

Geological Report

Denver Energy Investments
Marline Oil Corporation
#1 Goyer
C SE NW 25-30S-1E
Sumner County, Kansas

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December 22, 1977

Re: Denver Energy Investments and
Marline Oil Corporation
#1 Goyer
C SE NW 25-30S-1E
Sumner County, Kansas

Denver Energy Investments
P. O. Box 2036
Littleton, Colorado 80161

Gentlemen:

Submitted herewith is the geological report concerning the above captioned test. Data pertinent to the operation are tabulated below:

Spud: 12-5-1977 Rotary Complete: 12-19-1977
Contractor: White & Ellis Drilling, Inc.
Tool Pusher: Reggie Thompson
Surface Pipe: 250' 8 5/8" w/200 sx
Production pipe: None
Drill Time: U.S. to T.D. Samples: 250' to 3750'
DST: 1 (Western) Cores: 2 (see below)
Mud: Magcobar Log: Schlumberger 2LL-FDC-CNL
Elevation: Laughlin-Simmons

Geological formation tops as picked from samples and corrected to the open hole survey follow. All measurements are from the rotary bushing elevation.

Elevations:	1214' RB	1211' DF	1209' GL
Winfield		326 (+ 888)	
Howard		1516 (- 302)	
Severy Zone		1588 (- 374)	
Topeka		1665 (- 451)	
Heebner		2074 (- 860)	

Stalnaker	2398 (-1184)
Kansas City	2688 (-1474)
Base Kansas City	2930 (-1716)
Cleveland	2970 (-1756)
Marmaton	3010 (-1796)
Cherokee	3150 (-1936)
Mississippi	3250 (-2036)
Chattanooga	3572 (-2358)
Simpson	3632 (-2418)
1st sand	3638 (-2424)
2nd sand	3695 (-2446)
Arbuckle	3695 (-2481)

Zones of interest were encountered at the depths noted below and evaluated as indicated:

3632 - 3695 (Simpson) - There were two cores cut, the first from 3605 - 3636.5 and the second from 3639 - 3684.

Core No. 1 3605 - 3636.5 Full recovery of 31.5'

3605	- 3630.15	Shale, black, fissile
3605 30	.15 - 3633.20	Sandstone, light to grey, fine to medium grained, fair sorting, subrounded, shaly dolomitic in part with scattered vuggy and interlaminar porosity. Scattered light tan staining, strong odor, fair to good fluorescence. Estimated 1' of pay.
3633.20	- 3636.20	Shale, grey green, fissile, sub-waxy, sandy, white and black sandstone laminations. No shows, tight.
3636.20	- 3636.50	Sandstone, light to grey, fine grained, friable dolomitic with shale, grey green, poor intergranular porosity, scattered staining, poor fluorescence, faint odor, considered to be too shaley to be pay.
⁶ / 3 31	- ⁶ / 3 32	0.6 Perm. 14.4 Poro. 0 Oil Sat. 81.8 Water Sat.

<u>Core #2 3639 - 3684</u>		45 feet. Recovered 44.7 feet
3639	- 3648	Sandstone, white - grey, fine to medium grained dolomitic subangular to subrounded, with fair sorting with an increase in medium to coarse grained sand to base. Abundant shale and pyritic laminations. Abundant black phosphatic sand grains and plates. No show of oil. No fluorescence.
3648	- 3655	Sandstone, white to grey, medium to fine grained, shaly, grading to and interlaminated with shale, dark grey to greenish grey, subwaxy.
3655	- 3658	Shale, dark grey - greenish grey, subwaxy, fissile with few clusters and nodules of sand and pyrite.
3658	- 3661	Sandstone, green to white, fine to medium grained, subangular, fair sorting with green shaly matrix and few laminations and fragments of shale green waxy.
3661	- 3664.5	Sandstone, white, fine grained, quartzitic, angular to subangular, fractured with few shale laminations, slickensided in part, good show light tan oil bleeding from fractures, good odor, good fluorescence.
3664.5	- 3674.2	Sandstone, white to green, fine grained to very fine grained quartzitic to shaly, grading to sandy. Shale, green with green waxy shale laminations. No show of oil.
3674.2	- 3684.7	Sandstone, white to green, fine grained, poor to fair sorting, shaly, fossiliferous and shale green waxy sandy, fossiliferous with few shale and sand lenses. No show of oil.

