COLLINS 1 (15-135-00449) T: 20S R: 26W S: 24

Latitude: 38.3046199 Longitude: -100.1508438 Elevation (GL): 2461.0 Depth: 4555.0

Depth	Stratigraphic Units: Members	Formations	Subgroup	Group	Stage	Series	Subsystem	System	Era	Rock Color	Lithology: Rock Column	Sedimentary Structures	Fossils	Remarks
4390														
		Fort Scott Limestone		Marmaton										4395 Marmaton 4396 4397 1340 Limestone 4397 4398 1340 Limestone same 4398 4399 1341 Limestone silty 4399 4400 1341 Limestone algal
4400														4400 4401 1341 Limestone silty 4401 4402 1341 Limestone 4402 4403 1342 Limestone 4403 4404 1342 Claystone 4404 4405 1342 Limestone gray 4405 Cherokee 4406 4407 1343 Shale dark-gray 4407 4408 1343 Limestone light 4408 4409 1344 Limestone tan 4409 4410 1344 Siltstone tan
		Cabaniss												
4410														4411 4412 1345 Ibid. pyrite 4412 4413 1345 Claystone 4413 4422 1345-47 Siltstone gray calcareous fragmental fusulinids (reworked?) and sandstone green to tan calcareous pelecypods tiny white opaque forams blastoids echinoid spines. 4417 †Shale gray calcareous and fossiliferous. 4418.5 †Limestone dense pale brown.
							Desmoinesian							
4420														
				Chemkee										4422 4423 1348 Limestone 4423 4424 1348 Siltstone 4424 4425 1348 Claystone 4425 4426 1349 Claystone 4426 4427 1349 Ibid. and 4427 4428 1349 Claystone 4428 4429 1350 Siltstone 4429 4430 1350 Ibid. more
4430														4430 4430.5 1350 Siltstone tan 4431 4432 1351 Limestone 4432 4436 1351-52 Huch sand.
														4436 Atokan 4437 4440 1352 Sandstone gray noncalcareous fossiliferous intraclasts of finer grained varved sandstone with
4440														4440 4445 1353-55 Claystone red and greenish-gray to deep purple mottled unctuous slickensided shrinkage cracks fractured and recemented with green clay calcite veins. (Fig. 7 E) 4445 4446 1355 Shale 4446 4447 1355 Shale red and 4447 4448 1355 Shale red and 4448 4451 1356 Conglomerate in shale rotten red and green mottled reworked sandstone
														pebbles and Hississippian chert 4451 4456 1357-58 Sandstone conglomerate mottled gray and tan noncalcareous burrow mottled intraclasts of banded sandstone green shale Hississippian limestone clasts angular and rounded to 4456 4457 1358 Ibid. more
4450														4457 4458 1359 Conglomeratic 4458 4461 1359 Sandstone conglomeratic jumbled mixture of structures and materials: light and dark banded red iron
														4461 4462 1360 Siltstone or 4462 4464 1360 Sandstone conglomerate-breccia with
4460														4464 4466 1361 Breccia-conglomerate crinoidal
														4466 4467 1361 Cobble or 4467 4468 1362 Siltstone 4468 4470 1362 Sandstone with silt grayish-green pyrite
4470														4470 4473 1363 Sandstone conglomeratic green grading coarse to fine with silt short stringers and hunks of 4473 4474 1363 Ibid. with 4474 4475 1364 Limestone Ibid. 4475 4476 1364 Siltstone / 4476 4477 1364 Limestone 4477 4478 1365 Siltstone / 4478 4479 1365 Ibid. plus 4479 4480 1365 Limestone
							Pennsylvanian	Carboniferous	Paleozoic					
4480							Middle							4480 4481 1366 Same as 4477 4481 4482 1366 Limestone 4482 4483 1366 Limestone 4483 4484 1366 Limestone 4484 4485 1367 Limestone 4485 4486 1367 Limestone 4486 4487 1367 Limestone 4487 4488 1368 Mudstone matrix 4488 4489 1368 Limestone 4489 4490 1368 Limestone
														4490 4491 1369 Limestone 4491 4492 1369 Ibid. with 4492 4493 1369 Limestone 4493 4493.5 1370 Limestone 4494 4495 1370 Limestone 4495 4496 1370 Limestone 4496 4499.5 1370-71 Sandstone/siltstone matrix conglomeratic medium-gray noncalcareous with clasts of
4490								Atokan						
4500														4499.5 4500 1371 Limestone
														4504 4507 1372-73 Sandstone/siltstone conglomeratic gray with clasts of siltstone green glauconitic 4507 4510 1374 Siltstone conglomerate gray to green-gray (Fig. 14) and mudstone green with white chalky chert
4510														4510 4511 1375 Conglomerate 4511 4512 1375 Cobbles white 4512 4513 1375 Sandstone
														4513 4527 4527 1376-80 Conglomerate shaly sandy gray and green irregularly bedded with white chalky Hississippian chert clasts and pebbles weathered and water-worn surfaces dolomite with fossil molds of fenestellid bryozoans crinoid pieces and brachiopod spines and black carbonaceous
4520														plant material some geodes mammillary quartz pyrite sphalerite. And dolomitized pseudo-oolite glauconitic. (Fig. 9 F G H Fig. 15)
														4527 4528 1380 Siltstone hard
4530														4528 4536 4535 1380-82 Cobbles highly weathered tan to white Hississippian chert some surfaces water-worn and Osagean sponge beds in shaly sandy conglomerate matrix green and gray irregularly bedded and with relatively fresh Heramec cobbles of limestone. (Fig. 9 I Fig. 16 C-G)
														4536 4537 1383 Siltstone tan 4537 4538 1383 Siltstone
4540														4538 4540.5 4539 1383-84 Siltstone cobble tan dolomitized highly weathered 4540.5 4541 1384 Clay gray
														4543 4544 1385 Limestone 4544 4545 1385 Limestone 4545 4546 1385 Siltstone 4546 4547 1386 Siltstone 4547 4548 1386 Siltstone tan 4548 4549 1386 Siltstone
4550														4549 4555 1387 Siltstone tan to gray dolomitized weathered sponge spicules. (Fig. 9 J)
														4555 4556 1388 Dolomitized

