Schlumberger

DIPMETER COMPUTED RESULT

MSD*

MEAN SQUARE DIP a pad-to-pad correlation

* A Mark of Schlumberger

Using the following logs: SHDT

Company:	NORTHWEST NATURAL GAS		
Well:	OM 12-22-65		
Field:	MIST GAS FIELD		
County	COLUMBIA		
State	OREGON		
Reference No:	43779	Run no.	TWO
Date Logged:	9-SEP-1997	Date Processed:	6-NOV-1997
Elevations:	KB: 565.00	DF: NA	GL: 556.00
Permanent Datum:	0.00	Depth Units:	FEET

OLD HERE

The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

ELD RECORDING	Engineer	GREG PERRY	Location	BAKERSFIELD	Cyberpack version	32.2
OMPUTATION	Analyst	CHONG YO	Center	BKFCC	Baseline	20.6X5

DEFINITIONS OF COMPUTATION PARAMETERS

ECLI - magnetic declination (degrees)

ODE - mode for search correlation (focalization).

1. = hole axis

2. = fixed plane given by FOCDIP and FOCAZM.

3. = a file determined by FOCFIL is usedas the reference plane by zone.

ECIM - number of fast channels skipped.

ORINT - correlation interval (feet)

TEP - step in ratio of CORINT

EARCH - search angle in degrees (if over 100 then a double search will be used)

example: 140. = 40 X 2

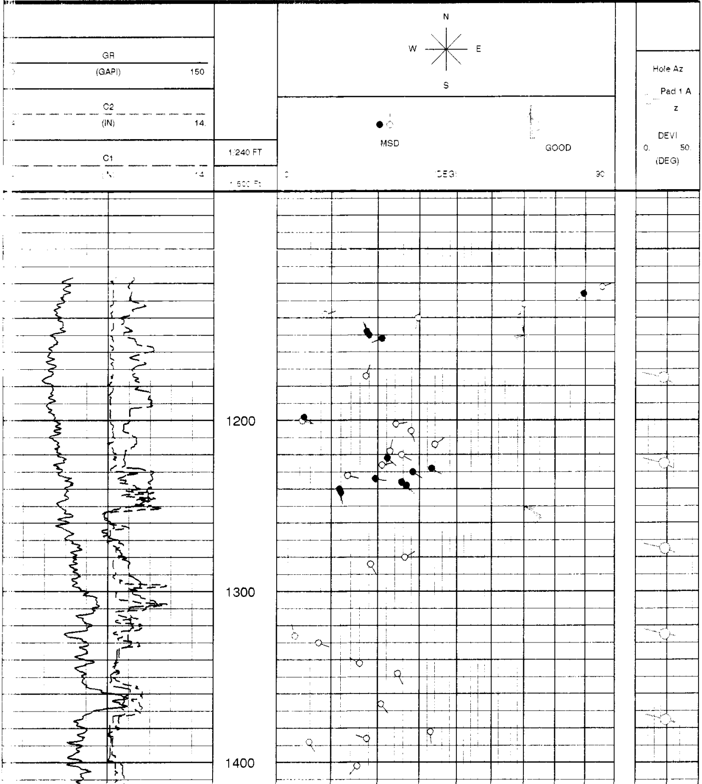
OCDIP - search correlation is focused on this fixed plane dip when MODE = 2.

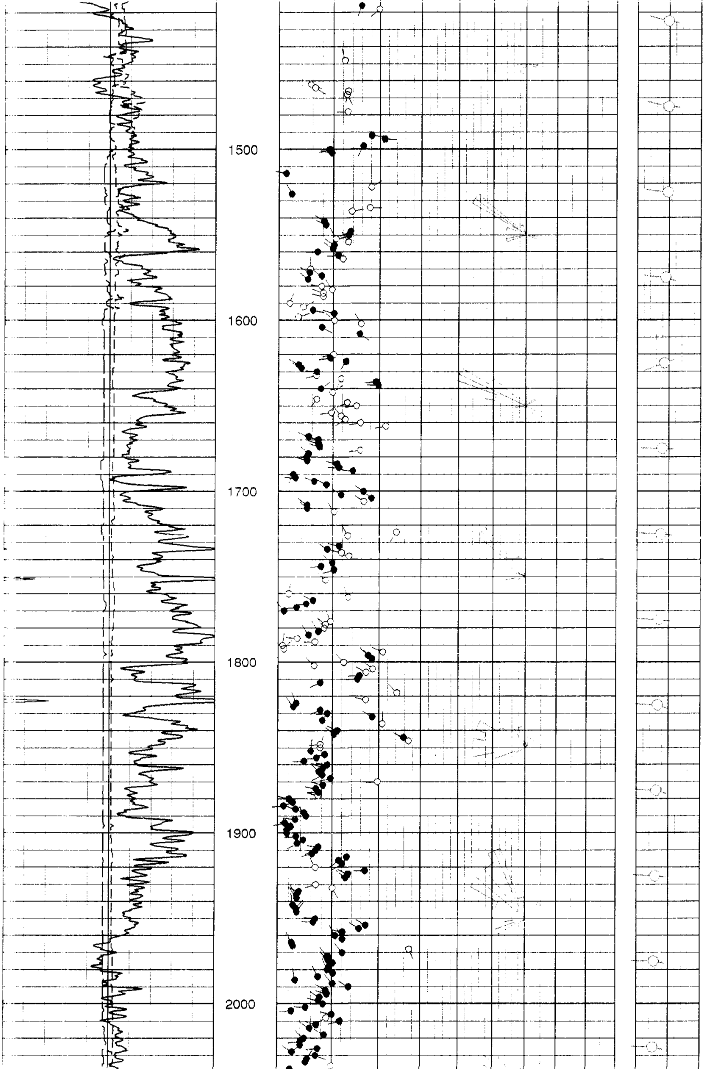
FOCAZM - search correlation is focused along this fixed plane azimuth when MODE= 2

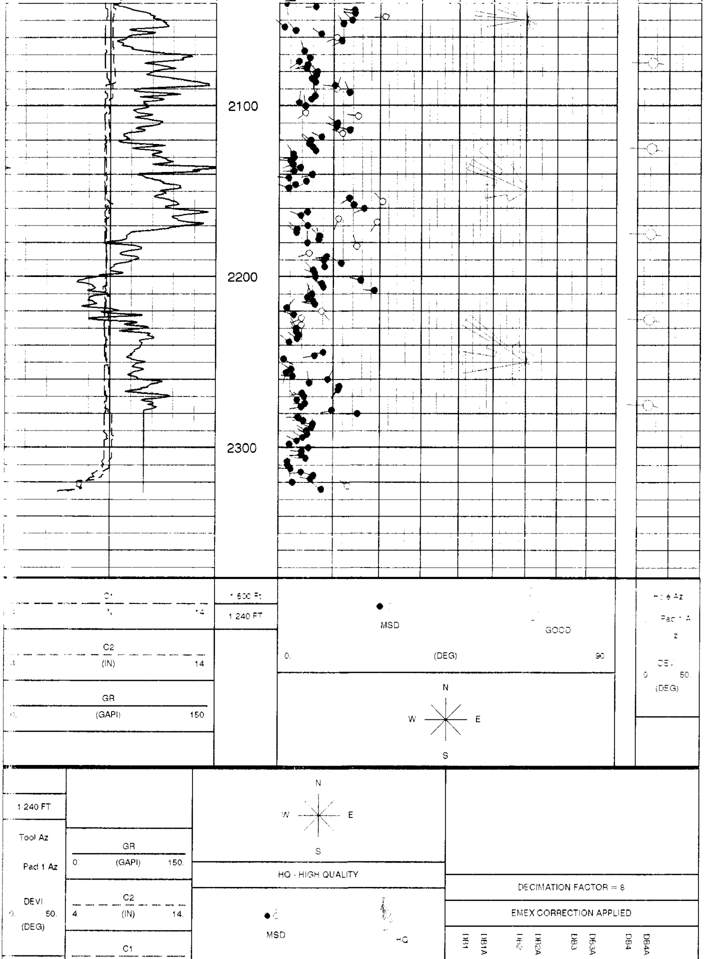
PSA - The solid angle used to make the Pooled plot.