<u>Core No. 2</u>	<u>Permeability</u>	<u>Porosity</u>	<u>Oil¹ Saturation</u>	<u>Water Saturation</u>
3639 - 3640	1.0	11.1	0	65.9
3640 - 3641	1.9	12.9	0	72.3
3641 - 3642	2.5	14.7	0	72.4
3642 - 3643	0.9	14.2	0	70.3
3643 - 3644	0.5	13.7	0	78.1
3644 - 3645	0.3	14.1	0	73.7
3645 - 3646	0.4	15.1	0	79.1
3646 - 3647	6.4	14.2	0	62.4
3647 - 3648	1.9	15.6	0	68.2
3659 - 3660	2.3	16.9	0	82.8
3661 - 3662	0.3	5.9	4.2	59.7
3662 - 3663	0.5	9.6	11.2	37.3
3663 - 3664	3.6	7.2	15.4	30.9
3664 - 3665	5.9	14.0	0	70.5
3665 - 3666	1.7	14.6	0	69.2
3666 - 3667	5.1	10.8	0	71.4
3667 - 3668	0.5	16.8	0	75.6
3668 - 3669	0.5	16.9	0	82.1
3669 - 3670	5.9	22.6	0	78.6
3681 - 3682	1.1	12.3	0	67.0

DST #1 ⁶3/32 - ⁶3/84

Open 45 SI 60 Open 30 SI 60
 Recovered: 45' mud with few oil specks in tool
 Weak blow for 15", intermittant for 30".
 1st FP's 40 to 40 2nd FP's 50 to 50
 IBHCIP 1340 FBHCIP 1298

The subject test ran 25' low on the Simpson to the test located one mile north in section 24 and 56' high to the test one mile west in section 26. A total section of 63' was found in the Simpson. In this area about 50' of Simpson section is required for preservation of the upper sandstone member. The Goyer #1 did not have the upper sand development that produces in the Markley and Bellman fields.

Since no shows of a commercial nature were found, it was recommended that the subject test be plugged and abandoned at 8:00 a.m. on December 18, 1977.

Yours very truly,

ASSOCIATED PETROLEUM CONSULTANTS

By _____
Charles R. King

CRK:da

Denver Energy Investments
 Marline Oil Corporation
 #1 Goyer
 C SE NW 25-30S-1E
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Drill Time

300 - 350 4-3-3-4-5-5-8-7-6-4
 350 - 400 4-3-4-3-3-6-4-4-5-7
 400 - 450 5-4-3-3-4-3-5-6-4-2
 450 - 500 2-3-5-5-7-5-4-4-4-4
 500 - 550 4-3-3-3-5-5-6-9-4-3
 550 - 600 3-14-3-4-3-5-1-9-6-4

One Foot Time:

600 - 610	1-2-1-2-1-1-1-1-1-1	900 - 910	½-¼-¼-½-½-½-½-½-½-1
610 - 620	1-½-½-½-1-2-2-1-1-½	910 - 920	1-1-2-1-2-2-1-1-1-1
620 - 630	1-1-2-1-2-2-1-1-2-1	920 - 930	½-½-½-1-2-1-1-1-2-1
630 - 640	¼-¼-½-1-1-1-¼-¼-½-½	930 - 940	1-1-1-½-½-2-1-1-1-½
640 - 650	1-1-½-1-2-1-1-2-1-1	940 - 950	1-1-1-1-1-1-1-1-1-1
650 - 660	1-½-½-1-1-1-2-1-1-½	950 - 960	1-1-1-1-1-1-1-2-2-1
660 - 670	½-1-1-½-½-½-½-1-1-1	960 - 970	2-1-1-2-3-2-2-1-1-1
670 - 680	1-1-1-½-½-1-½-½-2-1	970 - 980	2-1-1-2-1-1-2-4-1-1
680 - 690	1-x-1-1-2-2-1-1-1-½	980 - 990	1-2-2-3-2-2-2-1-1-1
690 - 700	½-1-1-1-3-1-1-2-2-½	990 - 1000	1-1-1-1-1-1-1-1-1-1
700 - 710	½-1-1-1-1-1-1-½-1½-½	1000 - 1010	½-½-1-1-1-1-1-1-1-1
710 - 720	½-1-1-½-½-2-2-2-3-1	1010 - 1020	1-1-1-1-1-1-1-1-1-1
720 - 730	1-1-2-1-1-1-2-2-1-1	1020 - 1030	1-1-1-1-1-1-1-1-1-1
730 - 740	1-1-2-1-1-½-½-1-1-1	1030 - 1040	1-1-1-2-1-1-1-1-1-1
740 - 750	1-1-1-½-½-½-1½-1-1-1	1040 - 1050	2-1-1-2-1-2-2-2-2-1
750 - 760	1-2-1-1-1-1-½-½-1-2	1050 - 1060	1-1-1-1-1-1-1-1-1-1
760 - 770	1-1-1-1-1-1-1-½-½-1	1060 - 1070	1-1-2-1-1-1-1-1-1-1
770 - 780	1-2-1-1-½-½-1-½-½-1	1070 - 1080	1-1-1-1-1-2-2-2-2-2
780 - 790	½-½-½-½-½-½-½-½-½-½	1080 - 1090	2-2-2-1-1-1-1-1-1-1
790 - 800	1-1-1-1-1-½-1½-1-1-1	1090 - 1100	1-2-3-2-2-2-2-1-2-3
800 - 810	1-1-1-1-1-1-1-1-1-2	1100 - 1110	2-2-2-2-2-1-1-1-1-1
810 - 820	1-2-1-1-1-1-1-1-1-1	1110 - 1120	2-1-1-2-2-3-1-1-2-2
820 - 830	2-1-1-1-1-½-½-1-1-1	1120 - 1130	3-3-2-2-2-2-2-2-2-2
830 - 840	1-1-1-2-2-1-1-1-1-2	1130 - 1140	1-1-2-1-1-1-1-1-1-1
840 - 850	1-1-1-1-1-1-1-1-1-1	1140 - 1150	1-1-1-1-½-½-½-½-½-1
850 - 860	½-½-1-1-2-1-1-2-1-2	1150 - 1160	1-1-2-½-½-½-½-½-½
860 - 870	1-1-1-1-1-½-½-1-1-1	1160 - 1170	½-½-½-1-1-1-1-1-1-1
870 - 880	1-1-½-½-1-½-½-½-½-1	1170 - 1180	1-1-1-1-1-1-1-1-2
880 - 890	½-½-2-1-1-2-1-1-1-½	1180 - 1190	1-1-2-1-1-2-1-1-2-2
890 - 900	½-½-½-½-½-1-1-1-1-1	1190 - 1200	1-1-1-2-1-1-½-1-1-1