Primary Rock Lithology

- Loess, Loam, Soil
- Clay, Claystone
- Shale
- Silt, Siltstone
- Sand, Sandstone
- Gravel
- Breccia
- Limestone Breccia
- Chert
- Pyrite
- Limestone
- Mudstone
- Limestone (massive)

Secondary Rock Lithology

- Loessy, Loamy, soil
- Clayey, Argillaceous, clay
- Shaly, shale
- Silty, Silt
- Sandy, sand
- Cherty, chert
- Glauconite, Glauconitic
- Carbonaceous, Carbonized
- Anthracitic
- Pyritic, pyrite
- oolitic
- fossiliferous
- Chalky
- Calcareous
- Dolomitic

Fossils

- Fresh Water
- Brackish Water
- Marine
- Few
- Many
- Broken
- – Macrofossils
- – Crustaceans
- – Brachiopods
- – Bryozoans
- – Corals
- – Echinoderms
- – Crinoids
- – Echinoids
- – Belemnoids
- – Pelecypods
- – Sponges
- – Plants
- – Wood
- – Algae
- – Burrows
- – Conodonts
- – Foraminifera
- – Larger Foraminifera, or fusulin
- – Ostracodes
- – Spicules

Sedimentary Structure Symbols

Depositional Structures

- Bedding Base
- Abrupt or sharp, planar base of bed
- Cross Bedding
- Planar cross-bedding
- Stratification
- Horizontal bedding
- Normal grading/fining upward

Deformational Structures

- Cavities
- Syneresis cracks

Erosional Structures

- Stylolites