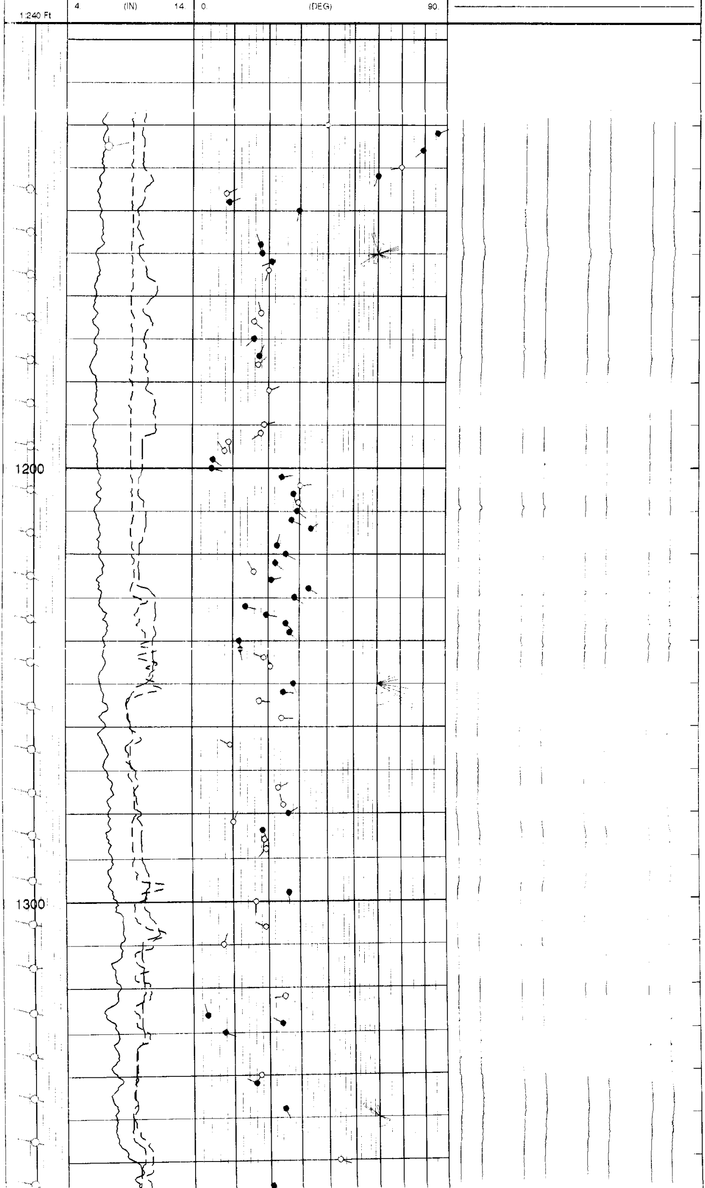
DEPTH INTERVAL		DECLI	MODE	DECIM	CORINT	STEP	SEARCH	FOCDIP	FOCAZM	PSA
START	STOP									
2326.00	1116.00	19.50	2.00	1.00	4.00	.50	140.00	0.00	0.00	6.0

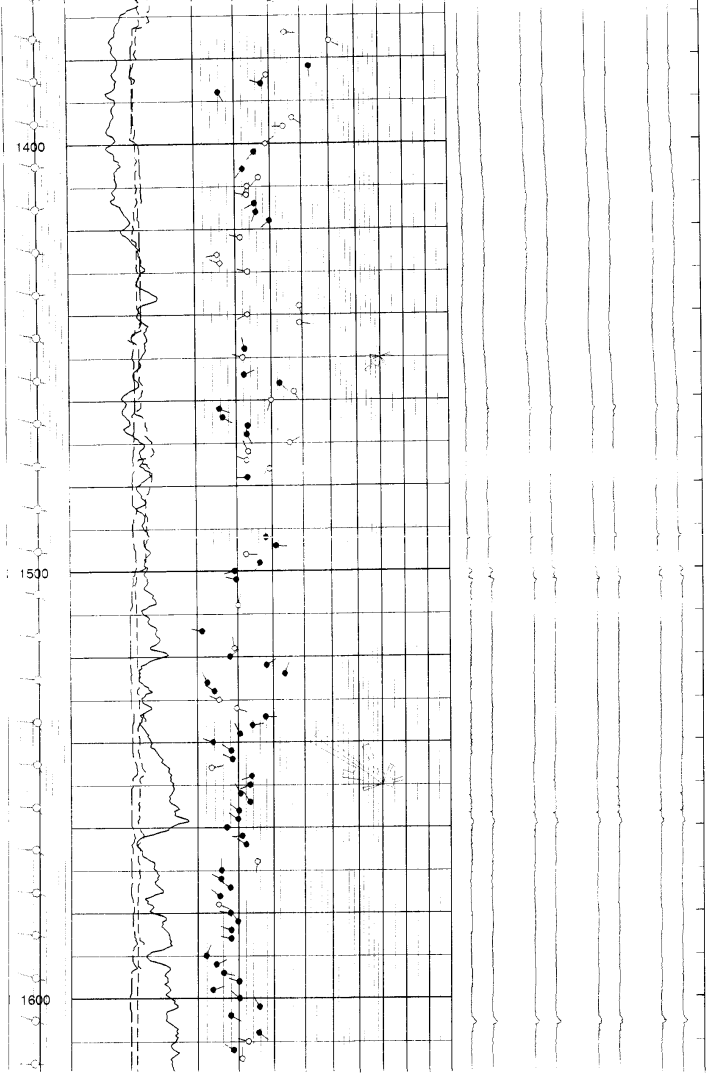
Remarks:

