Wnumber: 30000 Owner: GSB; ODW #1(OAKDALE)
County: JOHNSON (T80N R7W Sec 25 SE NW SE NW)
Core location: T42L1 - T44R4
Chip sample location: OD2-533

TD: 532 Elev: 805

SYS	SERIES	GROUP	FORMATION	MEMBER	DEPTH TOP	SHELF LOCATION	THICKNESS
DEV	Middle	L. Cedar V	Coralville	Cou Falls	178.0	T42L1	3.6
			Little Cedar	Rapid	181.6	T42L1	53.9
				Solon	235.5	T42C2	19.7
		Wapsipinic	Pinicon Ridge	Davenport	255.2	T42R1	24.5
				Spring Gr	279.7	T42R3	19.9
				Kenwood	299.6	T43L1	13.1
			Otis		312.7	T43L3	39.3
SIL			Scotch Grove	Welton	352.0	T43C3	59.5
				Buck Ck.	411.5	T44L1	8.0
				Welton	419.5	T44L1	12.0
				Buck Ck.	431.5	T44L3	1.5
				Welton	433.0	T44L3	9.0
				Buck Ck.	442.0	T44L4	5.9
				Welton	447.9	T44L4	4.1
			Hopkinton		452.0	T44C1	31.5
				Sweeney	483.5	T44C4	20.8
			Blanding		504.3	T44R2	14.9
ORD	Upper		Maquoketa		519.2	T44R3	12.3

~~330~~

301.8 - 361.5
6 boxes

W-30000

Locality OKD
OAKDALE core; drilled adjacent to Geological Survey building
NW SE NW SE sec. 25, T80N, R7W, Johnson Co., Iowa
depths in feet; cored sequence penetrates Middle Devonian (Cedar Valley & Wapsipinicon groups) through uppermost Ordovician (12.3 ft upper Maquoketa Fm) sequence; Silurian described below.

SILURIAN
SCOTCH GROVE FORMATION
WELTON MEMBER

352-352.9. Dol, v.lt.brn.gr.-lt.gr., xf-f xlln, fractured, small vugs, common to abnt small crinoid debris molds; solutional surface at top with pyrite.

352.9-355.1. Shale, lt.grn.gr., silty-vf sandy, sl calc, slickensides; probably karst-filling shale (Dev?).

355.1-355.8. Dol, pale brn.gr., xf-vf xlln, dense, some scattered small crinoid debris molds; grn.gr. shale (as above) in vug fill; inclined solutional surface at top with pyrite.

355.8-360.4. Dol, v.lt.brn.gr.-lt.gr., xf-f xlln, v porous with abnt small crinoid debris molds, part microporous mottled; vugs at 357.1 (with pyrite), 357.5-58, 358.8; 357.1 bryozoan, small gastropod; 357.3-57.4 dense unfossiliferous dol; 357.5 pyrite-lined fracture; large crinoid stems at 357.6, 58.9, 59.4; 358.9 Dalejina; 359.5 resserellid, cyrtiacean, cup coral; 359.9 small indet. tabulate.

360.4-361.8. Dol, v.lt.gr., xf-vf xlln, sl denser than above, small vugs (some green shale fill in vugs, middle to top), scattered to common small crinoid debris molds, stylolite at top; 361.1 bryozoan (?), small tabulate (halysitid?).

361.8-371.5. Dol, v.lt.gr., some v.lt.brn.gr., xf-f xlln, v porous through with abnt small crinoid debris molds, scattered vugs; small favositid at top; 362.3 brachiopod (atrypid?); 362.5 solitary rugosan (1 cm); 362.8 Atrypa, eospiriferid, small cup coral, small tabulate; 363.7 indet. brachiopod, large crinoid debris; 363.9 indet. brachiopod, vug; 364.3 and 366.9 "Neozaphrentis racinensis; 364.4 vug with some green shale fill; 364.7 stylolite; 365.9 stylolite, vug; 366.8 Eospirifer, large crinoid debris, bryozoan or small tabulate; 367.3 small solitary rugosan, large crinoid debris; 367.3 brachiopods include Hedeina, Meristina; 368.8 Coolinia; 369.6 indet. brachiopod, large crinoid debris, vertical fracture.

371.5-381.5. Dol, v.lt-lt.gr., xf-f xlln, crinoid-moldic, in part more porous than above; vugs scattered through (to 4 cm), some geopetal dol fill at 380.4; 372.4 large crinoid debris, small brachiopod; 374.6 and 77.7 indet. brachiopod; 376 Cyrtia exporrecta; 378.2, 79.5, 79.7 quartz-lined vugs; 378.8 small solitary rugosans; 380.2, stylolite.

