GEOLOGICAL REPORT

RUSSELL OIL, INC.

SCHAFFER NO. 1-31

870'FNL; 330'FWL

31-20S-11W

BARTON COUNTY, KANSAS

API NO. 15-009-25155-00-00

Commenced: February 6, 2008

Completed: February 15, 2008

3/-26-11W

Russell Oil, Inc.
P.O. Box 1469
Plainfield, Il. 60544

Re: Russell Oil, Inc.
Schaffer 1-31
870' FNL; 330' FWL
31-20S-11W
Barton, County, Kansas

Dear Sir:

The following is a Geological Report with a Time Log attached on the above captioned well.

Drilling was supervised from 1400' to 3480', rotary total depth. Samples were examined from 1400' to 3480', rotary total depth.

All formation tops, zones of interest, porosity and staining are based on rotary bushing measurements. Any corrections in measurements during the drilling of this well have been incorporated into this report.

Elevation 1816 GL -- 1826 KB

Log Tops

Anyhdrite	585' to 605'	+1241 to +1221
Herington	1555'	+ 271
Winfield	1606'	+ 220
Florence	1773'	+ 53
Wreford	1874'	- 48
Crouse	1926'	- 100
Neva	2062'	- 236
Red Eagle	2158'	- 332
Indian Cave	2312'	- 486
Grand Haven	2356'	- 530
Tarkio Lime	2439'	- 613
Elmont Lime	2501'	- 675
Howard	2648'	- 822
Topeka	2760'	- 934
Heebner	3017'	-1191
Toronto	3030'	-1204
Douglass Shale	3047'	-1221
Brown Lime	3147'	-1321
Lansing/Kansas City	3160'	-1334
Base/Kansas City	3391'	-1565
Arbuckle	3404'	-1578
Rotary Total Depth	3480'	-1654
Log Total Depth	3476'	-1650
5-1/2" Casing	3465'	-1639

(continued)

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Barton, County, Kansas

Structurally, on top of the Lansing/Kansas City, the Russell Oil, Inc. Schaffer 1-31 ran 4' high to the Alyward, Mussenberg No. 1 located 450 feet to the south.

On top of the Arbuckle, the Schaffer No. 1-31 ran at least 65 feet high to the Mussenberg due to the fact the Arbuckle was not reported encountered by their total datum depth of a -1644.

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Log-Tech logs of Dual Induction, Compensated Neutron/Compensated Density and a Microresistivity were ran.

Due to positive drill stem tests, the Russell Oil, Inc. Schaffer No. 1-31 was completed as a potential oil well.

New 5-1/2", 15.5# casing was ran to a depth of 3465 feet, 15 feet off bottom and 61 feet into the Arbuckle formation and set 25 sx of 60/40 poz for hole scavenger then 100 sx of AA2 cement.

A landing joint was temporarily used and the collar of the top joint was set at ground level.

Zero point is 10 feet above ground level at a Kelly bushing elevation of 1826 feet above sea level.

The shoe joint is 42.79 feet in length.

Sincerely,

Steven D. Angle

Steven D. Angle

Russell Oil, Inc.
P.O. Box 1469
Plainfield, Il. 60544

Schaffer No. 1-35
870' FNL; 330' FWL
31-20S-11W
Barton County, Kansas

ZONES OF INTEREST

Note: All oil shows and odors are denoted with an asterisk (*). Samples only showing florescence are not.

1370 to 1390*	Scattered light tan dolomitic, slightly silty limes with a fair show of florescence to fair show of free oil and medium to large crystalline, slightly silty, vuggy greyish dolomite with a fair show of oil staining.
1390 to 1400*	Scattered, slightly greyish medium crystallin, slightly dolomitc limes with a fairly good show of free oil and a few scattered slightly silty light tan cherty limes with a small show of free oil and fair pinpoint to slightly vuggy porosity. No odor.
1400 to 1411*	Scattered loose small slighly pinkish to yellowish quarts sand and medium anguar clear quartz loose sand. White dolomized lim with a small show of oil and oil sheen when acidized. No odor.
1415 to 1425*	Very light tan, fine crystalline dolomite with scattered slight vugginess with a release of oil sheen when acidized. Scattered medium sub-rounded frosted quartz sand.
1520 to 1540*'	Few scattered buff colored crystalline dolmite with good florescence and light scummy oil.