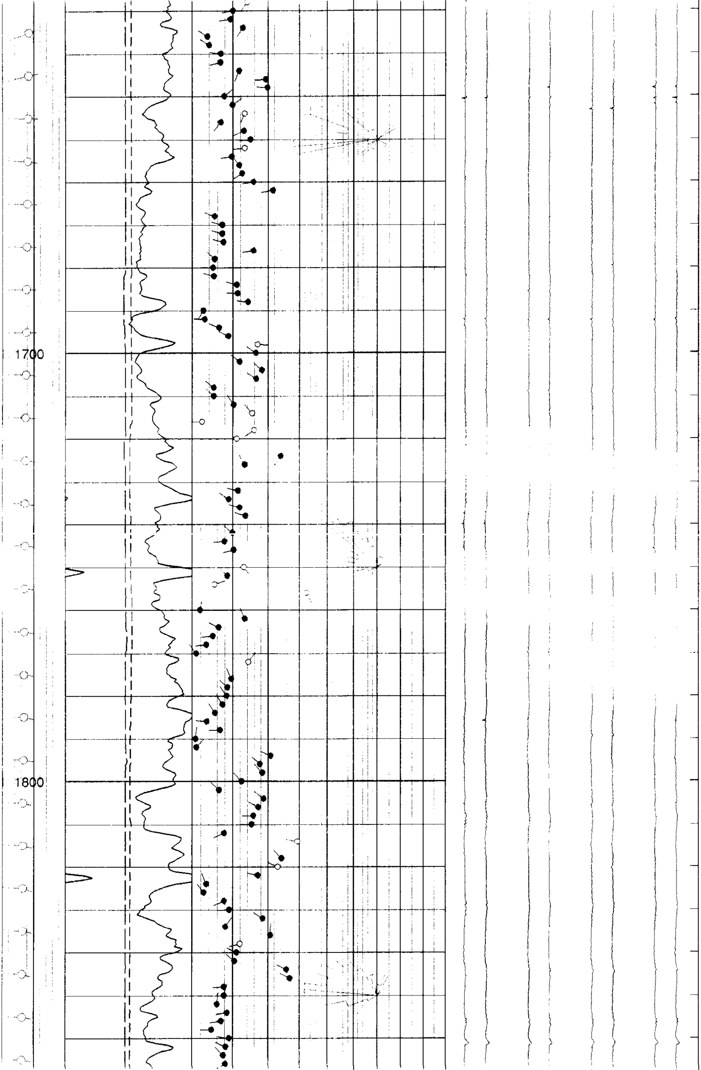


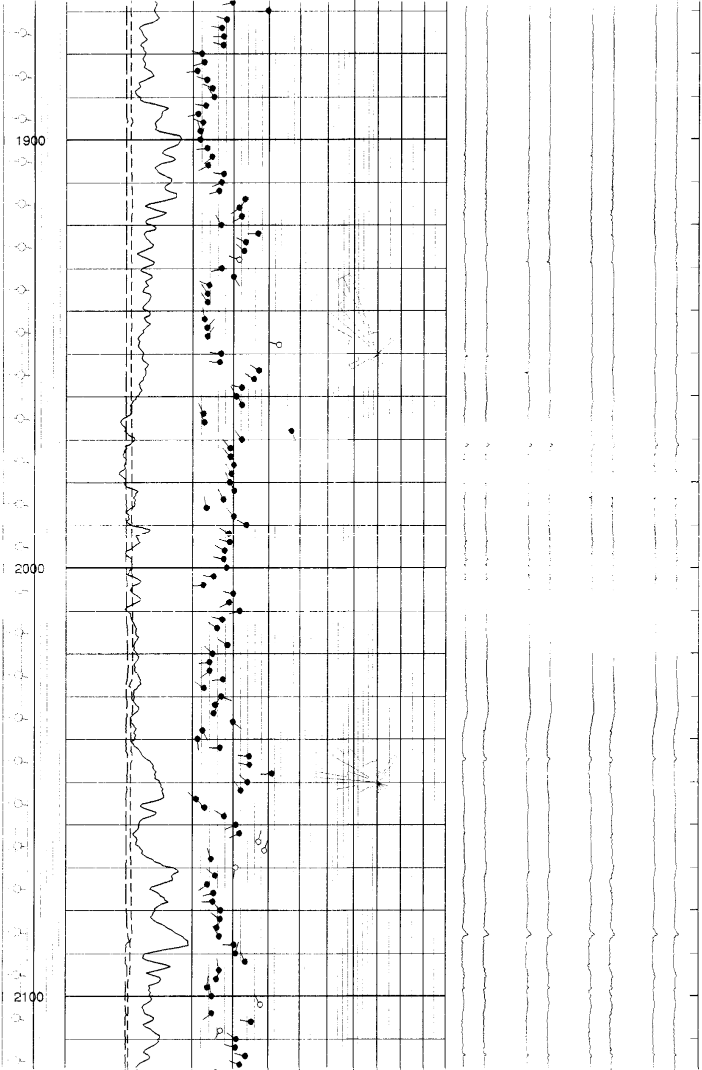


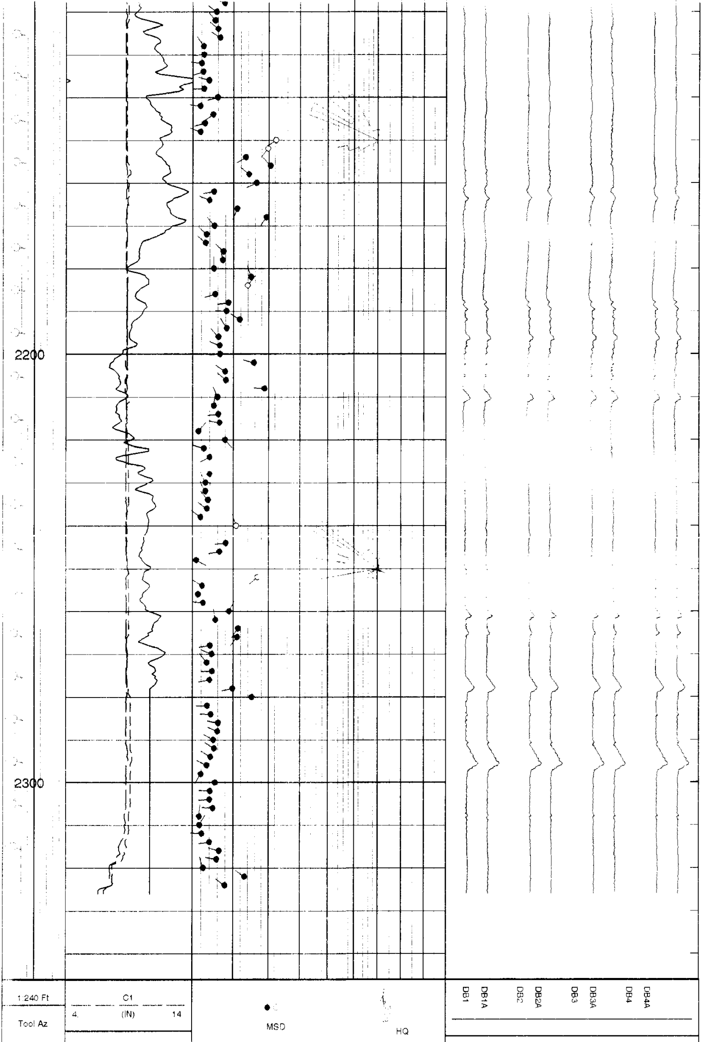


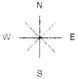










Pad 1 Az	C2 4 (IN) 14	0. (DEG) 90	EMEX CORRECTION APPLIED
DEVI 0 50. (DEG)	GR 0. (GAPI) 150.	HQ - HIGH QUALITY	DECIMATION FACTOR = 8
1/240 FT			

DIPMETER OUTPUT LISTING

COMPANY : NORTHWEST NATURAL GAS
WELL : OM 12-22-65
FIELD : MIST GAS FIELD
COUNTY : COLUMBIA
STATE : OREGON
COUNTRY :
REFERENCE : 43779

DEPTH	FORM. DIP DEGR.	DIP AZIM. DEGR.	BORE. DEVI. DEGR.	BORE. AZIM. DEGR.	PAD 1 AZIM. DEGR.	CALI. 1-3 INCHES	CALI. 2-4 INCHES	QUAL. INDEX BEST =20
1120	39.5	273.0	75.2	68.0	56.0	10.10	9.20	9
1122	85.9	69.0	56.0	61.0	50.0	10.10	9.20	12
1126	79.4	230.0	53.4	61.0	50.0	10.10	9.20	16
1130	69.8	260.0	59.4	50.0	52.0	10.30	9.20	8
1132	59.9	204.0	40.5	344.0	87.0	10.30	9.20	12
1136	8.1	66.0	21.5	282.0	125.0	10.30	9.20	7
1138	8.8	71.0	21.5	282.0	126.0	9.90	9.20	12
1140	29.6	193.0	21.5	282.0	127.0	9.90	9.20	13
1148	17.5	338.0	21.7	282.0	124.0	9.80	9.20	19
1150	18.0	337.0	21.7	282.0	124.0	10.10	9.20	19
1152	20.9	249.0	21.7	282.0	126.0	10.00	9.20	19
1154	19.9	200.0	21.7	282.0	130.0	10.50	9.10	7
1164	17.7	346.0	21.8	282.0	123.0	10.50	9.10	8
1166	15.6	133.0	21.9	282.0	122.0	10.30	9.20	7
1170	15.7	229.0	21.9	282.0	125.0	10.30	9.20	11
1174	17.3	24.0	22.0	282.0	121.0	10.30	9.20	13
1176	16.9	49.0	22.0	282.0	121.0	10.30	9.10	8
1182	20.2	69.0	22.0	282.0	117.0	10.70	9.10	10