1 Goyer
 C SE NW 25-30S-1E
 Sumner County, Kansas

1200 - 1210	1-1-1-2-2-1-2-1-1-1	1650 - 1660	2-1-1-2-1-1-1-1-2-1
1210 - 1220	1-1-1-1-1-1-1-1-1-1	1660 - 1670	1-1-2-2-2-2-2-2-2-1
1220 - 1230	2-2-2-2-2-2-1-1-1-1	1670 - 1680	1-1- $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ -1-2-1-1
1230 - 1240	1-1-1-1-1-1-1-1-1-1	1680 - 1690	1-2-1-2-2-1-2-2-2-1
1240 - 1250	1-1-1-1-1-1-1-1-1-1	1690 - 1700	1-2-2-1-2-1-1-1-1-1
1250 - 1260	1-1-1-1- $\frac{1}{2}$ - $\frac{1}{2}$ -1-1-1-1	1700 - 1710	1-1-2-1-2-2-2-2-2-2
1260 - 1270	1-1-1-3-1-1-1-1-1-1	1710 - 1720	1-1-2-2-1-2-2-2-2-3
1270 - 1280	2-1-1-1-1-1-1-1- $\frac{1}{2}$ -1	1720 - 1730	2-2-2-2-2-1-2-1-2-2
1280 - 1290	1-1-1-1-1-1- $\frac{1}{2}$ -1- $\frac{1}{2}$ -1-2- $\frac{1}{2}$ -1- $\frac{1}{2}$	1730 - 1740	2-1-2-1-2-1-1-2-1-2
1290 - 1300	$\frac{1}{2}$ -1- $\frac{1}{2}$ - $\frac{1}{2}$ -1-1-1-1-1-1	1740 - 1750	1-2-2-1-2-2-1-2-2-1
1300 - 1310	1-1-1-1-1-1-1-2-3-2	1750 - 1760	2-2-1-2-1-2-1-1-1-1
1310 - 1320	1-1-2-2-1-1-1-1-1-1	1760 - 1770	$\frac{1}{2}$ - $\frac{1}{2}$ -1-1- $\frac{1}{2}$ -1- $\frac{1}{2}$ -1-1-2-2
1320 - 1330	2-1-1-1-3-3-2-2-2-2	1770 - 1780	1-2-2-1-2-2-1-2-2-1
1330 - 1340	2-3-3-1-1-2-2-2-2-2	1780 - 1790	2-3-2-1-1-1-2-2-1-1
1340 - 1350	3-2-3-3-2-3-3-3-2-2	1790 - 1800	1-1-3-1-1-2-2-2-2-2
1350 - 1360	1-2-1- $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$	1800 - 1810	2-1-1-1-1-1-1-1-1-1
1360 - 1370	$\frac{1}{2}$ -1-1-2-2-3-2-2-1-2	1810 - 1820	$\frac{1}{2}$ -2- $\frac{1}{2}$ -2-2-1-2-1-1-2-2
1370 - 1380	2-2-2-2-2-1-2-2-2-2	1820 - 1830	2-1-2-2-1-2-2-2-2-2
1380 - 1390	1-2-4-3-2-2-2-2-2-2	1830 - 1840	1-2-2-2-2-1-2-2-2-2
1390 - 1400	2-2-2-2-1-1-1-1-2-1	1840 - 1850	2-1-2-1-2-1-2-1-2-1
