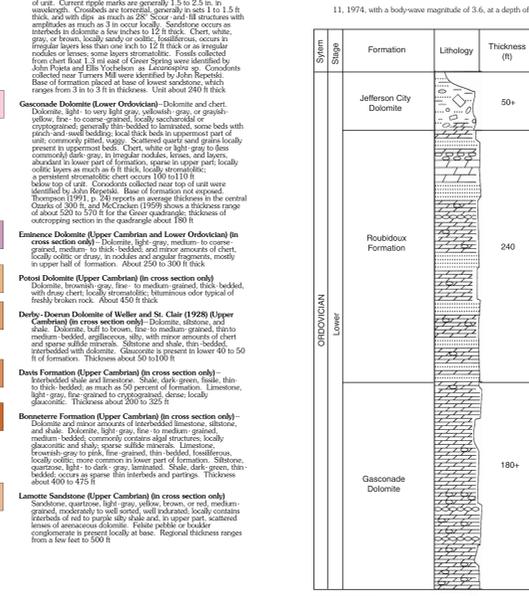
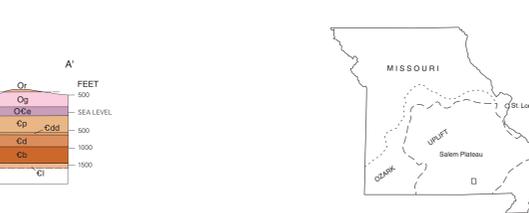


Figure 1. — Columnar section of exposed bedrock in Greer Quadrangle.



DISCUSSION
INTRODUCTION

The Greer 7.5-min quadrangle covers an area of about 60 mi² in Oregon County, Missouri. The southern part of the Salem Plateau and the Ozark uplift lie within its limits. It is underlain by generally flat-lying Upper Cambrian to Lower Devonian, mostly dolomite, and is overlain by a thick sequence of Precambrian granitic basement and is overlain by unconsolidated surficial deposits of Quaternary age. Elevations range from about 475 to 1100 feet in the southeastern corner of the quadrangle to about 1625 ft on a hilltop near the center of the quadrangle. The area is a predominantly forested area. The Eleven Point River, a National Scenic River, is administered by the U.S. Forest Service. Structural contours, derived from outcrops and wells, were used for the plotting of formation contacts.

The Paleozoic bedrock formations, all of Early Ordovician age and totaling about 470 ft (145 m) in thickness, are exposed in the quadrangle. From oldest to youngest, they are the Gasconade Dolomite, the Roubidoux Formation, and the Jefferson City Dolomite (fig. 1). The Gasconade Dolomite (L. Lane, 1927, p. 132) is a thickly bedded, massive dolomite that is commonly faulted and is overlain by the Roubidoux Formation (L. Lane, 1927, p. 132) and the Jefferson City Dolomite (L. Lane, 1927, p. 132). The Jefferson City Dolomite is a thickly bedded, massive dolomite that is commonly faulted and is overlain by the Roubidoux Formation (L. Lane, 1927, p. 132) and the Jefferson City Dolomite (L. Lane, 1927, p. 132). The Roubidoux Formation is a thickly bedded, massive dolomite that is commonly faulted and is overlain by the Jefferson City Dolomite (L. Lane, 1927, p. 132) and the Roubidoux Formation (L. Lane, 1927, p. 132).

RESOURCES AND HAZARDS

Lead and zinc deposits represent the only potential mineral resource known to occur in the Greer quadrangle. Although no conventional heavy metal resource has been identified in the quadrangle in recent years, mainly in the northwestern part. Samples of lead and zinc were collected from the Roubidoux Formation in the northwestern part of the quadrangle. A few abandoned prospect pits were found in the northwestern part of the quadrangle. The Roubidoux Formation is a thickly bedded, massive dolomite that is commonly faulted and is overlain by the Jefferson City Dolomite (L. Lane, 1927, p. 132) and the Roubidoux Formation (L. Lane, 1927, p. 132).

