FIG. 1

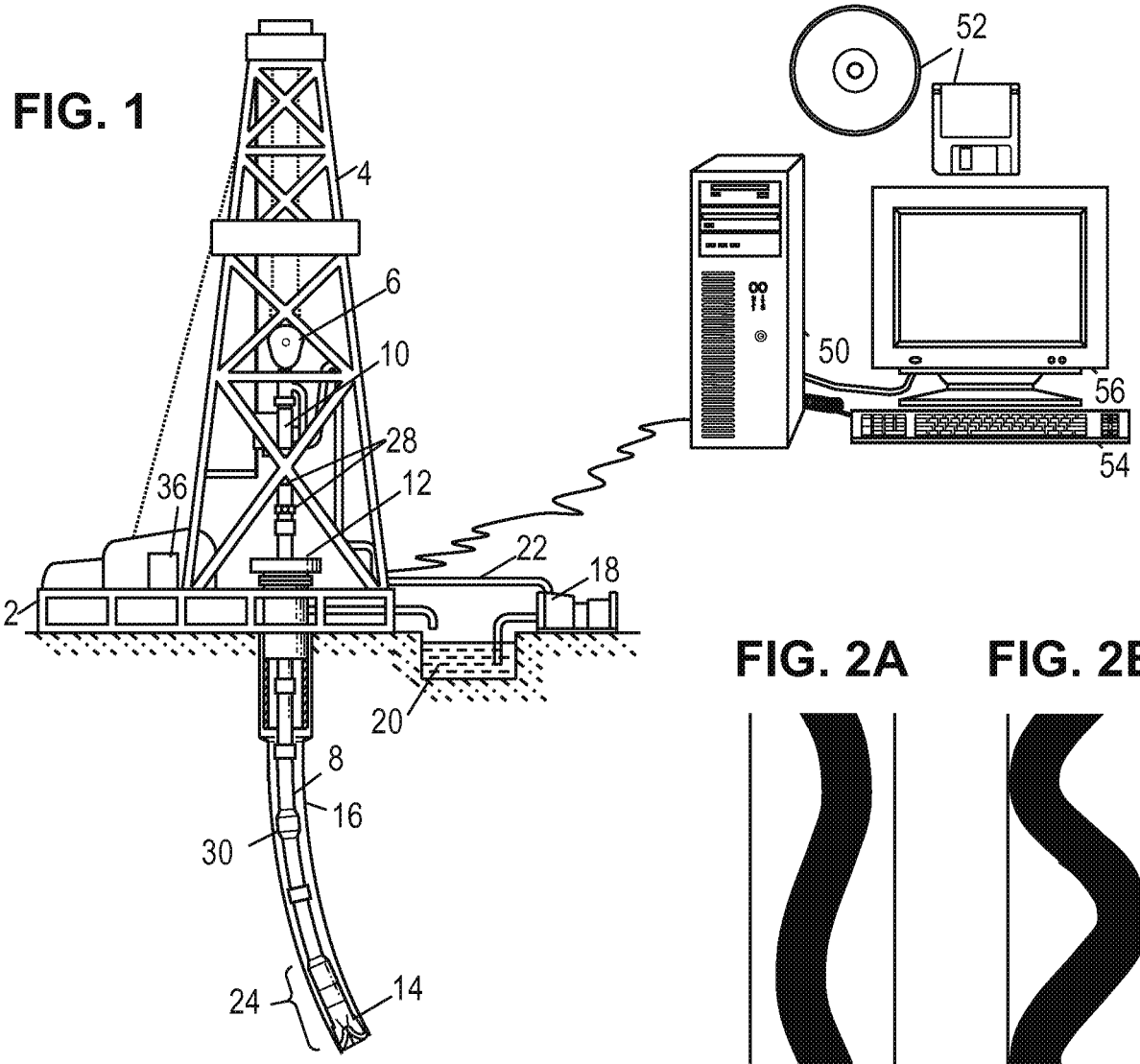


FIG. 2A FIG. 2B

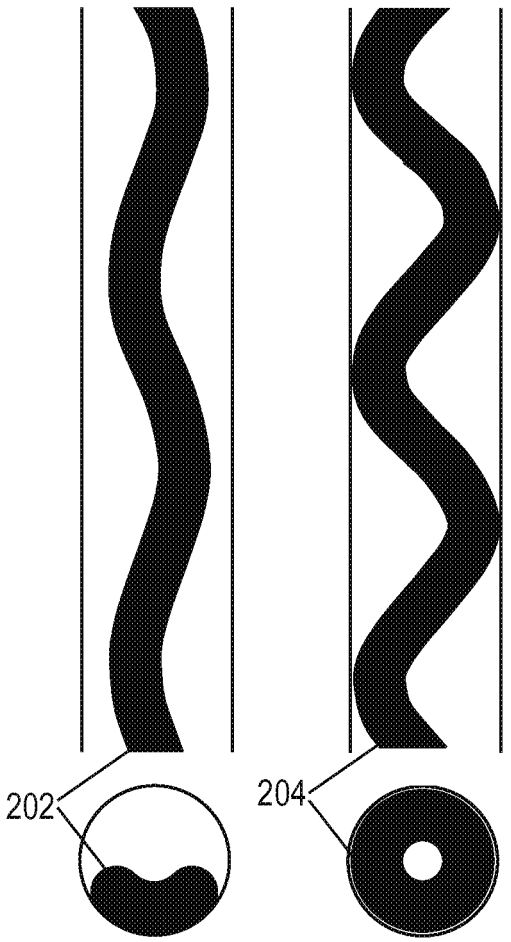


FIG. 3

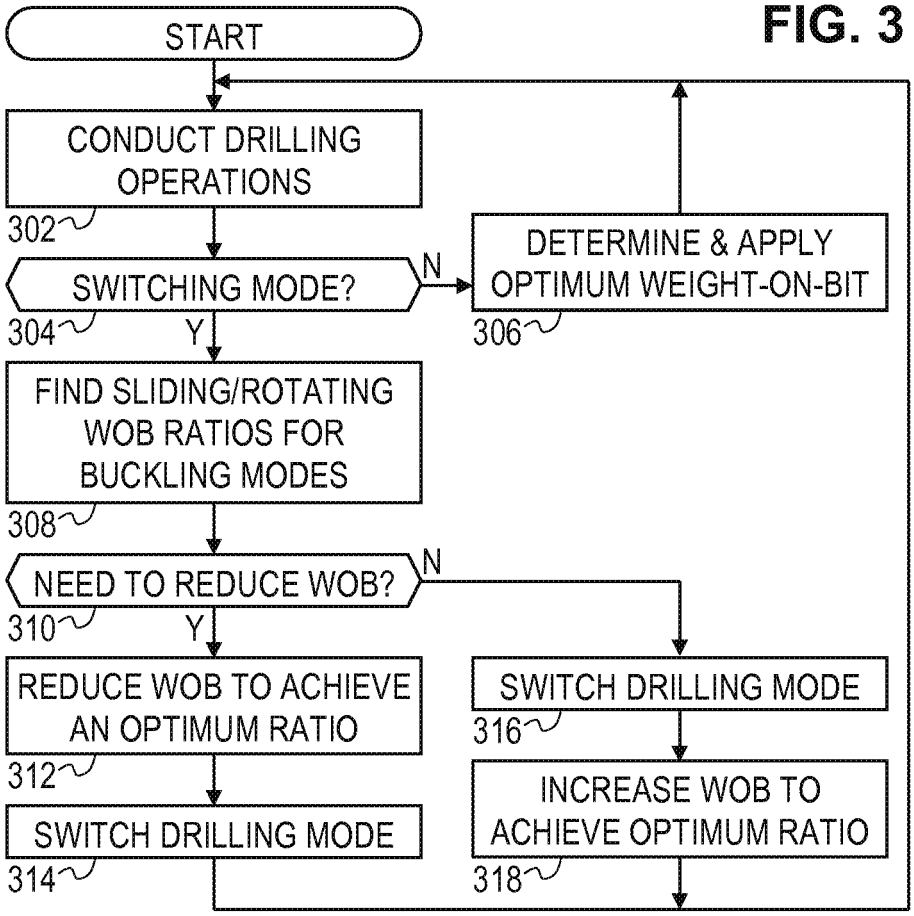
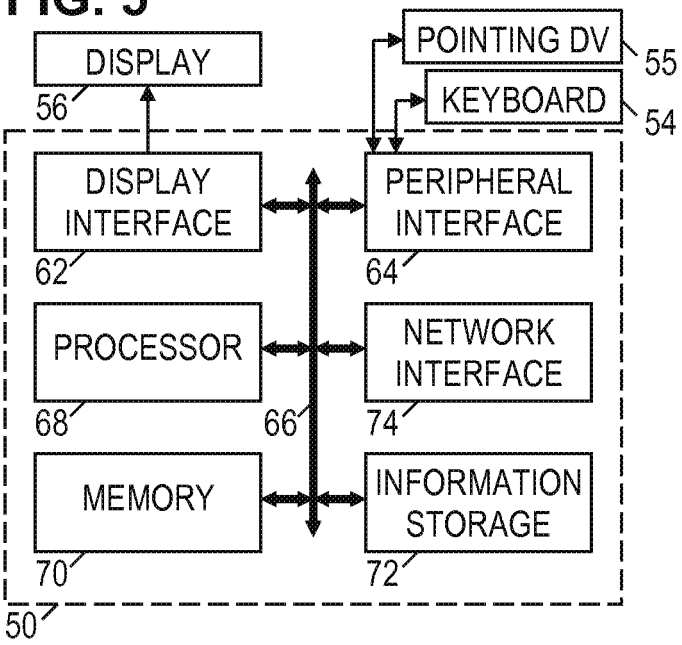
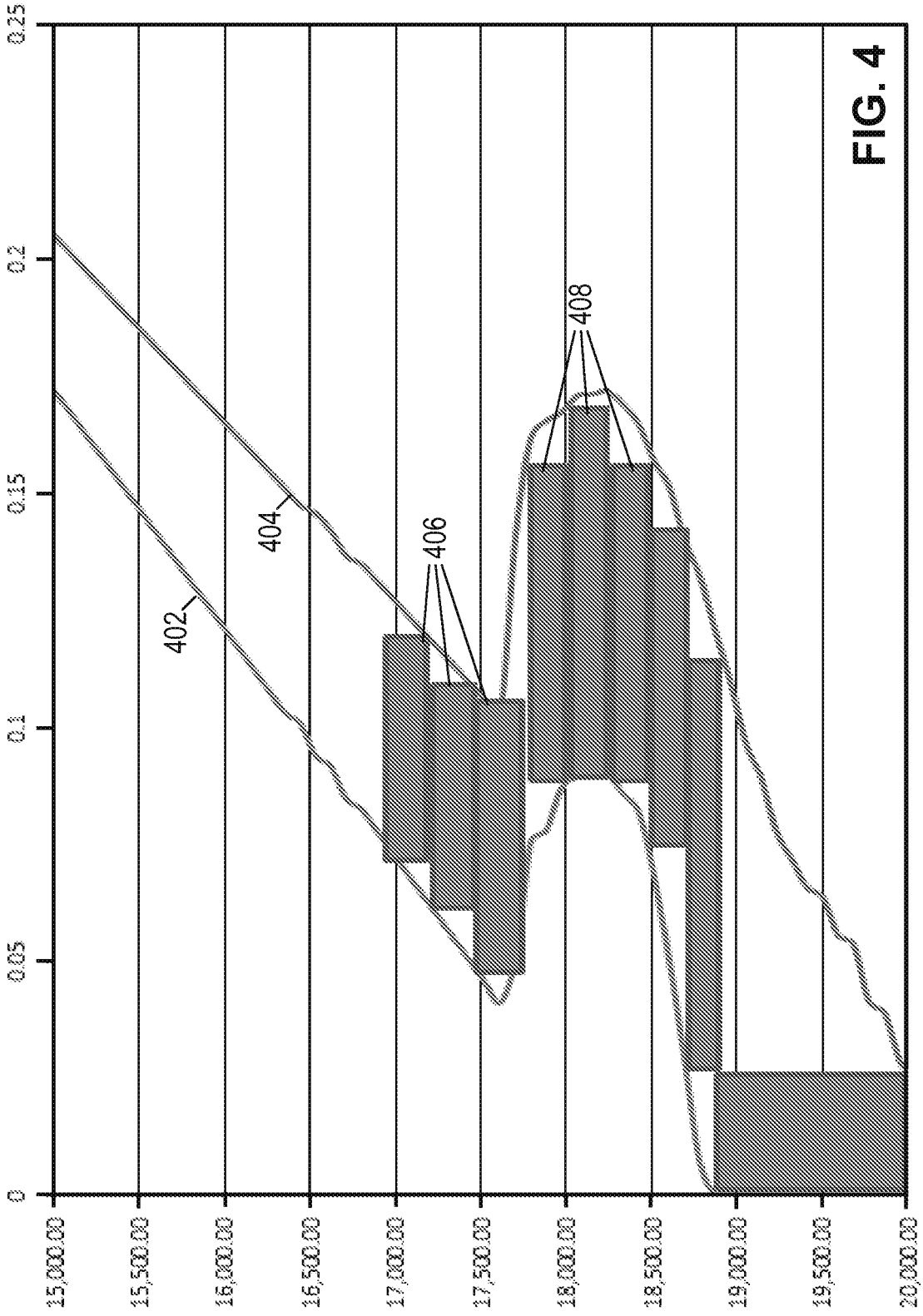

START
CONDUCT DRILLING OPERATIONS
302
SWITCHING MODE?
304
N
Y
DETERMINE & APPLY OPTIMUM WEIGHT-ON-BIT
306
FIND SLIDING/ROTATING WOB RATIOS FOR BUCKLING MODES
308
NEED TO REDUCE WOB?
310
N
Y
REDUCE WOB TO ACHIEVE AN OPTIMUM RATIO
312
SWITCH DRILLING MODE
314
SWITCH DRILLING MODE
316
INCREASE WOB TO ACHIEVE OPTIMUM RATIO
318

FIG. 5


DISPLAY
56
POINTING DV
55
KEYBOARD
54
DISPLAY INTERFACE
62
PERIPHERAL INTERFACE
64
PROCESSOR
68
66
NETWORK INTERFACE
74
MEMORY
70
INFORMATION STORAGE
72
50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20,000.00
402
404
406
408

FIG. 4