1190	18.6	77.0	22.1	282.0	123.0	11.00	9.10	10
1192	17.7	236.0	22.1	282.0	121.0	10.50	9.10	9
1194	8.8	169.0	22.2	282.0	119.0	10.50	9.10	6
1196	7.7	321.0	22.2	282.0	119.0	10.00	9.10	10
1198	4.8	126.0	22.2	282.0	123.0	10.00	9.10	16
1200	4.5	106.0	22.3	282.0	125.0	9.90	9.10	15
1202	24.2	81.0	22.3	282.0	125.0	9.90	9.20	15
1204	30.2	83.0	22.3	282.0	124.0	9.70	9.20	10
1206	27.9	162.0	22.3	282.0	122.0	9.90	9.20	13
1208	29.6	146.0	22.4	282.0	118.0	10.00	9.30	8
1210	29.2	126.0	22.4	282.0	118.0	10.20	9.30	11
1212	27.5	116.0	22.4	282.0	121.0	10.30	9.20	11
1214	34.0	55.0	22.4	282.0	121.0	10.20	9.20	12
1218	22.8	14.0	22.4	282.0	122.0	9.90	9.20	15
1220	25.6	119.0	22.4	282.0	121.0	9.80	9.30	15
1222	22.2	130.0	22.5	282.0	121.0	9.80	9.30	16
1224	15.8	328.0	22.5	282.0	120.0	9.80	9.40	10
1226	20.9	78.0	22.6	282.0	116.0	10.20	9.30	14
1228	33.2	120.0	22.6	282.0	116.0	10.50	9.60	20
1230	28.3	123.0	22.7	282.0	120.0	10.80	9.50	16
1232	13.4	104.0	22.7	282.0	122.0	11.10	9.60	14
1234	19.4	101.0	22.7	282.0	123.0	11.00	9.70	16
1236	25.6	135.0	22.7	282.0	121.0	11.10	9.80	20
1238	26.8	135.0	22.7	282.0	119.0	10.90	9.90	20
1240	11.6	167.0	22.7	282.0	119.0	11.00	10.80	16
1242	12.0	170.0	22.7	282.0	118.0	10.90	10.10	16
1244	18.6	291.0	22.8	282.0	116.0	10.90	10.80	4
1246	20.6	343.0	22.8	282.0	116.0	10.90	10.20	4
1250	28.0	158.0	22.8	282.0	121.0	10.10	10.50	11
1252	24.8	96.0	22.8	282.0	118.0	9.40	9.90	11
1254	17.4	94.0	22.9	282.0	115.0	9.00	9.60	9
1258	24.2	90.0	23.0	283.0	117.0	8.90	8.90	10
1264	9.3	297.0	23.1	283.0	114.0	9.10	9.50	8
1274	23.2	66.0	23.3	283.0	115.0	9.60	9.30	8
1278	24.8	340.0	23.3	283.0	115.0	9.80	9.50	9
1280	26.4	59.0	23.3	283.0	122.0	9.80	9.30	13
1282	10.2	24.0	23.3	283.0	122.0	10.00	9.40	8
1284	18.4	151.0	23.3	283.0	119.0	9.90	9.20	12
1286	18.8	188.0	23.3	283.0	119.0	10.00	9.20	5
1288	19.3	225.0	23.3	283.0	121.0	10.00	9.30	6
1298	26.5	178.0	23.2	283.0	102.0	10.30	10.60	11
1300	16.3	182.0	23.2	283.0	102.0	10.40	9.70	9
1306	19.0	294.0	23.2	283.0	103.0	11.00	10.50	9
1310	7.4	20.0	23.2	283.0	97.0	10.50	10.50	6
1322	25.0	262.0	23.3	283.0	88.0	10.00	10.00	9
1326	3.2	343.0	23.3	283.0	103.0	9.90	9.40	15
1328	24.1	298.0	23.3	283.0	110.0	10.00	10.10	11
1330	7.6	111.0	23.3	283.0	110.0	9.90	10.00	12
1340	17.4	212.0	23.4	283.0	99.0	9.40	9.50	4
1342	16.0	297.0	23.5	283.0	99.0	9.40	9.40	13
1348	24.7	155.0	23.5	283.0	114.0	9.30	9.30	12
1360	43.8	109.0	23.7	283.0	107.0	9.90	10.70	10
1366	20.7	141.0	23.8	283.0	115.0	9.70	10.40	12
1374	25.0	94.0	24.0	283.0	107.0	9.50	9.80	5
1376	40.5	119.0	24.1	283.0	105.0	9.20	9.50	7

1382	32.9	173.0	24.1	283.0	107.0	9.10	9.30	12
1384	19.1	223.0	24.1	283.0	112.0	9.10	9.20	7
1386	17.6	288.0	24.2	283.0	110.0	9.10	9.20	12
1388	5.9	148.0	24.2	283.0	104.0	9.10	9.20	12
1394	27.3	123.0	24.3	283.0	98.0	9.10	9.30	10
1396	24.3	270.0	24.3	283.0	97.0	9.10	9.30	10
1400	18.8	50.0	24.5	283.0	95.0	9.40	9.40	10
1402	15.4	221.0	24.6	283.0	96.0	9.70	9.40	15
1406	12.1	220.0	24.6	283.0	89.0	9.70	9.40	11
1408	16.6	223.0	24.5	283.0	87.0	9.80	9.40	10
1410	13.4	207.0	24.5	283.0	90.0	9.80	9.40	7
1412	13.2	281.0	24.4	283.0	93.0	9.70	9.40	10
1414	15.4	243.0	24.4	284.0	85.0	9.70	9.30	11
1416	15.8	201.0	24.4	284.0	79.0	9.70	9.30	16
1418	19.8	231.0	24.4	284.0	84.0	9.60	9.20	14
1422	11.3	285.0	24.5	283.0	104.0	9.60	9.30	10
1426	5.3	260.0	24.4	283.0	102.0	9.70	9.40	4
1428	6.0	290.0	24.4	283.0	104.0	9.70	9.40	4
1430	13.3	285.0	24.4	283.0	103.0	9.70	9.40	4
1438	29.0	166.0	24.5	283.0	99.0	9.70	9.50	4
1440	13.2	243.0	24.5	283.0	109.0	9.70	9.50	7
1442	29.1	98.0	24.5	283.0	120.0	9.40	9.50	7
1448	12.3	344.0	24.4	283.0	112.0	9.00	9.30	13
1450	11.7	287.0	24.4	283.0	98.0	9.10	9.50	9
1454	12.1	66.0	24.5	283.0	98.0	9.20	9.70	11
1456	22.6	132.0	24.5	283.0	103.0	9.20	9.60	11
1458	27.2	150.0	24.5	283.0	106.0	9.20	9.70	10
1460	19.9	199.0	24.6	283.0	108.0	9.20	9.50	5
1462	5.6	111.0	24.6	283.0	108.0	9.10	9.70	14
1464	6.5	122.0	24.6	283.0	105.0	9.10	9.70	13
1466	13.0	194.0	24.6	283.0	102.0	9.00	9.90	13
1468	12.8	152.0	24.6	283.0	102.0	9.10	10.20	13
1470	25.7	62.0	24.6	283.0	103.0	9.10	10.30	7
1472	13.1	331.0	24.5	283.0	99.0	9.00	9.90	9
1474	12.7	291.0	24.5	283.0	95.0	9.10	10.50	7
1476	19.2	224.0	24.5	283.0	93.0	9.00	9.90	8
1478	12.9	269.0	24.5	283.0	93.0	9.00	10.30	14
1492	18.1	94.0	24.5	281.0	99.0	9.00	10.00	16
1494	21.0	95.0	24.6	281.0	102.0	9.10	10.00	19
1496	12.3	91.0	24.6	281.0	106.0	9.10	9.90	8
1498	16.3	211.0	24.6	281.0	112.0	9.10	9.70	20
1500	9.3	255.0	24.6	280.0	118.0	9.10	9.60	16
1502	9.7	283.0	24.5	280.0	124.0	9.00	9.20	16
1508	10.2	16.0	24.4	279.0	136.0	8.80	9.20	8
1514	1.2	282.0	24.3	278.0	145.0	8.70	9.20	20
1518	9.2	350.0	24.3	277.0	148.0	8.70	9.20	9
1520	8.0	52.0	24.2	277.0	150.0	8.70	9.20	11
1522	18.1	57.0	24.1	276.0	153.0	8.70	9.30	13
1524	23.7	22.0	24.0	276.0	154.0	8.70	9.30	11
1526	2.3	331.0	23.9	276.0	154.0	8.80	9.30	16
1528	4.0	303.0	23.7	275.0	155.0	8.80	9.40	11
1530	5.1	291.0	23.6	275.0	155.0	8.80	9.40	10
1532	9.6	110.0	23.5	274.0	154.0	8.80	9.60	8
1534	17.7	90.0	23.4	274.0	153.0	8.80	9.40	12
1536	13.8	80.0	23.3	274.0	153.0	8.90	9.60	14
1538	10.4	331.0	23.2	274.0	153.0	8.80	9.30	11
1540	3.5	290.0	23.1	274.0	152.0	8.80	9.30	11
1542	8.2	303.0	23.1	273.0	151.0	8.90	9.40	20
1544	8.5	296.0	23.0	273.0	149.0	9.00	9.50	20
1546	3.1	79.0	23.0	273.0	148.0	8.90	9.40	9
1548	13.6	250.0	23.0	273.0	145.0	9.10	9.60	20
1550	13.2	248.0	22.9	273.0	143.0	8.80	9.40	20
1552	10.5	329.0	22.8	273.0	144.0	8.80	9.40	12
1554	13.1	325.0	22.7	273.0	143.0	8.70	9.40	12
1556	10.2	304.0	22.7	273.0	142.0	8.70	9.30	20
1558	9.9	303.0	22.6	273.0	141.0	8.80	9.40	20
1560	7.0	270.0	22.6	273.0	140.0	8.90	9.50	19
1562	11.0	265.0	22.5	273.0	136.0	8.80	9.30	19
1564	12.0	301.0	22.5	273.0	129.0	8.90	9.50	12