HERINGTON (Top @ 1555)	
1555 to 1567	Tan, slightly fossiliferous limes with a few fin crystallines and frosted quartz and dark grey cherts.
WINFIELD (Top @ 1606)	
1606 to 1616	White very fine sandy lime with a good show of florescence.
1618 to 1621	Scattered shite fine sandy limes with a fair show of florescence.
1625 to 1643	Very light grey, very fine sandy silty limes with a fair show of florescence.
1654 to 1658	Light tan very well developed oolicastic limes with a fair show of florescence.
1690 to 1698	Tan silty with black fossiliferous limes with a fair show of florescence.
1728 to 1736	Tan, well developed oolicastic and slightly fossil cast with scattered oolites with a good show of florescence throughout sample.
1740 to 1750	Same as above.
1760 to 1780	Same as above.
FLORENCE (Top @ 1773)	
1773 to 1785	Tan limes with a fair development of oolicasts and with a fair show of florescence.
1795 to 1815	Tan to light grey fossiliferous and poorly developed small oolicastic limes with a fair show of florescence.
1852 to 1865	Scattered tan well developed oolitic limes with a slightly scattered oolicastic porosity with a fair show of florescence.
WREFORD (Top @ 1874)	
1874 to 1893	Tan crystalline limes, tan to grey dense and grey fossiliferous limes.

CROUSE (Top @ 1924)	
1924 to 1934	Off white dense hard fossiliferous limes with a fairly good show of florescence.
1956 to 1965	White and tan dense slightly crystalline limes and scattered slightly weathered tan fossiliferous limes with a fair show of florescence throughout.
1967 to 1980	Soft redish tan shales and off white fine sandy limes and dense limes with a fair show overall florescence.
1980 to 1995	Off white heavily fossiliferous limes and a few light tan fine oolicastic limes with fair show of overall florescence.
2005 to 2012	White chalky, soft grey shales and light tan to light white slightly crystalline limes with a fair show of florescence.
2025 to 2035	White fossiliferous, sandy limes with a fair show of florescence.
2036 to 2044	Off white to tan fossiliferous and dense limes with a fair overall show of florescence.
2046 to 2060	Soft red and grey clays. Light grey crystalline, fossiliferous lime, tan limes,off white dense limes and light grey fossilferous limes with some scattered florescence.
NEVEA (Top @ 2060)	
2060 to 2078	Light tan vuggy to oolicastic lime with a fair show of overall florescence.
2078 to 2085	Tan vuggy, fossiliferous limes with a fair to good show of overall florescence.
2090 to 2105	Light tan oolitic and oolicastic limes and grey chalky limes with a fair show of florescence.

2105 to 2115	Same as above.
RED EAGLE (Top @ 2156)	
2156 to 2176	Tan and light grey clays, grey shale and few scattered whitish fine crystalline limes.
2190 to 2195	Scattered solid black shales and grey shales. Scattered and tan junky to fossiliferous limes with scattered shows of florescence.
INDIAN CAVE (Top @ 2312)	
2312 to 2326	Scattered off white to tan slightly silty, fairly loose limes with a show of florescence.
2345 to 2350	Hard dense tan to yellowish limes and scattered slightly glauconitic firm sand clusters.
GRAND HAVEN (Top @ 2356)	
2356 to 2368	Few scattered hard, crystalline grey and tan fossiliferous limes with a show of florescence. Scattered varied colored shales.
2387 to 2387	Sample loaded with fine light grey, slightly micaceous sand clusters.
2390 to 2400	Fari amount of dedium grey with feldspar crystals, calcite bonded friable sand clusters.
2402 to 2410	Same as above with some scattered sub angular clear to slightly reddish and yellowish fine to medium loose quartz sand grains.
TARKIO LIME (Top @ 2439)	
2439 to 2450	Scatteed tan and white fairly dense, fairly fossiliferous limes with a fair show of florescence.
2455 to 2459	Scattered tan and white fairly dense, fairly fossiliferous limes and fair amount of fairly fine to medium fine feldspared crystalline sand clusters.

2460 to 2466	Varied colored shales and a fair amount of tan and white dense to slightly fossiliferous limes and scattered medium fine micaceous sand cluster and fair amount of florescence of the limes.
2470 to 2488	Varied colored shales. Scattered colored lime and fossiliferous limes and scattered micaceous sand clusters.
ELMONT (Top @ 2501)	
2501 to 2516	Light tan to tan dense with some crystalline and scattered slightly fossilferous, silty limes and overall fair florescence.
HOWARD (Top @ 2648)	
2648 to 2678 with	Few scattered white to tan dense limes
	with a show of florescence.
2732 to 2748	Loaded with grey fine to medium fine , heavily micaceous sand clusters and scattered dark brown crystalline fossiliferous lime. NOTE: Some appearance of very light oil, no odor and no florescence.
TOPEKA (Top @ 2760)	
2760 to 2776	Tan to greyis dense lime and tan to greyish fossiliferous limes, tan to brown junky lime and some cherty.
2866 to 2892	Scattered tan dense limes.
2926 to 2938	Scatttered tan and grey dense to fossiliferous to scattered sharp, fresh chery limes.
2944 to 2952	Scattered off white to light tan fossilferous lime.
2968 to 2977	Fair amount of poorly sorted to fine to medium sub-angular clear, loose quartz sand grains.
HEEBNER SHALE (Top @ 3017)	Jet black shales.