381.5-391.5. Dol, lt.gr., xf-vf xlln, similar to above but sl less porous, vugs scattered through (to 6 cm); dolo-replaced m-c crinoidal fabrics noted at 383.7-84.4, 385.5; 381.5 and 385.7 green shale fill in vug; 382 large Favosites, indet. brachiopod; 382.5 large cystiphyllid; 385 stylolite; 385.9 Heliolites; 386.3 and 87.3 indet. brachiopods; 388.2 and 389.9 quartz-lined vugs; 388.4 Dolerorthis.

391.5-401.5. Dol, v.lt.gr.-v.lt.brn.gr., xf-vf xlln, similar to above but sl denser; very porous and vuggy top 1 ft (gradational above), fewer vugs below (398.6), green shale fill at 399.9; quartz-lined vugs at 391.6, 400.5; 398.6-99.5 dense, sparsely skeletal; 393 indet. brachiopod; 395.6 large crinoid debris; 396.2 large solitary rugosan; 396.7 indet. brachiopod, small tabulate; 397.4 small cup coral, Lecanocrinus, Porpites; 401 fenestellid, Cyrtia.

401.5-411.5. Dol, lt.gr., xf-vf xlln, v porous (small crinoid debris molds), scattered small vugs; scattered dolo-replaced m crinoid debris at 403.9-04.4, 405, 408.6-09.5, lower 1 ft; quartz-lined vugs at 405.1, 406.1; stylolites at 404.3, 05.8, 09.5; 403.6 Petalocrinus?; 406 fenestellid (in denser lithology); 406.2 silic. Favosites; 406.6 Eospirifer, bryozoan; 406.8 indet. brachiopod; 407.9 common gastropods (including Straparollus, Platyceras), indet. brachiopod, Eucalyptocrinites cup; 409.7 large crinoid debris.

BUCK CREEK QUARRY MEMBER

411.5-415.9. Dol, v.lt.brn.gr., xf-vf xlln, scattered to abnt small crinoid debris molds, becomes more porous upward (gradational above), v porous top 0.3 ft; chert nodules (T) at 413, 413.8; stylolites at 413.8, 14, 14.2, 14.6; clorindinids (?) at 411.5, 15.7; fenestellids at 412.6, 13.9, 15; branching bryozoans at 413.9, 15; 412.4 Atrypa;, 415 indet. brachiopod.

415.9-419.5. Dol, pale brn.gr., xf-vf xlln, denser than above, sparse skeletal molds, becomes sl more moldic upward; large chert nodules (T) every 0.2-0.5 ft; five stylolites lower 1.5 ft, sl argillaceous at top; fenestellids at 416, 17.2; branching bryozoans at 416, 16.4, 16.8, 17.2, 18.2; 416.3 silic crinoid stems in chert; 417.2 atrypid?; 417.7 Petalocrinus; 419.3 quartz-lined vug.

WELTON MEMBER

419.5-420.7. Dol, pale brn.gr., xf-vf xlln, dense, scattered to common small crinoid debris molds; upper 0.8 ft with scattered to common fenestellids and branching bryozoans.

420.7-424.8. Dol, v.lt.gr, pale brn.gr. top 0.8 and bottom 0.3 ft, xf-vf xlln, common to abnt small crinoid debris molds, v porous, becomes sl less moldic near top; quartz-lined vugs at 422.3, 22.8; stylolites at top, 422.3, 22.8, 23.7, 23.9, 24.5;

fenestellids at 422.6, 22.8, 23.1, 24.4; branching bryozoans at 421, 21.7, 22, 24.7; 421 small cup coral; 422 large crinoid debris, indet. cup (Macrostylocrinus?); 422.6 Petalocrinus (2), Atrypa (3); 423.7 nice Costistricklandia; 424.1 argillaceous burrow.

424.8-431.5. Dol, v.lt.brn.gr.-v.lt.gr., xf-vf xlln, porous, common to abnt small crinoid debris molds; stylolites at 425.8, 26.2, 26.6, 30.1, 30.6; fenestellids at 425.5, 26, 26.4, 27.4, 27.7, 28.8, 29.9; branching bryozoans at 425.5, 27.5, 28.8, 28.9; 425.2 indet. brachiopod; 425.6 Lichenalia, well preserved callocystitid rhombiferan ("Pezacystis" of Witzke, 1976); 427.9 quartz-lined vug; 428.4-29.3 vertical fracture with pyrite-lining; 428.9 indet. brachiopod; 429.5 Petalocrinus.

