IADC : Dull Bit Grading

Cutting structure				Example of bit grading : 2, 4, BT, M, E, X, (CT,WO), DTF.			
Inner	Outer	Dull Char	Location	Bearings seals	Gage	Other dull Char	Reason Pulled
1	2	3	4	5	6	7	8

1 - Inner cutting structure (All inner rows.)

2 - Outer cutting structure (All inner rows.)

In columns 1 and 2 a linear scale of 0---> 8 is used to describe the condition of the cutting structure according to the following guidelines for specific bit types.

Steel toothed bits Measure of lost tooth height due to abrasion and / or damage

0 - No loss of tooth height

8 - Total loss of tooth

Insert Bits Measure total cutting structure reduction of lost, worn, & or broken inserts

0 - No lost worn and / or broken inserts

8 - 0% of inserts and / or cutting structure remaining.

Fixed cutter bits Measure of lost tooth height due to abrasion and / or damage

0 - No lost, worn and / or broken cutting structure

8 - 100% of cutting structure lost, worn and / or broken

3 - Dull characteristics

Note: use only cutting structure related codes

BC - Broken cone*	**LN** - Lost nozzle
BF - Bond failure	**LT** - Lost teeth and cutters
BT - Broken teeth and cutters	**OC** - Off center wear
BU - Balled up bit	**PB** - Pinched bit
CC - Cracked cone*	**PN** - Plugged nozzle or flow by areas
CD - Cone dragged*	**RG** - Rounded gauge
CI - Cone interference	**RO** - Ring out
CR - Cored	**SD** - Shirttail damage
CT - Chipped Teeth & cutters	**SS** - Shelf sharping wear
ER - Erosion	**TR** - Cone tracking
FC - Flat crested wear	**WO** - Wash out
HC - Heat checking	**WT** - Worn teeth or cutters
LD - Junk damage	**NO** - No dull characteristics
LC - Lost cone*	*** Show cone # or #'s under location 4**

4 - Location

Roller cone		Fixed cutter	
N - Nose row	**G - Gauge row**	**C - Cone**	**S - Shoulder**
M - Middle row	**A - All rows**	**N - Nose**	**G - Gage**
State cone # or #'s I.e. 1, 2, or 3.		**T - Taper**	**A - All areas**

5 - Bearings and seals

Non sealed bearings		Sealed bearings	
A linear scale estimating bearing life is used		**E - Seals effective**	**F - Seals failed**
0 + No life used ---> 8, 100% bearing life used		**N - Not able to grade**	**X - Fixed cutter bit**

6 - Gauge

X - in gauge	**1/16** - 1/16" out of gauge	**1/8** - 1/8" out of gauge	**3/16** - 3/16" out of gauge
1/4 - 1/4" out of gauge	**5/16** - 5/16" out of gauge	**3/8** - 3/8" out of gauge	**7/16** - 7/16" out of gauge
1/2 - 1/2" out of gauge	**9/16** - 9/16" out of gauge	**5/8** - 5/8" out of gauge	**etc.**

7 - Other dull characteristics

Refer to column 3 codes

8 - Reasons bit was pulled or run completed

BHA - Change bottom hole	**HR** - Hours on bit
DMF - Down hole motor failure	**LOG** - Run logs
DTF - Down hole tool failure	**PP** - Pump pressure
DSF - Drill string failure	**PR** - Penetration rate
DST - Drill stem test	**Rig** - Rig repair
DP - Drill plug	**TD** - Total depth /casing depth
CM - Condition mud	**TW** - Twist off
CP - Core point	**TQ** - Torque
FM - Formation change	**WC** - Weather conditions
HP - Hole problems	
LIH - Left in hole	