REFERENCES CITED

Anderson, K.H., 1979, The geologic map of Missouri, Rolla, Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Harrell, R.M., and Johnson, A.C., 1990, Tectonic province, Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1954, Stratigraphy and paleogeography of the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1957, New Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1958, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1959, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1960, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1961, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1962, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1963, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1964, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1965, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1966, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1967, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1968, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1969, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1970, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1971, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1972, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1973, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1974, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1975, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1976, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1977, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1978, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1979, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1980, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1981, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1982, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1983, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1984, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1985, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1986, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1987, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1988, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1989, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1990, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1991, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1992, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1993, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1994, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1995, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1996, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1997, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1998, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 1999, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

Heller, R.L., 2000, Middle Cambrian corals from the Roubidoux Formation of Missouri, Missouri Department of Geology and Land Survey, scale 1:500,000.

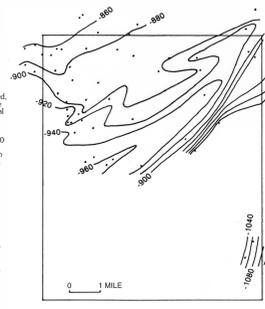


Figure 2. — Structure contour map showing the base of the Davis Formation. Data are data points taken from drillholes (table 1). Datum is mean sea level. Contour interval 20 ft.

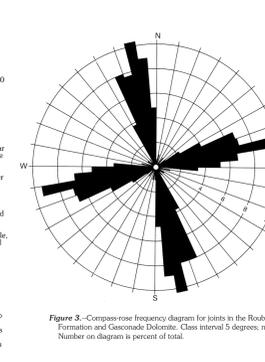


Figure 3. — Compressional frequency diagram for joints in the Roubidoux Formation and Gasconade Dolomite. Class interval 5 degrees; n=764. Number on diagram is percent of total.

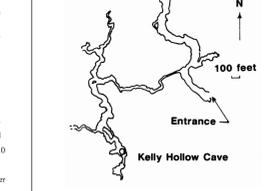


Figure 4. — Map showing cave passages of the Kelly Hollow cave (ORE-070). More than 6,500 ft of passages are shown; map simplified from unpublished map by Cave Research Foundation, completed in about 1992.

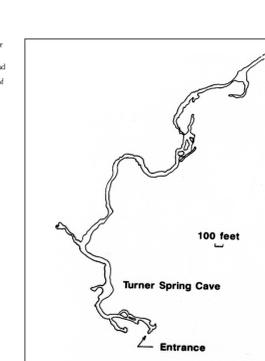


Figure 5. — Map showing cave passages of the Turners Spring cave (ORE-010). More than 5,300 ft of passages are shown; map simplified from unpublished map by Cave Research Foundation, completed in about 1986.

Table 1. Summary of drillhole data on Federal land in the Greer quadrangle, Missouri. Elevations, in feet, datum is mean sea level.