TORONTO (Top @ 3030)	
3030 to 3038*	General overall light florescence, two pieces of light tan and orangy tan limes with scattered vugginess and a fair to good show of free black heavy oil. No odor. (Included in DST No. 1)
3040 to 3047*	Tan white, slightly crystalline to and cherty limes that are fairly loose and friable with scattered vuggy porosity with a good show of black oil and free floating brown oil. No odor.
DRILL STEM TEST NO. 1	
3022 to 3075	TEST: 60-30-60-30, good blow building to 7-1/2". Shut In 30 minutes. No blow back. Good blow building to 7-1/2". Shut In 30 minutes. No blow back. Recovered: 45 feet of drilling mud with a few oil spots and very heavy oil clumps in test tool. Pressures: 16-25, 23-29, 112-93 Bhps. 1489-1464 hydrostatic pressures.
DOUGLASS SHALE (Top @ 3047)	
3047 to 3090	Mostly grey shales and varied colored shales.
3084 to 3090*	One piece of white, slightly cherty, slightly vuggy lime with a show of black heavy free oil.
BROWN LIME (Top @ 3147)	
LANSING/KANSAS CITY (Top @ 3160)	
3160 to 3165*	Brown fossiliferous lime with some inter-fossil porosity with a good show of "wet" oil staining and black oil flakes with a fair odor. (Included in DST No. 2)

3165 to 3175*	Light tan dense to scattered fine crystalline lime with a small show of free oil and a faint odor. A few pieces of light tan to brown fine oolicastic limes.
3176 to 3186*	Light tan cherty fine crystalline lime with a fair show of free oil. A few scattered white with scattered slight vugginess with a show of black heavy oil and a faint odor.
3188 to 3193*	Very few pieces of light grey slightly crystalline to slightly cherty limes with fair pinpoint porosity, fair show of free oil and a nice good odor.
3193 to 3196*	Tan, slightly crystalline cherty limes with some fracturing porosity, clear oil streams off rocks and a fair odor.
3196 to 3200*	Tan fossiliferous vuggy lime with a fairly good show of free oil and a fair odor.
3200 to 3210*	Light tan fossiliferous, slightly vuggy lime with medium brown "wet" oil staining and a faint odor.
3210 to 3222*	A few light, cherty, fossiliferous limes with fair vuggy porosity and dark "wet" oil staining in vugs. Tan fossiliferous limes with intercrystalline porosity with a fair show of dark brown free oil and a fair odor.
3225 to 3231*	Light grey limes with vugs with a dark "wet" oil staining and dark grey limes with small vugs and "wet" oil staining and some streams of clear oil and a light fair odor.
3234 to 3242*	Light and dark tan, fossiliferous limes. One piece of dark brown lime with a few small vugs with dark "wet" oil in oolicasts. No odor.

DRILL STEM TEST NO. 2

3160 to 3243	TEST: 60-30-60-30, strong blow and off bottom of the 5 gallon bucket in 1 minute. Shut In 30 minutes. Good blow back building to 5". Strong blow and off bottom of the 5 gallon bucket in 1 minute with gas to surface in 5 minute, too small to measure but gas will burn. Shut In 30 minutes. Strong blow back off bottom of bucket in 18 minutes. Recovered: 32 feet of oil and gas cut mud and 360 feet of slightly mud cut gas cut oil. Pressures: 25-105, 135-170, 665-628 Bhps. 1549-1479 hydrostatic pressures.
3245 to 3252*	Off white and light tan junky to fossiliferous limes. One piece of white, medium crystalline lime with a small show of dark free oil. No odor.
3254 to 3261	A few scattered white chalky and tan fossiliferous, dense hard to slightly crystalline limes.
3261 to 3271	White to buff fine crystalline to medium crystalline to dense limes.
3271 to 3282	Dark grey shales predominate and scattered buff, dense to light greyish to tan junky, fossiliferous limes.
3282 to 3284	Grey and dark grey shales. Scattered dense to crystalline, fossiliferous limes. One piece of dense, cherty lime with vugginess and a show of "wet" oil staining. No odor.