1400 - 1410	1-3-2-2-2-2-2-3-2-3	1850 - 1860	2-2-2-2-3-2-1-2-2-2
1410 - 1420	2-3-2-3-2-2-1-2-1-2	1860 - 1870	2-2-2-2-1-2-1-1-3-3
1420 - 1430	2-1-2-1-1-1-1-1-1-2	1870 - 1880	3-3-3-2-3-2-3-2-3-2
1430 - 1440	2-2-2-2-2-2-2-1-1-1	1880 - 1890	1-2-2-2-2-1-1-1-1-1
1440 - 1450	1-1-1-1-2-1-2-1-1-2	1890 - 1900	1-1-2-2-2-2-2-2-2-2
1450 - 1460	1-1-1-1-1-1-1-1-1-2	1900 - 1910	2-2-2-1-2-2-2-2-2-1
1460 - 1470	3-3-1-1-1-1-1-1-1-1	1910 - 1920	2-2-3-2-3-3-4-3-3-3
1470 - 1480	2-1-1-1-1-1-1-1-1-1	1920 - 1930	3-3-3-3-3-3-2-2-2-2
1480 - 1490	1-1-1-1-1- $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ -1	1930 - 1940	1-2-2-1-1-1-2-2-2-1
1490 - 1500	1-1-1-1-1-1-1-1-1-1	1940 - 1950	1-2-3-2-2-2-3-2-3-1
1500 - 1510	1-1-1-1-1-1-1-1-1-1	1950 - 1960	2-2-2-2-1-2-2-2-3-2
1510 - 1520	1-1-1-1-2-3-3-2-2-2	1960 - 1970	3-2-2-2-2-3-2-1-3-2
1520 - 1530	1-2-2-2-1-2-2-2-2-2	1970 - 1980	2-1-2-3-2-3-3-3-3-2
1530 - 1540	1-1-1-1-2-2-2-3-3-3-	1980 - 1990	1-2-1-2-1-1-1-2-1-2
1540 - 1550	2-2-2-1-1-1-1-1-1-1	1990 - 2000	2-1-2-1-2-3-2-2-2-3
1550 - 1560	1-1-2-2-2-3-2-3-2-2	2000 - 2010	2-3-2-2-2-1-1-2-1-1
1560 - 1570	2-2-1-1-3-2-2-2-2-2	2010 - 2020	1-1-1-1-1-1-1-1-1-1
1570 - 1580	1-2-2-2-1-2-3-2-1-2	2020 - 2030	1-2-1-1-1-2-2-3-3-3
1580 - 1590	1-1-1-2-1-2-1-1-1-2	2030 - 2040	1-3-3-2-2-3-2-2-3-2
1590 - 1600	1-1-2-1-2-1-2-1-1-1	2040 - 2050	2-2-2-2-2-2-2-2-2-2
1600 - 1610	1-2-1-1-2-1-2-1-1-1	2050 - 2060	1-2-2-2-2-2-3-3-3-2
1610 - 1620	1-1-1-1-1-1-1-2-1-1	2060 - 2070	2-2-2-2-3-2-2-3-3-3
1620 - 1630	1-2-1-1-2-1-1-1-2-2	2070 - 2080	3-3-2-1-2-1-1-3-3-2
1630 - 1640	2-1-1-1-2-1-1-1-1-1	2080 - 2090	1-2-1-2-2-3-2-2-2-2
1640 - 1650	1-1-1-1-2-1-1-2-1-1	2090 - 2100	3-3-2-3-3-2-3-2-2-2