Well No.	Location	Collar elevation, in feet	Contact	Bottom elevation, in feet
801-16	SW1/4 sec. 4, T. 25 N., R. 3 W.	636	601 Cb-Cd	609 Cb-Cd
801-16	SW1/4 sec. 18, T. 25 N., R. 3 W.	905	1,234 Cb-Cd	607 Cb-Cd
801-17	SW1/4 sec. 21, T. 25 N., R. 3 W.	690	682 Cb-Cd	681 Cb-Cd
801-51	SW1/4 sec. 3 W., T. 25 N., R. 3 W.	840	621 Cb-Cb	590 Cb-Cd
801-54-BK	SW1/4 sec. 5 W., T. 25 N., R. 3 W.	920	560 Cb-Cd	560 Cb-Cd
801-56	SW1/4 sec. 12, T. 25 N., R. 3 W.	920	531 Cb-Cd	531 Cb-Cd
801-57	NE1/4 sec. 2 W., T. 25 N., R. 3 W.	980	507 Cb-Cd	507 Cb-Cd
801-58-BC	SW1/4 sec. 5 W., T. 25 N., R. 3 W.	950	547 Cb-Cd	547 Cb-Cd
801-70	NE1/4 sec. 15, T. 25 N., R. 3 W.	640	649 Cb-Cd	649 Cb-Cd
801-85	NE1/4 sec. 5 W., T. 25 N., R. 3 W.	920	623 Cb-Cd	623 Cb-Cd
801-86	NE1/4 sec. 21, T. 25 N., R. 3 W.	790	623 Cb-Cd	623 Cb-Cd
801-87	NE1/4 sec. 13, T. 25 N., R. 3 W.	890	608 Cb-Cd	608 Cb-Cd
801-93	NE1/4 sec. 26, T. 25 N., R. 3 W.	680	613 Cb-Cd	613 Cb-Cd
801-94	SW1/4 sec. 4 W., T. 25 N., R. 3 W.	640	607 Cb-Cd	607 Cb-Cd
801-95	NE1/4 sec. 9, T. 25 N., R. 3 W.	830	675 Cb-Cd	675 Cb-Cd
801-106	SW1/4 sec. 2, T. 25 N., R. 3 W.	988	547 Cb-Cd	547 Cb-Cd
801-114	SE1/4 sec. 19, T. 25 N., R. 3 W.	925	639 Cb-Cd	639 Cb-Cd
801-117	NE1/4 sec. 2, T. 25 N., R. 3 W.	979	563 Cb-Cd	563 Cb-Cd
801-118	SW1/4 sec. 3 W., T. 25 N., R. 3 W.	960	561 Cb-Cd	561 Cb-Cd
801-119	NE1/4 sec. 1, T. 25 N., R. 3 W.	960	586 Cb-Cd	586 Cb-Cd
801-120	SE1/4 sec. 12, T. 25 N., R. 3 W.	920	608 Cb-Cd	608 Cb-Cd
801-122	SW1/4 sec. 2 W., T. 25 N., R. 3 W.	930	602 Cb-Cd	602 Cb-Cd
801-123	SW1/4 sec. 5 W., T. 25 N., R. 3 W.	935	627 Cb-Cd	627 Cb-Cd
801-128	SE1/4 sec. 12, T. 25 N., R. 3 W.	940	604 Cb-Cd	604 Cb-Cd
801-129	SW1/4 sec. 2, T. 25 N., R. 3 W.	855	636 Cb-Cd	636 Cb-Cd
801-131	NE1/4 sec. 11, T. 25 N., R. 3 W.	890	605 Cb-Cd	605 Cb-Cd
801-148	NE1/4 sec. 11, T. 25 N., R. 3 W.	920	606 Cb-Cd	606 Cb-Cd
801-149	SW1/4 sec. 3, T. 25 N., R. 3 W.	910	618 Cb-Cd	618 Cb-Cd
801-156	SE1/4 sec. 14, T. 25 N., R. 3 W.	845	686 Cb-Cd	686 Cb-Cd
801-158	NE1/4 sec. 11, T. 25 N., R. 3 W.	927	603 Cb-Cd	603 Cb-Cd
82903	SW1/4 sec. 2, T. 24 N., R. 3 W.	960	659 Cb-Cd	659 Cb-Cd
82925	SW1/4 sec. 3, T. 24 N., R. 3 W.	860	623 Cb-Cd	623 Cb-Cd
82940	SW1/4 sec. 10, T. 25 N., R. 3 W.	905	680 Cb-Cd	680 Cb-Cd
82944	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82945	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82946	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82947	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82948	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82949	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82950	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82951	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82952	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82953	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82954	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82955	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82956	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82957	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82958	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82959	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82960	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82961	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82962	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82963	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82964	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82965	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82966	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82967	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82968	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82969	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82970	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82971	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82972	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82973	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82974	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82975	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82976	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82977	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82978	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82979	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82980	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82981	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82982	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82983	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82984	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82985	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82986	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82987	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82988	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82989	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82990	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82991	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82992	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	640 Cb-Cd
82993	NE1/4 sec. 14, T. 25 N., R. 3 W.	912	640 Cb-Cd	