BUCK CREEK QUARRY MEMBER

431.5-433. Dol, similar to above (sl less moldic) but contains chert nodules (T) at 432, 32.6; branching bryozoans at top, 432.6; 431.7 green argillaceous burrow; 432.5 fenestellid; 432.6 crinoid stem mold with cirri; gradational below.

WELTON MEMBER

433-437.5. Dol, v.lt.brn.gr., xf-vf xlln, porous, common small crinoid debris molds, similar to above but lacks chert; stylolites at 433.3 (faint arg stylos?), 34.9, 36.3-36.5 (faint arg stylos), 37.2; green argillaceous streaks or partings at 434.7, 437; green argillaceous horizontal burrows at 433.7; quartz-lined vugs at 433.6, 34.2 (with green shale fill), 35.3; fenestellids at 434.3, 35.2, 35.4, 35.9, 36, 36.3-36.5, 36.9 (2 spp.); branching bryozoans at 433.5, 33.7, 35.6; crustose bryozoans at 433.3, 34.3, 35.9; indet. brachiopods at 433.3, 36.4; 433.5 Costistricklandia; 434.7 pustulose 2 cm fossil (trilobite cranidia?); 435.2 crinoid plates; 435.9 Dolerorthis; 437.5 Cyathocrinites cup mold.

437.5-442. Dol, lt.gr., darker-colored than above, xf-f (some m) xlln, more porous than above, coarser crinoid debris molds more common, becomes more porous downward, part vuggy; very sharp lithologic change at base (adjacent core pieces don't match, suggests small missing interval or out-of-place segment); top 1.5 ft with scattered stylolites; 438.1 quartz-lined vug; 437.8 Ferganella, branching and crustose bryozoans; fenestellids at 439.4, 441.3, 42; 440.4 Petalocrinus.

BUCK CREEK QUARRY MEMBER

442-443.5. Dol, v.lt.brn.gr, vf-f (m) xlln, much denser and less skeletal moldic than above, scattered small crinoid debris molds; non-cherty but lithologically allied with interval below; scattered green agrillaceous horizontal burrows; 443.2 stylolite; 442.3 large Favosites; 427 quartz-lined vug.

443.5-447.9. Dol, pale brn.gr., xf-vf xlln, dense, sparsely skeletal with scattered crinoid debris molds; sharp lithologic change at base; chert nodules (T) at 443.9, 44, 44.2, 44.4, 45.6, 45.9, 46, 46.1, 47, 47.2, 47.6; stylolites at 443.7, 45.9, 46.2, 47.1; branching bryozoans at 444.8, 46.5; 447.6 silic. crinoid debris, Dalejina.

WELTON MEMBER

447.9-452. Dol, v.lt.brn.gr., xf-f, becomes xf-vf downward, more porous and skeletal moldic than above, becomes sl. denser downward; sharp lithologic change at base (adjacent core pieces don't match, suggests small missing interval or out-of-place segment); stylolites at 447.9, 50.7, 51.9; arg parting at 451.3; quartz-lined vugs at 448.8, 51; fenestellids at 449.7, 50, 50.2, 50.4, 50.5 (abnt), 51.2; branching bryozoans at 448.3, 49.3, 49.7, 50, 50.2, 50.9, 51.8; crustose bryozoans at 448.3, 49.3, 50.4, 50.5, 51.2; 448.1 crinoid basal circlet; 448.3 Atrypa;, 450.4 Protomegastrophia, crinoid plates; 450.5 Lichenalia; 450.9 Myelodactylus; 451.2 Protomegastrophia, Eoplectodonta.

HOPKINTON FORMATION
UPPER HOPKINTON UNDIFFERENTIATED

452-459.5. Dol, v.lt.-lt.brn., vf-m xlln, scattered to abnt crinoid debris molds, scatt m xlln dolo-replaced crinoidal fabrics (packstones); microporous mottled, scattered vugs, stylolites scattered through; chalcedonly void fills at 455, 459; chert nodules (T) at 459.1; indet. small (1-3 cm) pentamerids (aff. Harpidium or Pentamerus) at 452.1-52.4, 456.9-57.1; Pentamerus oblongus at 458.8, 459.1; silic laminar stromatoporoids at 453.2, 59.3; 452.7 nice silic Favosites; 454.9 Flabellitesia.