CFS @ 3284 for 60 Minutes

3284 to 3289	Grey shales. Tan, slightly crystalline limes and dense limes to a few pieces of cherty lime.
3290 to 3302	Light tan and light grey limes.
3202 to 3206*	Faint but definite odor. One piece of white cherty lime with some vugginess with black oil flakes and "wet" oil staining. (Included in DST No. 3)
3308 to 3313*	Tan fossiliferous limes. A couple of pieces with scattered vugs with "wet" oil stain and free scummy oil with a faint odor.
3313 to 3315*	One piece of tan, junky fossiliferous lime with a small show of "wet" oil staining. Tan dense and tan fossiliferous limes. The sample had a faint odor.

CFS @ 3315 for 60 minutes

3315 to 3328*	Tan slightly crystalline to cherty, fossiliferous limes with a few vugs and a very small show of "wet" oil staining. No odor.
3330 to 3342*	Same as above.
3344 to 3351*	White to light tan, dense to slightly crystalline to fossiliferous limes. A couple of pieces of light tan cherty limes with some large vugs with a fairly good show of black heavy oil. No. odor.
3351 to 3361	Light tan crystalline and fossiliferous limes and scattered white chalk.
3374 to 3381*	Greyish shales and a few scattered dark greenish shales. Light tan, dense to slightly crystalline limes and one piece of fine crystalline lime with a very small show of dark free oil when broken. No odor.

3381 to 3388	Greyish to blackish shales, scattered grey micaceous shales and white to tan chalky, slightly crystalline and cherty limes.
3388 to 3398	Greyish shales and a few scattered greenish yellow, purple tinted shales. A few dense limes.
3398 to 3408*	Scattered greyish and dark brown shales and soft to firm pale green shales. A few scattered pink dolomite with medium clear quartz sand. Sample had a fair Arbuckle odor.
3408 to 3410*	Light tan, medium crystalline dolomitic lime with a fairly good show of free oil, pink weathered oolicastic dolomitzed lime with a very good show of free oil with a fairly good Arbuckle odor.

CFS @ 3410 for 60 minutes

DRILL STEM TEST NO. 3

3300 to 3410	TEST: 60-30-60-30, , strong blow off bottom of 5 gallon bucket in 2 minutes. Gas to surface in 55 minutes. Shut In 30 minutes. Strong blow off bottom of 5 gallon bucket in 2 minutes. Gas too small to measure but gas will burn. Shut In 30 minutes. Recovered: 1163 feet of gassy oil. Pressures: 99-260, 264-386, 805-731 Bhps. 1654-1577 hydrostatic pressures. 106 degrees F. maximum bottom hole temperature.
3310 to 3414*	Light tan medium crystalline dolomite with a fairly good show of free oil and a good strong odor. (Included in DST No. 4)

3414 to 3418*	Scattered grey, purple tinted, yellowish green and turquoise green shales and light tan dense and medium crystalline dolomite with fairly good intercrystalline porosity with a fairly good show of free oil and a good strong odor. (Included in DST No. 4)
CFS @ 3418 60 Minutes	
DRILL STEM TEST NO. 4 3311 to 3418	TEST: 30-30-15-30, Weak surface blow died. Shut In 30 minutes. Weak surface flow died. Shut In 30 minutes. Recovered: 3 feet of oil cut mud and 2 feet of oil. Pressures: 11-15, 15-21, 1016-847 Bhps. 1706-1659 hydrostatic pressures.
3418 to 3425*	Scattered tan, small slightly weathered oolicastic dolomite with a fair to good show of oil, light tan dolomitic limes and tan fossiliferous dolomitic limes with a fairly good show of free oil. A few scattered pale green to yellowish green shales. Sample had a good odor.
CFS @ 3425 60 Minutes	
DRILL STEM TEST NO. 5 3418 to 3425	TEST: 30-30-30-30, Dead, flushed tool two times, weak suface blow, died. Shut In 30 minutes. Very week surface blow, died. Shut In 30 minutes. Recovered: 1 feet of oil and 4 feet of oil cut mud. Pressures: 15-23, 24-26, 1010-855 Bhps.

3425 to 3428*	Turquoise green shalely clear quartz sand and clear quartz sandy shale. A few scattered dark yellow shales. Tan and white fine to medium crystalline dolomite withe a fairly good show of free oil. Tan chalky fossiferous dolomite. A few white oolitic cherts. Sample had a fairly good odor.
3428 to 3436*	Half and half of white medium to fairly crystalline dolomite with black dead flakey oil and tan fine to medium crystalline dolomite with a fair show of free oil and overall good oil satuation. A few scattered white to pale green oolitic cherts. Fairly good odor but not as strong as upper samples.
3436 to 3447*	Tan and white dense dolomite and poorly developed tan crystalline dolomite and fine crystalline dolomite with good oil saturation of a light show of oil. Scattered white, fairly large poorly developed crystalline dolomite with scattered black dead flakey oil. Sample had a fairly good odor
3447 to 3462*	Tan dolmitic lime. Scattered fine to medium dolmite with scatttered traces of free oil and dark brown to black dead flakey oil. Few pieces of white glauconitic dolmite. Sample had a taint fair odor.
3462 to 3477*	Tan, fine crystalline denst to scattered weathered slightly vuggy dolomite with fair show of light oil. Scattered oolitic white, sharp, fresh chert and scattered white crystalline dolomitic lime with scattered black flakey oil. Sample had a fairly good odor.

