CORE #2

329341

AMOCO AUST. Tilana No.1
Date : 5 Oct 85 Time : 15:43

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY	24.00 cP
YIELD POINT	14.00 lb/cft^2
POWER LAW k	.4863
POWER LAW n	.7063
DEPTH	2806.92 m (9210')
VERTICAL DEPTH	2806.79 m
DEPTH OF RETURNS	2738.60 m
CUTTINGS BULK DENSITY	2.10 spc grv
MUD DENSITY	9.34 lb/gal
ACTIVE SURFACE MUD VOLUME	10 bbl
FLOW RATE	190 gal/min
BOOSTER FLOW	0 gal/min
PUMP PRESSURE	360 psi
PUMP gal/stk	4.96 gal/stk
BIT NOZZLES	21, 21, 21

CALCULATED RESULTS:

FROM m	TO m	LENGTH m	ANNULUS/PIPE in	ANN VELO. ft/min	CRIT VELO ft/min	FLOW REGIME	PRESS LOSS psi
0.00	104.55	104.55	18.750/ 5.000	14.3	172.9	LAMINAR	.1
104.55	1651.4	1546.9	12.347/ 5.000	36.5	246.1	LAMINAR	7.2
1651.4	2493.2	841.79	12.250/ 5.000	37.2	247.9	LAMINAR	4.1
2493.0	2660.6	167.38	12.250/ 5.000	37.2	247.9	LAMINAR	.8
2660.3	2806.9	146.35	12.250/ 8.000	54.1	334.2	LAMINAR	2.2

MUD HYDROSTATIC	9.28 lb/gal
FLOW CONTRIBUTION	.03 lb/gal
CUTTINGS CONTRIBUTION	.11 lb/gal
EQUIVALENT CIRCULATING DENSITY	9.42 lb/gal

SURFACE PRESSURE LOSS	5 psi	NOZZLE VELOCITY	61.0 ft/sec
PIPEBORE PRESSURE LOSS	161 psi	HYDRAULIC POWER	3.4 hp
ANNULAR PRESSURE LOSS	14 psi	JET IMPACT FORCE	56.0 lbs
BIT PRESSURE LOSS	31 psi	% OF PRESS LOSS AT BIT	15
TOTAL CALC. PRESS LOSS	211 psi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 38 s.p.m.
1) Pipe Capacity	6465	154	1303	34.0
2) Pipe Displacement	3965	94	799	20.9
3) Total Annulus	48976	1166	9874	257.8 <- LAG
4) Mud in active pits	412	10	83	2.2
Circulation (1) + (3)	55441	1320	11178	291.8
Hole Volume (1)+(2)+(3)	59406	1414	11977	312.7
Total Mud Circulation	55852	1330	11261	294.0
HOLE OUT OF GAUGE:				
CIRCULATION CORRECTION FACTOR =	1.0564			
Corrected Annulus	52102	1241	10504	274.2 <- LAG
Corrected Hole	62532	1489	12607	329.1

Annulus Diam	Pipe j.d.	Pipe o.d.	Pipe i.d.
18.750	6.375	5.000	4.276
12.347	6.375	5.000	4.276
12.250	6.375	5.000	4.276
12.250	6.375	5.000	3.000
12.250	8.000	8.000	2.875