EXLOG

AMOCO AUST. Tilana No.1
Date : 24 Sep 95 Time : 04:36

329327

HYDRAULICS CALCULATIONS

PLASTIC VISCOSITY	14.00 cP
YIELD POINT	12.00 lb/cft^2
POWER LAW k	.5616
POWER LAW n	.6215
DEPTH	5833.7 ft (1778.0m)
VERTICAL DEPTH	5833.6 ft
DEPTH OF RETURNS	5779.0 ft
CUTTINGS BULK DENSITY	2.50 spc grv
MUD DENSITY	9.00 lb/gal
ACTIVE SURFACE MUD VOLUME	313 bbl
FLOW RATE	618 gal/min
BOOSTER FLOW	0 gal/min
PUMP PRESSURE	2050 psi
PUMP gal/stk	4.96 gal/stk
BIT NOZZLES	15, 15, 15

CALCULATED RESULTS:

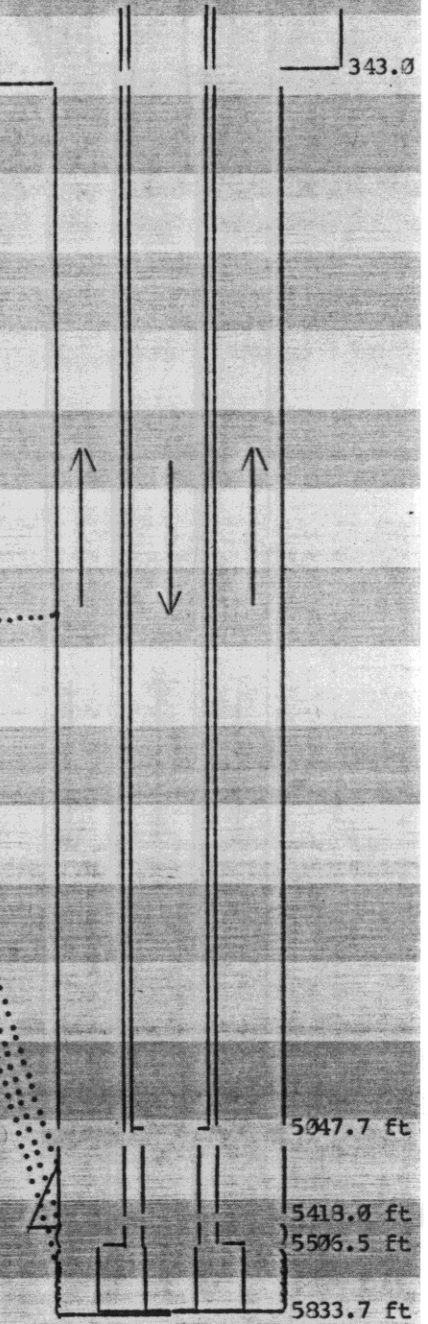
FROM ft	TO ft	LENGTH ft	ANNULUS/PIPE in	ANN VELO. ft/min	CRIT VELO ft/min	FLOW REGIME	PRESS LOSS psi
0.0	343.0	343.0	18.750/ 5.000	46.4	163.0	LAMINAR	.2
343.0	5047.7	4704.7	12.347/ 5.000	118.3	225.0	LAMINAR	13.3
5047.0	5418.0	370.3	12.347/ 5.000	118.3	225.0	LAMINAR	1.0
5418.0	5506.5	88.5	12.250/ 5.000	121.1	226.4	LAMINAR	.3
5506.0	5333.7	327.2	12.250/ 3.000	176.0	290.0	LAMINAR	2.8

Annulus Dian	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
12.347	6.375	5.000	3.000
12.250	6.375	5.000	3.000
12.250	3.000	3.000	2.875

MUD HYDROSTATIC	8.92 lb/gal
FLOW CONTRIBUTION	.06 lb/gal
CUTTINGS CONTRIBUTION	.20 lb/gal
EQUIVALENT CIRCULATING DENSITY	9.17 lb/gal

SURFACE PRESSURE LOSS	43 psi	NOZZLE VELOCITY	383.0 ft/sec
PIPEBORE PRESSURE LOSS	722 psi	HYDRAULIC POWER	425.2 hp
ANNULAR PRESSURE LOSS	18 psi	JET IMPACT FORCE	1103.1 lbs
BIT PRESSURE LOSS	1179 psi	% OF PRESS LOSS AT BIT	60
TOTAL CALC. PRESS LOSS	1962 psi		

VOLUMES:	gal	bbl	Strokes	Minutes @ 125 s.p.m.
1) Pipe Capacity	4044	96	815	6.5
2) Pipe Displacement	2599	62	524	4.2
3) Total Annulus	32098	764	6471	51.9 <- LAG
4) Mud in active pits	13159	313	2653	21.3
Circulation (1) + (3)	36142	861	7287	58.5
Hole Volume (1)+(2)+(3)	38741	922	7811	62.7
Total Mud Circulation	49301	1174	9940	79.8



5 cm