3477 to 3480*	Same as above.

CFS @ 3480 60 Minutes

ROTARY TOTAL DEPTH @ 3480

LOG TOTAL DEPTH @ 3476

5-1/2" CASING SET @ 3465

DRILLING INFORMATION ON THE SCHAFFER NO. 1-31

Drilling Contractor: Southwind Drilling, Rig 1. Drillers: W. Sanders
T. Reeder
K. Thompson
E. Zecha

Tool Pusher: Frank Rome

Spud Date: February 6, 2008 Date of RTD: February 14, 2008

Surface Pipe: New 8-5/8", 20# set @ 268' w/225 sx 60/40 Poz mix, 3% cc & 2% gel. Cement did circulate.

Status: Potential oil well. New 5-1/2", 15.5# pipe ran.

Ran 81 joints, 3455.38' of new 5-1/2", 15.5# pipe set at 3465.38' using a 13' landing joint with the collar set at ground level and 10.62' off bottom of hole. The shoe joint is 42.79' in length which should give 18.59' of clean pipe rat hole below the top of the Arbuckle. Bottom was tagged using one of the spare casing joints prior to cementing and measured 6" off of calculated TD of 3476' KB.

The pipe was set with scratchers welded and placement at 3391-3401, 3348-3353, 3310-3320, 3328-3338 and centralizers on the bottom 11 joints and one centralizer set in the middle of the 8-5/8" surface pipe at 128' down from ground level. Pipe was cemented with 50 sx of 60/40 Poz mix, 100 sx of AA-2 cement with additives of 25# of cello-flake, 484# of salt, 38# friction reducer, 71# of gas block, 76# of FLA-322 and 48# of gilsonite. 1000 gals of superflush mud cake remover was ran prior to cementing. Pipe was slowly rotated during all cementing process. Cementing completed with the plug down and holding at 1:15 A.M. on Friday, February 15, 2008

Drilling Mud: Mud-Co, Engineer, Rick Hughes.

Drill Stem Testing: Trilobite Testing, Tester: John Schmidt.

Cementing: Basic Energy Services, Engineers: Bobby Drake.

Electric Logging: Log-Tech, Engineers: Tim Martin.

TOTAL FOOTATE DRILLED PER DAY

Under surface at 8:00 A.M. on February 7, 2008

1900	Feet	At	7:00 A.M.	On	2-08-08
2740	"	"	"	"	2-09-08
3075	"	"	"	"	2-10-08
3243	"	"	"	"	2-11-08
3400	"	"	"	"	2-12-08
3418	"	"	"	"	2-13-08
3480	Feet	At	1:06 A.M.	On	2-14-08

MUD RECORD

Pre-Mix Tank Used.

Surface - 90 sx gel, 2 sx lime, 9 sx hulls.
1520' - 75 sx gel, 1 sx soda ash.
2550' - 265 sx gel, 4 sx soda ash, 6 sx caustic, 6 sx lignite, 2 sx drispac, 6 sx hulls.
3075' - 123 sx gel, 5 sx soda ash, 5 sx caustic, 3 sx lignite, 2-1/3 sx drispac, 3 sx hulls.
3990' - 50 sx gel, 2 sx caustic, 2 sx lignite, 22 sx hulls, 2/3 sx drispac.
3410' - 15 sx gel, 2 sx soda ash, 2 sx caustic, 1/2 sx lignite, 1/2 sx drispac, 2 sx hulls.
3425' - 20 sx gel, 1 sx soda ash, 2 sx caustic, 1 sx lignite, 1 sx drispac. 7 sx hulls.