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2100 - 2110	2-2-2-2-2-2-2-3-3-2	2560 - 2570	1-2-2-1-1-1-2-2-2-1
2110 - 2120	2-3-3-3-3-2-1-2-2-1	2570 - 2580	2-2-2-2-2-2-1-2-1-2
2120 - 2130	1-1-2-1-2-1-2-1-2-1	2580 - 2590	1-2-1-2-2-1-1-1-2-1
2130 - 2140	2-1-2-2-2-1-2-1-2-2	2590 - 2600	2-1-2-1-2-1-2-2-1-2
2140 - 2150	2-2-3-3-3-3-2-3-2-2	2600 - 2610	2-2-2-1-1-2-2-2-1-2
2150 - 2160	3-3-2-3-2-2-2-2-1-2	2610 - 2620	2-1-2-1-1-2-1-2-2-1
2160 - 2170	1-2-2-2-3-2-3-3-2-2	2620 - 2630	1-1-2-2-2-2-2-2-2-2
2170 - 2180	3-3-3-2-2-2-1-2-1-2	2630 - 2640	3-2-2-2-2-3-3-3-2-2
2180 - 2190	2-1½-1½-2-2-2-1½-1-1-2	2640 - 2650	2-2-3-2-2-3-2-2-3-3
2190 - 2200	2-2-1-2-2-1-2-2-1-1	2650 - 2660	2-3-2-2-3-2-2-2-3-2
2200 - 2210	2-1½-1½-2-1-2-1-2-2-1½	2660 - 2670	1-2-2-2-3-2-2-3-2-2
2210 - 2220	1½-1-2-1½-1½-1½-1½-2-2-2		
2220 - 2230	1-2-1-2-1-2-2-1-2-1	2670 - 2680	2-2-3-2-2-2-2-2-3-2
2230 - 2240	2-1-2-2-1-2-1-1½-2-1½	2680 - 2690	3-3-3-3-3-2-4-4-4-2
2240 - 2250	1-2-2-1½-1½-2-2-1½-1½-2	2690 - 2700	3-3-3-3-3-3-4-4-4-4
2250 - 2260	2-1½-1½-2-2-2-2-2-1-1½-2		
2260 - 2270	1½-2-2-2-2-1-2-2-2-2	2700 - 2710	3-3-4-3-4-4-4-3-3-2
2270 - 2280	2-2-2-2-2-2-2-2-2-2	2710 - 2720	2-2-2-2-2-3-2-2-1-2
2280 - 2290	2-2-3-2-2-3-2-2-2-1	2720 - 2730	2-2-2-2-2-2-2-3-2-2
2290 - 2300	1-1-1-1-2-1-1-2-1-1	2730 - 2740	2-3-2-2-2-3-3-4-4-3
2300 - 2310	1-2-1-2-1-1-2-2-1-1	2740 - 2750	2-2-2-3-3-3-3-2-2-2
2310 - 2320	2-1-2-1-1-2-1-2-2-1	2750 - 2760	2-3-3-2-3-2-3-2-2-2
2320 - 2330	1-1-1-1-2-2-2-1-2-2	2760 - 2770	2-2-3-2-2-2-1-2-2-2
2330 - 2340	1-2-1-2-2-1-2-1-2-2	2770 - 2780	1-1-2-2-3-3-4-2-3-3
2340 - 2350	1-1-1-2-1-2-1-2-1-2	2780 - 2790	1-2-2-2-2-3-2-3-4-4
2350 - 2360	1-1-½-½-1-1-1-1-1-1	2790 - 2800	4-2-1-2-2-2-3-3-3-4
2360 - 2370	1-1-1-1-1-1-1-1-1-1	2800 - 2810	3-4-3-4-3-3-3-3-3-3
2370 - 2380	1-1-1-1-1-1-1-1-1-1	2810 - 2820	3-3-4-2-3-3-4-6-4-4
2380 - 2390	1-2-1-1-½-½-1-1-1-1	2820 - 2830	3-5-5-4-4-4-4-3-2-3
2390 - 2400	½-½-1-1-1-1-1-1-1-2	2830 - 2840	3-4-5-2-2-2-3-3-4-4
2400 - 2410	2-2-2-2-2-2-2-1-2-2	2840 - 2850	3-3-4-4-4-4-5-4-4-6
2410 - 2420	½-½-1-1-1-1-1-½-½-1	2850 - 2860	4-5-4-5-5-6-5-3-2-5
2420 - 2430	1-1-1-1-1-1-1-½-½-1	2860 - 2870	4-4-5-6-5-4-3-4-2-2
2430 - 2440	1-1-1-2-1-1-1-1-1-1	2870 - 2880	3-3-1-1-½-½-1-1-1-3
2440 - 2450	1-1-1-½-½-1-1-1-1-1	2880 - 2890	2-3-5-4-4-4-4-4-5-4
2450 - 2460	1-1-½-½-2-1-2-1-1-1	2890 - 2900	4-4-4-5-3-4-4-5-4-4
2460 - 2470	1-1-1-1-½-½-2-2-1-1	2900 - 2910	3-4-4-4-3-3-3-3-3-4
2470 - 2480	2-1-2-1-1-½-½-2-1-2	2910 - 2920	5-4-4-5-6-4-4-4-5-4
2480 - 2490	1-1-2-1-2-1-1-1-2-1	2920 - 2930	4-4-4-4-4-5-4-4-4-4
2490 - 2500	2-1-2-1-2-2-1-2-1-2	2930 - 2940	3-2-3-3-2-2-2-2-2-3
2500 - 2510	1-2-1-2-1-1-1-2-1-1	2940 - 2950	3-3-2-2-4-2-2-3-3-3
2510 - 2520	1-1-2-1-1-1-1-2-1-2	2950 - 2960	1-3-3-3-4-3-4-5-4-3
2520 - 2530	1-1-1-1-3-1-1-2-1-2	2960 - 2970	3-3-4-3-3-2-1-2-2-3
2530 - 2540	1-2-1-2-2-1-2-1-2-2	2970 - 2980	1-2-1-2-1-2-1-1-1-2
2540 - 2550	1-1-1-1-2-1-2-1-2-2	2980 - 2990	1-1-1-1-1-1-1-1-1-1
2550 - 2560	1-2-1-2-2-1-2-2-1-2	2990 - 3000	1-1-½-½-1-1-1-1-1-1