1568	15.2	189.0	22.4	273.0	123.0	8.80	9.40	5
1570	5.6	358.0	22.4	274.0	119.0	8.70	9.30	15
1572	5.5	297.0	22.4	274.0	117.0	8.70	9.30	16
1574	7.8	303.0	22.4	274.0	112.0	8.70	9.30	20
1576	5.2	307.0	22.3	274.0	104.0	8.80	9.20	20
1578	4.9	113.0	22.3	275.0	98.0	8.80	9.20	8
1580	7.8	279.0	22.2	275.0	99.0	8.90	9.20	12
1582	9.8	324.0	22.2	276.0	102.0	8.90	9.20	14
1584	8.1	289.0	22.1	276.0	104.0	9.00	9.30	12
1586	8.1	283.0	22.0	277.0	104.0	8.90	9.20	14
1590	1.9	24.0	22.0	280.0	106.0	8.90	9.20	14
1592	4.3	65.0	21.9	282.0	105.0	8.80	9.20	14
1594	6.1	102.0	21.9	284.0	105.0	8.80	9.20	16
1596	10.2	287.0	21.8	287.0	108.0	8.70	9.20	16
1598	3.4	71.0	21.8	289.0	111.0	8.60	9.20	15
1600	10.3	308.0	21.8	291.0	112.0	8.70	9.20	13
1602	15.8	327.0	21.8	291.0	113.0	8.60	9.20	15
1604	7.9	119.0	21.7	289.0	113.0	8.60	9.20	16
1608	15.5	126.0	21.7	284.0	109.0	8.70	9.20	20
1610	12.6	286.0	21.6	281.0	107.0	8.70	9.20	10
1612	8.7	300.0	21.6	277.0	102.0	8.70	9.20	11
1614	10.8	359.0	21.5	273.0	97.0	8.70	9.20	9
1618	13.8	215.0	21.4	264.0	87.0	8.70	9.20	8
1620	10.1	259.0	21.4	259.0	81.0	8.70	9.20	12
1622	9.4	261.0	21.3	255.0	75.0	8.70	9.20	16
1624	12.7	215.0	21.3	251.0	70.0	8.70	9.20	16
1626	3.5	300.0	21.2	249.0	68.0	8.70	9.20	20
1628	4.0	301.0	21.1	248.0	67.0	8.70	9.10	20
1630	6.9	276.0	21.1	248.0	68.0	8.70	9.10	16
1632	6.8	255.0	21.0	251.0	71.0	8.70	9.10	14
1634	11.6	203.0	20.9	254.0	75.0	8.70	9.10	12
1636	19.2	265.0	20.9	258.0	79.0	8.70	9.10	17
1638	19.7	275.0	20.8	262.0	83.0	8.70	9.10	16
1640	7.7	52.0	20.8	265.0	87.0	8.70	9.20	16
1642	9.9	54.0	20.7	268.0	90.0	8.70	9.20	14
1644	13.2	203.0	20.6	270.0	92.0	8.70	9.20	8
1646	6.9	218.0	20.5	271.0	94.0	8.70	9.20	12
1648	12.9	247.0	20.5	273.0	96.0	8.70	9.20	15
1650	14.8	264.0	20.5	273.0	97.0	8.70	9.20	14
1652	13.1	263.0	20.4	274.0	98.0	8.70	9.20	9
1654	9.7	262.0	20.4	273.0	99.0	8.70	9.20	13
1656	11.6	322.0	20.3	273.0	99.0	8.70	9.20	14
1658	12.5	238.0	20.2	272.0	98.0	8.70	9.20	13
1660	15.7	260.0	20.2	271.0	97.0	8.70	9.20	13
1662	21.4	259.0	20.1	271.0	96.0	8.70	9.20	13
1668	5.3	290.0	19.9	270.0	95.0	8.70	9.20	20
1670	7.2	286.0	19.9	270.0	95.0	8.70	9.20	20
1672	7.2	285.0	19.8	270.0	94.0	8.70	9.20	20
1674	7.5	286.0	19.8	270.0	94.0	8.70	9.20	16
1676	15.6	261.0	19.7	270.0	94.0	8.70	9.20	12
1678	5.3	311.0	19.7	270.0	92.0	8.70	9.20	19
1680	4.9	273.0	19.6	270.0	91.0	8.60	9.20	20
1682	5.1	286.0	19.6	270.0	91.0	8.60	9.20	20
1684	10.9	285.0	19.5	269.0	91.0	8.60	9.10	17
1686	11.2	273.0	19.4	269.0	90.0	8.60	9.10	16
1688	14.1	277.0	19.4	269.0	91.0	8.60	9.10	16
1690	2.6	210.0	19.4	269.0	91.0	8.60	9.10	20
1692	2.9	273.0	19.3	269.0	91.0	8.60	9.20	16
1694	6.4	292.0	19.3	269.0	92.0	8.60	9.20	20
1696	8.8	297.0	19.3	269.0	92.0	8.70	9.20	20
1698	16.9	95.0	19.2	269.0	93.0	8.70	9.20	6
1700	16.4	303.0	19.1	270.0	94.0	8.70	9.20	16
1702	11.7	306.0	19.0	270.0	95.0	8.70	9.20	20
1704	18.2	309.0	19.0	271.0	96.0	8.70	9.20	20
1706	16.5	302.0	18.9	271.0	96.0	8.70	9.20	15
1708	5.1	306.0	18.9	272.0	96.0	8.70	9.20	20
1710	5.1	312.0	18.8	272.0	96.0	8.70	9.20	20
1712	10.3	324.0	18.8	272.0	95.0	8.70	9.20	12
1714	15.3	319.0	18.8	272.0	94.0	8.70	9.20	9
1716	2.3	268.0	18.7	273.0	94.0	8.70	9.10	10
1718	15.9	237.0	18.7	273.0	93.0	8.70	9.20	9
1720	10.9	187.0	18.6	273.0	93.0	8.70	9.10	6
1724	24.0	213.0	18.5	273.0	97.0	8.70	9.10	15
1726	13.1	330.0	18.5	273.0	98.0	8.70	9.10	13
1732	11.3	282.0	18.4	273.0	101.0	8.70	9.10	20
1734	8.9	303.0	18.4	273.0	102.0	8.70	9.10	20
1736	11.8	284.0	18.4	272.0	103.0	8.70	9.10	15
1738	13.4	287.0	18.4	273.0	102.0	8.70	9.10	13