DRILLERS TIME LOG

RUSSELL OIL COMPANY — 870' FNL & 330' FNL — ELEVATION: 1816 GL
Schaffer No. 1-31 — 31-20S-11W Barton County, Kansas — 1826 KB

DEPTH	MINUTES	REMARKS
Note: 1/3" made ¼".	1 foot drilling time	
1400 to 1410	¼-¼-½-½-½-1-½-½-½-½	
1420	½-½-½-½-1-½-½-1-1½-½	
1430	1-1-½-½-1-½-½-1-1-½	
1440	½-½-½-1-½-½-1-1½-2½-1½	
1450	½-1-2-3-1-1½-1-½-1½-1½	
1460	1-1-1½-1½-1½-½-1-1-1-1	
1470	1-2-2-1-1-1-1-1-1-2	
1480	1½-2-1½-1-1-½-½-1-1-1	
1490	1-1-1-1-1½-1½-1-1-1-½	
1500	½-1-1-2-1-1½-2-1½-1½-1½	
1510	2-2-1-1-1½-2-2½-2-2½-2½	
1520	2½-1½-1-1-1-1-1-1-1-1	
1530	1-1-1-1-1-1-1-½-½-1	
1540	1-1-1-1-1-1-1-1½-½-1	
1550	1-1-1½-½-1-1-1-1-1-1	
1560	2-1-1-1-1-1-2-1-2-1	
1570	1-1-1-1-1-1-1-1-1-1	
1580	1-2-1-1-1-1-1-1-1-2	
1590	1-2-1-1-2-1-2-1-2-1	
1600	2-1-1-1-1-1-1-1-1-1	
1600 to 1610	1-1-2-1-1-1-1-2-1-1	
1620	1-2-1-1-1-1-1-1-1-2	
1630	1-½-½-1-1-1-1-½-½-½	
1640	½-½-½-½-½-1-½-½-½-½	
1650	½-½-½-½-1-½-½-1-½-½	
1660	1-1-1-2-2-1-2-1-1-1	
1670	1-1-1-1-1-1-1-1-½-½-½	
1680	½-1-1-1-1-1-1-1-½-½-½	
1690	½-1-1-1-1-1-1-1-1-1	
1700	1-1-1-2-2-1-1-1-1-½-½	

1700 to	1710	1-½-½-1-1-½-½-1-1-1
	1720	1-1-1-1-1-1-1-1-1-1
	1730	1-1-1-1-1-1-1-1-1-1
	1740	1-1-1-1-1-½-½-½-½-½
	1750	½-½-½-½-½-1-1-1-1-1
	1760	1-1-1-½-½-½-1-1-1-1
	1770	1-1-1-1-1-1-1-1-1-1
	1780	1-1-1-1-1-2-1-1-1-1
	1790	1-1-1-1-1-1-1-½-½-½
	1800	½-½-½-½-½-½-½-½-½-1
1800 to	1810	1-¼-¼-¼-¼-½-1½-½-½-½
	1820	½-½-½-½-½-½-½-1-1-1
	1830	1-1-1-3-2-2-1-1½-1-½
	1840	1-2-1-2-1-2-1-2-3-1
	1850	1-2-1-2-2-2-2-2-2-1
	1860	1-1-1-1-1-1-1-1-1-1
	1870	1-1-1-1-1-1-1-1-1-1
	1880	1-1-½-1½-1-1-2-2-2-1½
	1890	2-1½-1½-2--1-1½-2-2-2-2
	1900	1½-1½-2½-1½-2½-1½-1-1-1-1
1900 to	1910	1-½-½-1-1-1-½-1½-1½-1½
	1920	2-2-2-1½-1½-1½-1½-2-2-1
	1930	1½-1½-1-1½-1½-1½-1½-1-1-1½
	1940	2-2-1-1-1½-1½-1½-1½-2-1½
	1950	2-2½-1-1-2-2-2-1-1-1½
	1960	1-1½-2-1-1-1-1-1-1-1½
	1970	1½-1½-1½-1½-1½-2-2-2-2-1
	1980	1-1-2-1-1-1-1½-1-1-1
	1990	½-½-½-½-½-½-½-1-½-½
	2000	1-1-2-1½-2-1½-1½-2-1-1
2000	2010	1-1-1½-1-1-2-1½-1½-1½-2
	2020	2-2-2-1½-2-1-1-½-½-1
	2030	1-1-1-1-1-1-1-1½-1½-2
	2040	2-1½-1½-1-1-1-1-1-1-1½
	2050	1-1-1-1-1½-1½-1-1½-2-1½
	2060	2-2-1-1-1-1-1-1½-1½-1
	2070	1½-1½-1½-1½-1-1-½-½-½-½
	2080	½-½-1-1-1-2-1-1½-2-1½
	2090	1½-1½-1½-1½-2-2-1½-1½-1-½
	2100	½-½-½-¼-¼-¼-¼-¼-¼-½