#1 Goyer
C SE NW 25-30S-1E
Sumner County, Kansas

3000 - 3010	1-1-1-1-1-1-2-2-2-1	3470 - 3480	5-6-7-5-6-5-6-5-6-6
3010 - 3020	2-1-2-2-3-3-2-4-2-3	3480 - 3490	5-6-6-5-6-6-6-6-5-6
3020 - 3030	3-3-3-3-3-2-2-2-3-3	3490 - 3500	5-6-9-5-6-5-5-6-5-5
3030 - 3040	3-3-3-3-2-3-3-3-4-3	3500 - 3510	6-4-7-5-5-5-5-5-4-5
3040 - 3050	4-4-4-2-4-3-4-4-4-2	3510 - 3520	5-5-4-5-5-5-5-5-3-5
3050 - 3060	2-3-3-5-4-4-3-3-4-4	3520 - 3530	4-4-4-5-5-5-4-5-5-5
3060 - 3070	4-5-5-5-4-4-5-4-6-5	3530 - 3540	5-4-5-5-6-5-4-5-5-5
3070 - 3080	4-6-5-5-6-5-5-5-5-5	3540 - 3550	6-4-5-5-6-4-5-6-5-3
3080 - 3090	4-6-5-5-4-4-4-2-3-3	3550 - 3560	3-6-5-5-4-5-6-5-6-5
3090 - 3100	3-3-2-2-2-3-3-2-2-3	3560 - 3570	6-7-7-6-6-7-6-7-5-7
3100 - 3110	3-3-6-4-4-5-5-4-5-5	3570 - 3580	7-9-7-5-9-7-7-7-8-7
3110 - 3120	6-4-5-5-4-4-5-4-2-2	3580 - 3590	5-8-10-10-7-9-7-8-8-8
3120 - 3130	3-2-2-3-3-3-3-3-3-3	3590 - 3600	7-5-5-6-7-6-5-6-7-8
3130 - 3140	4-3-3-4-3-3-3-3-3-3	3600 - 3610	6-7-8-8-3-28-31-33-24-31
3140 - 3150	3-3-2-3-2-3-3-2-3-4	3610 - 3620	36-27-34-35-37-35-45-33- 38-31
3150 - 3160	3-2-2-2-3-3-3-4-4-5	3620 - 3630	35-39-36-37-28-30-25-20- 22-20
3160 - 3170	4-4-4-5-4-7-5-4-3-3	3630 - 3640	10-11-14-19-29-16-x-3-4-17
3170 - 3180	3-3-3-4-5-4-5-4-4-4	3640 - 3650	22-14-11-11-11-12-13-14- 11-14
3180 - 3190	3-3-5-4-5-4-3-5-4-4	3650 - 3660	21-15-12-10-16-18-23-15- 7-7
3190 - 3200	1-2-2-3-3-3-3-3-2-3	3660 - 3670	11-26-25-14-15-8-10-7-7-6
3200 - 3210	4-4-3-3-3-2-3-3-5-5	3670 - 3680	5-12-11-11-13-12-16-14- 17-19
3210 - 3220	4-1-2-4-1-2-2-4-4-3	3680 - 3690	22-21-26-12-4-2-4-3-2-5
3220 - 3230	4-3-3-3-3-4-3-3-3-2	3690 - 3700	3-4-2-3-2-3-3-3-4-4
3230 - 3240	4-3-3-4-4-2-2-2-2-2	3700 - 3710	6-3-3-4-6-4-3-4-5-2
3240 - 3250	3-4-3-2-4-3-4-5-4-4	3710 - 3720	2-3-2-2-2-2-2-3-4-4
3250 - 3260	5-5-5-5-5-5-6-5-5-5	3720 - 3730	4-4-4-4-5-5-5-5-6-6
3260 - 3270	7-7-5-6-5-6-4-5-6-5	3730 - 3740	5-5-5-5-3-3-5-5-5-5
3270 - 3280	5-4-5-4-3-3-4-6-3-6	3740 - 3750	5-5-4-5-4-4-5-6-6-8
3280 - 3290	5-5-4-5-4-3-7-5-5-4		
3290 - 3300	6-5-6-5-6-5-5-5-4-5		
3300 - 3310	4-4-4-3-4-4-6-5-6-6		
3310 - 3320	6-5-6-6-5-4-7-7-7-6		
3320 - 3330	7-6-5-13-8-7-7-8-7-6		
3330 - 3340	7-6-9-6-7-7-5-5-6-5		
3340 - 3350	7-7-5-7-5-6-8-6-6-7		
3350 - 3360	8-7-9-7-7-6-7-6-7-7		
3360 - 3370	6-7-6-7-9-5-5-6-6-6		
3370 - 3380	6-6-7-6-8-6-6-5-6-6		
3380 - 3390	6-6-6-6-5-6-6-7-5-5		
3390 - 3400	5-5-5-5-4-5-5-6-6-5		
3400 - 3410	6-4-5-6-5-6-5-5-5-5		
3410 - 3420	6-5-6-5-5-5-6-5-5-6		
3420 - 3430	5-5-5-5-4-6-6-6-6-7		
3430 - 3440	6-7-6-6-7-6-6-6-7-7		
3440 - 3450	7-5-6-5-6-6-6-6-7-5		
3450 - 3460	7-6-7-6-6-6-6-7-7-6		
3460 - 3470	5-6-6-7-6-5-7-6-6-6		