1742	9.9	309.0	18.3	273.0	99.0	8.70	9.10	20
1744	7.8	265.0	18.2	273.0	98.0	8.70	9.10	19
1746	10.3	254.0	18.2	273.0	98.0	8.70	9.10	16
1750	12.9	142.0	18.1	273.0	97.0	8.70	9.10	7
1752	8.6	312.0	18.0	273.0	96.0	8.70	9.20	12
1754	5.3	71.0	18.0	273.0	95.0	8.70	9.20	7
1756	32.5	152.0	17.9	273.0	95.0	8.70	9.20	10
1760	1.8	15.0	17.8	273.0	100.0	8.70	9.20	12
1762	13.2	337.0	17.7	273.0	100.0	8.70	9.20	13
1764	6.3	295.0	17.7	273.0	99.0	8.80	9.20	20
1766	4.9	264.0	17.7	272.0	98.0	8.80	9.20	20
1768	3.2	263.0	17.6	272.0	98.0	8.80	9.20	20
1770	1.0	320.0	17.6	272.0	99.0	8.70	9.20	20
1772	14.2	38.0	17.5	272.0	100.0	8.70	9.20	7
1776	9.6	337.0	17.4	273.0	97.0	8.70	9.20	15
1778	8.6	311.0	17.3	273.0	98.0	8.70	9.20	14
1780	8.4	324.0	17.3	272.0	100.0	8.70	9.20	14
1782	7.3	327.0	17.2	272.0	102.0	8.70	9.20	20
1784	5.4	325.0	17.2	272.0	102.0	8.70	9.10	19
1786	3.3	277.0	17.2	272.0	102.0	8.70	9.10	14
1788	6.7	270.0	17.1	272.0	100.0	8.70	9.10	13
1790	0.8	8.0	17.1	272.0	98.0	8.70	9.10	15
1792	1.0	45.0	17.0	272.0	98.0	8.70	9.10	15
1794	20.8	293.0	17.0	272.0	99.0	8.70	9.10	15
1796	17.6	312.0	17.0	272.0	99.0	8.70	9.10	20
1798	18.4	315.0	16.9	272.0	100.0	8.70	9.10	20
1800	12.3	316.0	16.9	272.0	102.0	8.70	9.10	14
1802	6.5	313.0	16.9	272.0	104.0	8.70	9.10	14
1804	18.6	307.0	16.8	272.0	105.0	8.70	9.10	13
1806	17.1	298.0	16.7	272.0	105.0	8.70	9.10	14
1808	15.6	269.0	16.7	272.0	105.0	8.70	9.10	20
1810	15.2	268.0	16.6	272.0	105.0	8.70	9.10	18
1812	7.7	247.0	16.6	272.0	105.0	8.70	9.10	16
1814	29.3	281.0	16.5	272.0	105.0	8.70	9.10	7
1818	24.2	315.0	16.5	272.0	107.0	8.70	9.10	14
1820	23.0	294.0	16.5	272.0	108.0	8.70	9.10	5
1822	17.0	282.0	16.4	272.0	109.0	8.70	9.10	13
1824	3.2	336.0	16.4	272.0	109.0	8.70	9.10	17
1826	2.7	322.0	16.4	272.0	106.0	8.70	9.10	17
1828	7.7	249.0	16.3	272.0	103.0	8.70	9.10	20
1830	9.0	266.0	16.3	272.0	103.0	8.70	9.10	20
1832	18.5	301.0	16.2	272.0	102.0	8.70	9.10	16
1834	8.1	37.0	16.2	272.0	101.0	8.70	9.10	20
1836	20.7	4.0	16.2	272.0	104.0	8.70	9.10	14
1838	11.9	255.0	16.2	272.0	106.0	8.70	9.10	10
1840	11.0	295.0	16.2	272.0	105.0	8.70	9.10	16
1842	10.4	308.0	16.1	272.0	106.0	8.70	9.10	20
1844	25.8	296.0	16.1	272.0	107.0	8.70	9.10	16
1846	27.0	297.0	16.0	272.0	107.0	8.70	9.10	14
1848	7.7	265.0	16.0	272.0	107.0	8.70	9.10	13
1850	7.7	17.0	16.0	272.0	106.0	8.70	9.10	14
1852	5.9	8.0	15.9	272.0	104.0	8.70	9.10	20
1854	8.5	259.0	15.9	272.0	103.0	8.70	9.10	20
1856	7.0	262.0	15.9	272.0	102.0	8.70	9.10	20
1858	4.6	271.0	15.8	272.0	101.0	8.70	9.10	20
1860	9.0	279.0	15.8	272.0	101.0	8.70	9.10	20
1862	8.2	294.0	15.7	272.0	100.0	8.70	9.10	20
1864	7.5	314.0	15.7	272.0	99.0	8.70	9.10	20
1866	8.1	242.0	15.7	272.0	99.0	8.70	9.10	20
1868	9.7	257.0	15.7	272.0	100.0	8.70	9.10	20
1870	19.7	266.0	15.6	272.0	100.0	8.70	9.10	15
1872	8.2	287.0	15.6	272.0	102.0	8.70	9.10	20
1874	6.9	281.0	15.5	272.0	105.0	8.70	9.10	20
1876	7.4	267.0	15.4	272.0	104.0	8.70	9.10	20
1878	7.3	285.0	15.4	272.0	102.0	8.70	9.10	15
1880	2.0	284.0	15.3	272.0	103.0	8.70	9.10	17
1882	2.6	252.0	15.3	272.0	103.0	8.70	9.10	20
1884	1.0	264.0	15.2	272.0	103.0	8.70	9.10	20
1886	3.1	288.0	15.2	272.0	103.0	8.70	9.10	20
1888	4.6	293.0	15.2	272.0	101.0	8.70	9.10	20
1890	5.0	323.0	15.2	272.0	101.0	8.70	9.10	19
1892	3.0	279.0	15.1	272.0	101.0	8.70	9.10	20
1894	1.2	258.0	15.1	272.0	102.0	8.70	9.10	20
1896	2.3	290.0	15.0	272.0	102.0	8.70	9.10	20
1898	1.6	342.0	15.0	272.0	101.0	8.70	9.10	20
1900	1.6	19.0	15.0	272.0	100.0	8.70	9.10	20
1902	3.2	263.0	14.9	272.0	100.0	8.70	9.10	20
1904	4.5	232.0	14.9	272.0	100.0	8.70	9.10	20
1906	3.4	242.0	14.9	272.0	100.0	8.70	9.10	20
1908	7.4	277.0	14.8	272.0	101.0	8.70	9.10	19