2100 to 2110	½-½-½-1-1½-1½-1-1½-1½-1
2120	1½-1½-2-1½-1½-1½-1½-1½-1-1
2130	1-1-2-1½-1½-2-1-1-2-1½
2140	1½-2-1-1½-1½-1-1½-1-1½-1
2150	1-1-1½-1½-1½-1½-1½-2-1-1
2160	1½-1½-2-1-1½-1½-2-1½-1½-1½
2170	1-1½-2-1-1½-1½-1-¼-¼-¼
2180	¼-¼-¼-¼-¼-¼-1-1-1-1½
2190	1½-1½-1½-2-2-2-1½-1½-2-2
2200	2-2-1½-1½-2-1-1-2-1½-2
2200 to 2210	1½-2-1½-1½-1-1-1½-1-1½-1
2220	1-1½-1½-1-1½-1½-1½-1½-1½-1½
2230	1½-1½-1½-1½-1½-1½-1½-1½-1½-2
2240	1-½-½-½-½-½-1½-1½-2-1
2250	½-1½-1½-2-1-2-1½-1½-1½-1½
2260	1-1½-1½-1-1-1-½-1-1-1
2270	1-1-1½-1½-1½-1½-1½-1½-1-1
2280	1-1-1-1-1-½-½-1-½-½
2290	½-½-½-½-½-1½-1½-1½-2-1½
2300	1-1½-1-1½-2-2-1-1-1-½
2300 to 2310	1-1-½-1-1-1-½-½-1-1
2320	1-½-1-1-1-½-1-2-2-1½
2330	1-1-1½-1-1½-2½-2-1½-2-1½
2340	1½-1½-1½-2-2-1-1-1-1-1½
2350	1½-1½-1½-1½-2-1½-1-1½-1½-1
2360	1½-1½-1-1-1½-1-1½-1-1-1
2370	1-2-2-1½-1½-1-1-1-1-1
2380	1½-1½-1½-1½-1-1-1-1-1½-1½
2390	1-1-1-1½-1½-1½-1½-1-1-1
2400	2-1-1-1½-1-1-1-1-1-½
2400 to 2410	1-1-1-1-1-1-1-1-1-1
2420	1-1-1-1-1-1-½-½-½-½
2430	1-1-1-1-1-1-½-½-1-1
2440	1-1-½-½-1-1-½-½-1-½
2450	½-2-2-2-1½-2½-2-1½-2-2
2460	2½-2-2½-1½-2-1-1-1½-1½-2
2470	1½-1½-1½-1½-1-1½-1½-1-1½-1½
2480	1-1-½-1-½-1-1-1-½-½
2490	1-1-1½-1½-1-1-1-1-1-1
2500	1-1-1-1-1-1-½-½-1-1

2500 to 2510	½-½-½-½-3-2-2-1½-2-2
2520	2-2-1½-2-2-2½-2-2-3-3
2530	1½-1½-2-2-1-½-1½-3-2-3
2540	3-1-1-3-3-1-2-1½-1-1½
2550	1-2-2½-1-1½-2-2½-2½-2-2
2560	1½-1½-1½-1½-2-1-1-2-2-3
2570	2-3-2-2-2-1-1½-2-2-2½
2580	2-2½-1½-2-1-2-1-1-2-1
2590	1-1-2-3-2-2-3-6-2-3
2600	2-2-1-1-3-1-2-2-2-2
2600 to 2610	1-2-1-1-1-2-2-2-2-1
2620	1-1-1-1-1-1-1-1-1-1
2630	1-1-1-1-1-1-1-1-1-1
2640	1-1-1-1-1-1-1-1-1-1
2650	1-1½-1½-1-1-1-1-1-1-1
2660	2-3-3-4-3-2-2-3-2-3
2670	2-2-2-3-3-2-3-2-2-2
2680	1-3-2-3-2-2-3-2-2-3
2690	4-1-3-2-3-2-2-2-1-2
2700	1-2-3-2-2-2-1-3-2-1
2700 to 2710	2-2-2-1-1-1-2-1-3-2
2720	2-2-4-2-2-1-1-1-1-1
2730	1-1-1-1-1-1-1-1-1-1
2740	1-1-2-1-1-1-1-1-1-1
2750	1-1-1-1-1-2½-2-3-3-2½
2760	1½-2½-2-2-2-3-3-1½-1½-2
2770	1½-1½-2-2-2-2-2-2-2½-1½
2780	3-2½-2½-2-2-2-2-2-2-1½
2790	2-1½-1-1-1-1-1-1-1-1½
2800	1½-1-1-1-1-1-1-2-2-2
2800 to 2810	2-1-1-1-1½-1½-2½-1½-2-1½
2820	2-2-2-1½-1½-1-2-1½-2-1½
2830	2-2-1½-1½-2½-2-2-2-2½-2½
2840	3-2½-2½-2½-2-2½-2-2-1½-1½
2850	1½-1½-1-1½-1½-2½-2-1½-1-1½
2860	2½-2½-1½-2-2-1½-1½-2-1-1
2870	2-2-3-2-2-2-1½-1½-1-1½
2880	1½-1½-1-½-1-½-½-1-1-½
2890	½-½-½-1-1-1-1-1-1-1
2900	1-1½-2-1½-2-1-1½-1½-1½-1½