459.5-463.5. Dol, v.lt.brn.gr., xf-f xlln, includes m xlln downward, sl denser than above, arg stylolites scattered; 462.4 chert nodules (T); 461.9 silic Favosites; 463 silic laminar stromatoporoid.

463.5-469.5. Dol, v.lt.brn.gr., vf-m xlln, porous to sl vuggy, stylolites scattered through; chert nodules (T) at 464.7-65.1, 469; silic laminar stromatoporoids at 463.5, 466.1-66.9 (common), 467.2-67.5 (common), 468; Halysites at 463.7, 68.6.

469.5-471.5. Dol, v.lt.brn.gr., xf-f xlln (m downward), part crinoid moldic, part microprous; silic laminar stromatoporoids at 469.9, 70.7, 71.1; 470-70.5 with scattered to common small (1-3 cm) globular pentamerids (aff. Harpidium); 471.4 larger indet. pentamerid.

471.5-475.4. Dol, as above, vf-m xlln, porous in part, scattered vugs, green clay fill near top; stylolites lower 2 ft; 472.2 silic Favosites; 472.7 indet. tabulate; 474.3 nice Halysites;

474.9-75.2 silic laminar stromatoporoids.

475.4-480.2. Dol, as above, vf-m xlln, part sl denser than above, part microporous, scattered vugs, stylolites common through; chert nodules (T) at 475.4, 75.6, 76.2, 77.1, 77.2-77.4, 77.6, 78.3; scattered pentamerids at 477.2, 77.6-78 (common), 78.7, 79, 79.6; 477.2 silic Halysites.

480.2-482.1. Dol, lt.gr.-v.lt.brn.gr., vf-f, denser than above, scattered crinoid debris molds, scattered vugs; chert nodules (T) at 480.5, 482.1; 481.6 stylolite; green shale fills at 480.8 (fracture), 482.1.

482.1-483.5. Dol, v.lt.brn.gr., vf-m xlln, common stylolites through (every 0.1-1 ft), crinoid debris, microporous mottling; scattered pentamerids at 482.6-82.9, 483.3-83.4; silic laminar stromatoporoids at 482.4, 83.2; 483 Atrypa; gradational below.

SWEENEY MEMBER

483.5-492.3. Dol, as above, common stylolites, microporous; similar to above but with chert nodules (T) at 483.9, 84.1, 84.2, 84.3, 86.6, 90.4; silicified laminar stromatoporoids at 483.7, 85.3, 88.3, 88.8, 89, 89.4, 89.6, 90-90.5, 92.3; 483.6 silic Halysites; 489.6-89.9 large Syringopora mold.

492.3-495.5 Dol, as above, but xf-vf xlln top 1.2 ft and bottom 0.9 ft; chert nodules (T) abundant in xf-vf xlln beds with thick nodules at 492.6-93; stylolites common in middle part.

495.5-504.3. Dol, v.lt.brn.gr., vf-m xlln (includes m xlln crinoidal packstones); stylolites common every 0.1-0.7 ft; chert nodules (T) at 497.3, 97.6-97.7; silic laminar stromatoporoids at 498, 98.3, 500.3, 501.6, 502.2; 500.2 silic Favosites.

BLANDING FORMATION

504.3-508.4. Dol, v.lt.brn.gr., vf-m xlln, similar to above but becomes less porous downward; more chert than above with large nodules (S-T) at 504.3-04.5, 04.9, 05.4-05.5, 07.2-07.4, 07.7; gradational below.

508.4-511.5. Dol, v.lt.brn.gr., xf-vf xlln, denser than above, common stylolites every 0.05-0.4 ft; very large chert nodules (S-T) at 508.4-08.7 (with indet. brachiopods), 08.8, 09.5-09.8, 10.2, 10.5-10.8 (with cup coral).

511.5-518.6. Dol, as above, becmes arg-v arg in basal 1.1 ft; stylolites common through; scattered vugs and small crinoid debris molds; pyrite-lined vug at base; large chert nodules (S-T) at 12.5-12.9, 12.9-13.1, 13.3, 13.5-13.9, 14.4-14.6, 15.4-15.8, 16.4-16.8.

8.6-519.2. Dol, v.arg., gradational with Maquoketa shale below, displays irregular brown laminations and swirls (may be weathering surface on Maquoketa shale).