1910	6.9	249.0	14.8	272.0	102.0	8.70	9.10	20
1912	6.2	256.0	14.8	272.0	102.0	8.70	9.10	19
1914	13.0	207.0	14.7	272.0	102.0	8.70	9.20	17
1916	11.4	236.0	14.7	272.0	101.0	8.70	9.10	17
1918	12.1	239.0	14.7	272.0	100.0	8.70	9.10	17
1920	6.8	329.0	14.6	272.0	100.0	8.70	9.10	15
1922	16.0	267.0	14.6	272.0	99.0	8.70	9.10	17
1924	13.3	295.0	14.6	272.0	98.0	8.70	9.10	20
1926	12.8	308.0	14.5	272.0	97.0	8.70	9.10	20
1928	11.4	289.0	14.5	272.0	98.0	8.70	9.10	7
1930	6.9	253.0	14.4	272.0	99.0	8.70	9.10	12
1932	10.1	149.0	14.4	272.0	99.0	8.70	9.10	12
1934	3.7	291.0	14.4	272.0	98.0	8.70	9.10	20
1936	3.3	326.0	14.3	272.0	97.0	8.70	9.10	20
1938	3.3	324.0	14.3	272.0	96.0	8.70	9.10	20
1942	2.7	350.0	14.2	272.0	96.0	8.70	9.10	19
1944	3.2	42.0	14.2	272.0	97.0	8.70	9.10	20
1946	3.3	37.0	14.1	272.0	96.0	8.70	9.10	20
1948	23.1	287.0	14.1	272.0	96.0	8.70	9.10	9
1950	6.8	277.0	14.1	272.0	96.0	8.70	9.10	20
1952	6.4	274.0	14.1	272.0	96.0	8.70	9.10	20
1954	17.1	300.0	14.0	272.0	96.0	8.70	9.10	16
1956	15.6	302.0	14.0	272.0	96.0	8.70	9.10	16
1958	12.2	285.0	13.9	272.0	97.0	8.70	9.10	16
1960	10.7	330.0	13.9	272.0	98.0	8.70	9.10	17
1962	12.2	333.0	13.9	272.0	99.0	8.70	9.10	17
1964	2.5	332.0	13.8	272.0	100.0	8.70	9.10	20
1966	2.7	335.0	13.8	272.0	102.0	8.70	9.20	20
1968	27.2	155.0	13.8	272.0	102.0	8.70	9.20	14
1970	12.2	321.0	13.7	272.0	102.0	8.70	9.20	20
1972	9.2	318.0	13.7	272.0	101.0	8.70	9.20	20
1974	9.3	315.0	13.7	272.0	101.0	8.70	9.20	20
1976	10.2	320.0	13.6	272.0	101.0	8.70	9.20	20
1978	9.5	328.0	13.6	272.0	102.0	8.70	9.20	20
1980	9.1	337.0	13.5	272.0	104.0	8.70	9.20	20
1982	10.3	331.0	13.5	272.0	104.0	8.70	9.20	20
1984	7.4	332.0	13.5	272.0	104.0	8.70	9.20	18
1986	3.1	347.0	13.4	272.0	103.0	8.70	9.20	20
1988	10.2	318.0	13.4	272.0	101.0	8.70	9.20	16
1990	13.5	299.0	13.4	272.0	99.0	8.70	9.20	20
1992	8.8	302.0	13.3	272.0	99.0	8.70	9.20	20
1994	9.0	286.0	13.3	272.0	100.0	8.70	9.20	20
1996	7.7	299.0	13.2	272.0	100.0	8.70	9.20	20
1998	7.5	282.0	13.2	272.0	99.0	8.70	9.20	20
2000	8.3	267.0	13.2	272.0	99.0	8.70	9.20	20
2002	5.0	274.0	13.2	272.0	99.0	8.80	9.20	20
2004	2.5	265.0	13.1	272.0	99.0	8.70	9.20	20
2006	10.0	282.0	13.1	272.0	99.0	8.80	9.20	20
2008	8.9	243.0	13.1	272.0	99.0	8.70	9.20	13
2010	11.6	256.0	13.0	272.0	99.0	8.70	9.20	20
2012	7.1	286.0	13.0	272.0	100.0	8.80	9.20	20
2014	5.8	300.0	13.0	272.0	101.0	8.80	9.20	20
2018	8.5	300.0	12.9	271.0	104.0	8.80	9.20	20
2020	4.7	312.0	12.9	271.0	103.0	8.80	9.20	20
2022	4.0	264.0	12.8	271.0	102.0	8.80	9.20	20
2024	4.0	233.0	12.8	271.0	103.0	8.80	9.20	20
2026	7.3	264.0	12.7	271.0	104.0	8.80	9.20	20
2028	2.6	303.0	12.7	271.0	104.0	8.80	9.20	20
2030	6.9	112.0	12.7	271.0	104.0	8.80	9.20	17
2032	5.3	36.0	12.6	271.0	105.0	8.80	9.20	20
2034	5.0	29.0	12.6	271.0	106.0	8.80	9.20	20
2036	9.9	128.0	12.6	271.0	105.0	8.80	9.20	14
2038	2.3	151.0	12.5	271.0	103.0	8.70	9.10	16
2040	1.2	173.0	12.5	272.0	101.0	8.70	9.10	20
2042	6.6	268.0	12.4	272.0	100.0	8.80	9.20	20
2044	14.3	277.0	12.4	272.0	101.0	8.80	9.10	20
2046	14.4	280.0	12.4	272.0	101.0	8.80	9.20	19
2048	21.1	265.0	12.3	272.0	101.0	8.80	9.10	13
2050	13.8	313.0	12.3	272.0	100.0	8.80	9.10	20
2052	12.0	325.0	12.3	272.0	100.0	8.70	9.10	20
2054	0.9	309.0	12.2	272.0	101.0	8.80	9.10	16
2056	2.8	315.0	12.2	272.0	100.0	8.70	9.10	16
2058	7.6	301.0	12.2	272.0	98.0	8.70	9.10	16
2060	10.6	246.0	12.1	272.0	96.0	8.70	9.10	14
2062	11.6	245.0	12.1	272.0	95.0	8.70	9.10	20
2064	17.1	14.0	12.0	272.0	94.0	8.70	9.10	8
2066	18.7	21.0	12.0	272.0	93.0	8.80	9.10	10
2068	4.4	340.0	11.9	272.0	95.0	8.70	9.10	16
2070	10.6	191.0	11.9	272.0	96.0	8.70	9.10	8
2072	5.4	309.0	11.9	272.0	96.0	8.70	9.10	19
2074	3.4	236.0	11.8	272.0	96.0	8.70	9.10	16
2076	5.0	255.0	11.8	272.0	94.0	8.70	9.20	20
2078	4.8	271.0	11.7	272.0	94.0	8.80	9.20	20
2080	6.8	316.0	11.7	272.0	96.0	8.80	9.20	20
2082	0.7	303.0	11.7	272.0	98.0	8.80	9.20	20