2900 to 2910	1½-1½-2½-1½-3-2-3-3-2½-2½		
2920	2-2-2-2-2-3-3-3-2-2		
2930	3-3-2-2½-2-2½-2-2-2-2		
2940	2-1-1-½-½-1-1-1-1-1		
2950	1-1½-2-2½-2-2-2-1½-1½-1		
2960	2½-2-2-2-2½-2½-2-2-3-2½		
2970	2½-3-2-2½-1½-1½-1½-2-2-2		
2980	3-2½-2½-2½-3-1½-1½-1-1½-1½		
2990	3-2½-2½-2-2-2-2-2-2½-2		
3000	2½-2-2½-2½-2-2½-2½-2-2½-2½		
3000 to 3010	3-2½-2½-2-2½-2-2-2-2-2		
3020	2-2½-2½-2-2½-2½-2½-2½-2½-2½		
3030	3-1-3-2-1½-1-1-2½-3-3		
3040	2-2½-2½-2½-2½-3-3-2½-2½-2		
3050	2-2-2½-1½-1½-2-2½-2½-3-2½		
3060	2½-2½-1½-1½-1½-1½-2½-2-1½-2		
3070	1½-2-2-1½-2-1½-2-2½-1½-1½		
3080	2-1½-1½-2-1-1-2-2-2-1		DST #1, 3022-3075
3090	1½-1½-1-1½-1½-1-1½-1-1½-1		
3100	1½-1½-1-1-1½-1½-1-1½-1½-1		
3100 to 3110	1½-1½-1-1-1-1-2-2-2-1		
3120	2-2-2-2-2-1-3-2-2-2		
3130	2-1-2-2-2-2-2-2-2-1		
3140	2-2-1-1-1-2-1-1-2-2		
3150	1-1½-1-2-2-2-1-1½-1½-1½		
3160	1-2-1-2-1½-2½-4-3-3-4		
3170	2-3-3½-3-2½-2-3½-3½-2-2		
3180	2-3-3-2½-2½-3-2-4-4-2		CFS @ 3180.
3190	3-4-3-4-3½-3½-3½-3½-4-4		
3200	3½-3½-3½-4-4-3-2½-4-4-4		CFS @ 3195.
3200 to 3210	2½-2½-2½-2-3½-3-4-3½-3½-3		
3220	3-2½-3-2½-3½-3½-3-3-2½-2½		
3230	3-3½-4-3½-4-3½-3-4½-3½-3½		
3240	3-4-3-4-4-3-3-3-4-3		
3250	4-4-3½-3½-2½-2½-1½-3-3½-3½		DST #2, 3160-3243.
3260	3½-3½-3½-4½-3-4-3-4½-2½-4		
3270	3½-3½-3-2-3-4-4-3-4-3		
3280	4-3-3½-3½-4-2-3-4-3-2		
3290	4½-2½-3-2½-2½-3½-4½-3-3½-4		
3300	2½-3½-2-3-3-3-3-2½-2½-4		

3300 to 3310	3-5-5-4-3-3½-3½-5-5-3½	DST #3, 3300-3410.
3320	3½-3-3-3½-3½-4½-5-4½-4½-5½	
3330	5½-5-5-4-4½-4½-4-4½-2-2½	
3340	2-1-2-2-2½-3-4-4-3½-3	
3350	4½-4½-4½-5-4-4½-4-4½-4½-4	
3360	4-4½-3½-3-3½-3½-4-3½-3-4	
3370	4½-4½-4-4-3½-3½-3½-3½-4-4	
3380	3-3-3-3-3-3-3½-3½-3½-4½	
3390	4-4-4½-4-4-3-4-4-4-3	
3400	3½-3-3-3-2½-3-3½-2½-3-2	
3400 to 3410	3-3-2½-2½-3½-3½-3-4½-3-2½	
3420	2-2-2½-2½-2½-2½-2-2-2½-3	SR 3419-3420. DST #4,3411-3418.
3430	2½-3-1-1½-½-4-2-3-4-3½	SR @ 3421, DST #5, 3418-3425.
3440	3-3½-3½-4½-2-2-3½-3-2½-2	
3450	2-4-2-3-1-4-2-2-4-2	
3460	3-2-3-4-3-2½-2½-3-2-1	
3470	3-2-3-1-2-2-3-2-1-1	
3480	2-1-1-4-2-2-1-2-2-3	Stop CFS @ 3480. RTD @ 3480.