2084	5.8	32.0	11.7	272.0	101.0	8.90	9.20	20
2086	6.5	327.0	11.6	272.0	104.0	8.80	9.10	20
2088	10.3	273.0	11.6	272.0	106.0	8.80	9.20	20
2090	10.6	18.0	11.5	272.0	107.0	8.70	9.10	14
2092	13.3	335.0	11.5	272.0	104.0	8.80	9.10	17
2094	6.4	350.0	11.5	272.0	101.0	8.70	9.00	17
2096	5.7	32.0	11.5	272.0	101.0	8.80	9.00	16
2098	3.4	8.0	11.5	272.0	102.0	8.70	8.90	20
2100	4.6	349.0	11.4	272.0	105.0	8.70	8.90	20
2102	17.8	330.0	11.4	272.0	108.0	8.70	8.90	9
2104	4.6	234.0	11.4	272.0	109.0	8.70	8.90	14
2106	15.1	281.0	11.3	272.0	108.0	8.70	8.90	12
2108	6.8	211.0	11.3	272.0	107.0	8.70	8.90	9
2110	10.8	305.0	11.3	272.0	102.0	8.70	8.90	20
2112	10.6	288.0	11.3	272.0	97.0	8.70	8.90	20
2114	13.4	284.0	11.2	272.0	96.0	8.70	8.90	20
2116	11.8	291.0	11.2	272.0	97.0	8.80	8.90	14
2118	7.7	293.0	11.2	272.0	97.0	8.70	8.90	20
2120	5.6	304.0	11.1	272.0	96.0	8.80	8.90	20
2122	5.3	317.0	11.1	272.0	97.0	8.70	8.90	20
2124	6.0	310.0	11.1	272.0	100.0	8.70	8.90	20
2126	6.6	301.0	11.0	271.0	102.0	8.70	8.80	19
2128	2.5	324.0	11.0	271.0	101.0	8.70	8.80	16
2130	2.6	266.0	11.0	271.0	101.0	8.70	8.80	20
2132	2.0	276.0	10.9	271.0	101.0	8.70	8.80	16
2134	2.4	251.0	10.9	271.0	101.0	8.70	8.80	18
2136	3.7	285.0	10.9	272.0	99.0	8.70	8.80	18
2138	2.6	269.0	10.8	272.0	100.0	8.70	8.80	16
2140	5.9	256.0	10.8	271.0	101.0	8.70	8.80	16
2142	1.7	276.0	10.7	271.0	101.0	8.70	8.80	20
2144	4.8	237.0	10.7	271.0	104.0	8.70	8.80	20
2146	2.8	255.0	10.7	271.0	108.0	8.70	8.80	20
2148	1.7	289.0	10.7	272.0	109.0	8.70	8.80	20
2150	22.2	237.0	10.6	272.0	110.0	8.70	8.80	9
2152	19.8	220.0	10.6	272.0	104.0	8.70	8.80	8
2154	13.3	240.0	10.6	272.0	98.0	8.70	8.90	16
2156	20.5	315.0	10.5	272.0	99.0	8.80	8.90	15
2158	14.2	310.0	10.5	272.0	101.0	8.80	8.90	19
2160	16.4	247.0	10.5	272.0	102.0	8.80	9.00	19
2162	5.0	259.0	10.5	272.0	100.0	8.70	8.90	20
2164	3.8	291.0	10.5	272.0	99.0	8.70	8.80	17
2166	11.0	204.0	10.4	272.0	101.0	8.70	8.80	14
2168	19.3	214.0	10.4	272.0	104.0	8.70	8.80	15
2170	5.1	317.0	10.4	272.0	103.0	8.80	8.80	20
2172	3.1	311.0	10.3	272.0	100.0	8.70	8.80	20
2174	3.0	309.0	10.3	272.0	98.0	8.80	8.80	20
2176	7.4	311.0	10.2	272.0	98.0	8.70	8.80	16
2178	7.2	349.0	10.2	272.0	98.0	8.70	8.80	19
2180	5.0	0.0	10.2	272.0	97.0	8.80	8.80	20
2182	14.8	341.0	10.1	272.0	97.0	8.80	8.80	15
2184	13.9	40.0	10.1	272.0	97.0	8.80	8.80	7
2186	5.3	252.0	10.1	272.0	97.0	8.80	8.80	15
2188	8.7	262.0	10.0	272.0	97.0	8.80	8.80	20
2190	8.2	273.0	10.0	272.0	96.0	8.80	8.80	20
2192	11.6	300.0	10.0	272.0	96.0	8.80	8.80	20
2194	8.3	327.0	9.9	272.0	96.0	8.80	8.80	20
2196	6.1	315.0	9.9	272.0	97.0	8.80	8.80	20
2198	6.4	290.0	9.8	272.0	98.0	8.80	8.80	20
2200	6.6	266.0	9.8	271.0	98.0	8.80	8.70	20
2202	15.7	285.0	9.8	271.0	99.0	8.80	8.80	16
2204	7.8	303.0	9.7	271.0	102.0	8.80	8.70	20
2206	8.1	308.0	9.7	271.0	102.0	8.80	8.70	20
2208	18.8	274.0	9.7	271.0	102.0	8.70	8.70	16
2210	5.9	335.0	9.6	271.0	101.0	8.80	8.70	20
2212	5.0	8.0	9.6	271.0	101.0	8.80	8.80	20
2214	6.1	263.0	9.5	271.0	103.0	8.70	8.80	20
2216	6.5	280.0	9.5	271.0	108.0	8.80	8.80	20
2218	1.4	42.0	9.5	271.0	110.0	8.70	8.80	20
2220	7.8	138.0	9.5	271.0	110.0	8.70	8.80	14
2222	2.6	287.0	9.4	271.0	109.0	8.70	8.80	16
2224	3.9	244.0	9.4	271.0	107.0	8.70	8.90	15
2228	3.9	176.0	9.4	271.0	105.0	8.70	8.90	14
2230	3.0	333.0	9.4	272.0	103.0	8.70	8.90	20
2232	3.0	330.0	9.3	272.0	102.0	8.70	8.90	20
2234	3.5	317.0	9.3	272.0	101.0	8.70	8.90	20
2236	3.2	304.0	9.3	272.0	101.0	8.70	8.90	20
2238	1.8	307.0	9.2	272.0	101.0	8.70	8.80	20
2240	10.7	341.0	9.2	272.0	102.0	8.70	8.80	10

DEPTH	FORM. DIP DEGR.	DIP AZIM. DEGR.	BORE DEVI. DEGR.	BORE. AZIM. DEGR.	PAD 1 AZIM. DEGR.	CALI. 1-3 INCHES	CALI. 2-4 INCHES	QUAL. INDEX BEST =20
2244	8.1	263.0	9.2	272.0	106.0	8.70	8.80	20
2246	6.4	260.0	9.2	272.0	110.0	8.80	8.80	20
2248	0.9	119.0	9.2	272.0	113.0	8.80	8.80	20
2252	16.7	230.0	9.1	272.0	112.0	8.80	8.90	8
2254	2.2	301.0	9.1	272.0	111.0	8.70	8.90	20
2256	1.3	196.0	9.1	272.0	111.0	8.70	8.90	20
2258	2.4	277.0	9.1	272.0	112.0	8.70	8.90	20
2260	8.9	29.0	9.0	272.0	112.0	8.70	8.90	17
2262	5.4	350.0	9.0	272.0	113.0	8.70	8.90	16
2264	11.2	215.0	8.9	272.0	114.0	8.70	8.90	20
2266	11.0	217.0	8.9	271.0	114.0	8.70	8.90	20
2268	4.1	259.0	8.9	271.0	109.0	8.80	8.80	20
2270	4.5	291.0	8.9	271.0	103.0	8.80	8.80	20
2272	3.2	322.0	8.8	271.0	102.0	8.80	8.80	20
2274	4.6	271.0	8.8	271.0	102.0	8.80	8.80	20
2276	3.9	260.0	8.8	271.0	101.0	8.80	8.80	20
2278	9.8	258.0	8.8	271.0	101.0	8.70	8.90	19
2280	15.0	271.0	8.7	271.0	100.0	8.80	9.00	16
2282	3.3	268.0	8.7	271.0	100.0	8.70	9.10	20
2284	4.3	272.0	8.7	271.0	100.0	8.70	9.10	20
2286	6.1	281.0	8.6	271.0	101.0	8.70	9.10	20
2288	5.9	291.0	8.6	271.0	102.0	8.70	9.10	20
2290	4.9	299.0	8.6	271.0	104.0	8.80	9.10	20
2292	5.1	301.0	8.6	271.0	106.0	8.80	9.10	20
2294	4.2	302.0	8.6	271.0	103.0	8.80	9.10	20
2296	3.2	297.0	8.5	271.0	99.0	8.80	9.10	20
2298	1.9	212.0	8.5	271.0	98.0	8.70	9.10	20
2300	5.3	272.0	8.4	271.0	98.0	8.70	9.10	20
2302	4.1	274.0	8.4	271.0	99.0	8.70	9.10	20
2304	4.0	266.0	8.4	271.0	103.0	8.70	9.10	20
2306	4.8	274.0	8.4	271.0	109.0	8.70	9.00	20
2308	1.5	7.0	8.4	271.0	112.0	8.70	9.00	20
2310	1.6	30.0	8.4	271.0	113.0	8.60	8.90	20
2312	2.1	275.0	8.4	271.0	113.0	8.50	8.80	20
2314	3.9	262.0	8.4	272.0	114.0	8.40	8.80	20
2316	6.3	286.0	8.3	272.0	116.0	8.20	8.60	20
2318	5.7	281.0	8.3	272.0	113.0	7.80	8.10	20
2320	2.5	341.0	8.2	272.0	104.0	7.70	8.00	20
2322	13.0	304.0	8.2	272.0	101.0	7.50	7.50	14
2324	7.8	305.0	8.2	272.0	100.0	7.00	7.30	16