

country mud company mud engineer		ITA AVA S.p.a. FIORELLO ROSSI		operator contractor rig		AGIP S.p.A. IDECO 2100		well report # date		SAUDONE 1 D 1 09/04/1994	
DRILLING SITUATION				HYDRAULICS				ROTARY DRILL SYSTEM			
depth at end of day		1 m		flowrate 0 l/min		pressure 0.0 atm.		n.2 drill collar 11"1/4 /			
depth at start of day		0 m		critical velocity		velocity in annulus					
progress		1 m		D.P. 82.70		D.P.		D.P. 11" 1/4			
drilling time		0h 00'		D.P.		D.P.		D.C. 11" 1/4			
Ø latest casing		0"		D.C. 82.70		D.C.		weight on the bit (Tons) 0.00			
Ø bit		26"		D.C.		D.C.		R.P.M. rotary 0			
Ø nozzles				lag time 0' 00"		cir. time 0' 00"		deviation 0.00			
TIME DISTRIBUTION				drilling 0h 00'		running		circul.		trip	
								PRODUCTS (Tons)		today's supplies	
										Consumption today progressive	
										Stock	
MUD TYPE FW-QE- PO		DEPTH		MUD VOLUMES (m³)				Agipek hv		4.575	
MUD PROPERTIES		m 1 m m		hole start end				Agipek lv		1.450	
Densita' - g/lt		1050		active pits 0.0 0.0				Avagum		0.750	
Viscosita' Marsh - sec/ft		55		circulating 0.0 45.0				Avalensio		2.210	
lettura a 600 giri/ - -		36		res. pit 1 0.0 30.0				Potassa caustica		3.000	
lettura a 300 giri/ - -		24		res. pit 2				Visco xc 84		2.800	
Viscosita' Apparente - cps		18		res. pit 3				Granular m		0.840	
Viscosita' Plastica - cps		12		total res. 0.0 30.0				Granular f		1.300	
Yield Value - g/100cm2		6		new mud 75.0				Bicarbonato potassio		2.500	
Gels 10" - g/100cm2		1		H2O dil. 0.0				Barite sfusa		58.500	
Gels 10' - g/100cm2		4		flows 0.0				Bentonite sx		10.100	
Filtrato API - cc		9		formation lost 0.0				Cloruro calcio polv.		2.200	
Ph - -		9		surface lost 0.0				De block s 200		1.600	
N		0.628		evacuation 0.0				Avasil		0.800	
K - lb/ft x 100 cmq		0.437		wetting 0.0				Avacid f 25		1.600	
				total lost 0.0							
				reserve mud							
				density pit 1 1400.00							
				density pit 2							
				density pit 3							
				REMARKS				Daily mud cost		LIT 5.541.000	
								Other		LIT 0	
								Total mud cost		LIT 5.541.000	
								SOLIDS TREATMENTS			
				machine		flowrate screens		light		heavy	
OPERATIONS				CONFEZIONATI 75 m³ DI FANGO A 1050 g/l							
				30 " " " A 1400 g/l							
				AVA mud engineer FIORELLO ROSSI							



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DAILY DRILLING MUD REPORT

country	ITA	operator	AGIP S.p.A.	well	SAUDONE 1 D
mud company	AVA S.p.a.	contractor		report #	2
mud engineer	IORELLO ROSSI	rig	IDECO 2100	date	10/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	52 m	flowrate	pressure	n.3 heavy weight 5" / n.3 drill collar 9" 1/2 /	
depth at start of day	1 m	2200 l/min	40.0 atm.		
progress	51 m	critical velocity	velocity in annulus		
drilling time	24h 00'	D.P.	80.59	D.P.	6.66
Ø latest casing	0"	D.C.	80.94	D.C.	7.41
Ø bit	26"	D.C.		D.C.	
Ø nozzles		lag time	6' 44"	cir. time	28' 01"
				D.P.	5"
				D.C.	9" 1/2
				weight on the bit (Tons)	4.00
				R.P.M. rotary	110
				deviation	0.00

TIME DISTRIBUTION		drilling	reaming	circul.	trip	PRODUCTS (Tons)	today's supplies	Consumption		Stock
		24h 00'						today	progressive	
MUD TYPE FW-GE-PO	DEPTH	MUD VOLUMES (m³)				Agipak hv		0.375	0.575	4.000
MUD PROPERTIES	m 52 m m	hole	start	end	Agipak lv					1.450
Densita' - g/lt	1090	active pits	0.0	16.4	Avagum		0.250	0.350		0.400
Viscosita' Marsh - sec/lt	55	circulating	45.0	46.6	Avatensio					2.210
lettura a 600 giri/ - -	36	res. pit 1	45.0	63.0	Potassa caustica		0.325	0.475		2.525
lettura a 300 giri/ - -	24	res. pit 2	30.0	30.0	Visco xc 84					2.800
Viscosita' Apparente - cps	18	res. pit 3			Granular m					0.840
Viscosita' Plastica - cps	12	total res.	30.0	30.0	Granular l					1.300
Yield Value - g/100cm2	6	new mud		58.0	Bicarbonato potassio					2.500
Gels 10" - g/100cm2	2	H ₂ O dil.		10.0	Barite sfusa				15.000	43.500
Gels 10' - g/100cm2	9	flows		0.0	Bentonite sx		1.550	5.550		4.550
Filtrato API - cc	11	formation lost		40.0	Cloruro calcio polv.					2.200
Ph - -	9	surface lost		10.0	De block s 200					1.800
N	0.678	evacuation		0.0	Avasil		0.100	0.200		0.600
K - lb/ft x 100 cmq	0.291	wetting		0.0	Avacid f 25					1.600
		total lost		50.0						
		reserve mud								
		density pit 1	1400.00							
		density pit 2								
		density pit 3								
		REMARKS				Daily mud cost LIT 3.804.750				
		TRATTI DI ARGILLA				Other LIT 5.541.000				
						Total mud cost LIT 9.345.750				
						SOLIDS TREATMENTS				
						machine	flowrate screens	light	heavy	hours
						vibrovagli	20/ 20	0.000	0.000	24.00
						vibrovagli	20/ 20	0.000	0.000	24.00
						vibrovagli	20/ 20	0.000	0.000	24.00

OPERATIONS	00.00 - 24.00 perforazione
AVA mud engineer IORELLO ROSSI	

country	ITA	operator	AGIP S.p.A.		well	SAUDONE 1 D							
mud company	AVA S.p.a.	contractor			report #	3							
mud engineer	IORELLO ROSSI	rig	IDECO 2100		date	11/04/1994							
DRILLING SITUATION			HYDRAULICS			ROTARY DRILL SYSTEM							
depth at end of day		52 m	flowrate 2200 l/min		pressure 40.0 atm.		n.3 heavy weight 5" / n.3 drill collar 9"1/2 /						
depth at start of day		52 m	critical velocity		velocity in annulus								
progress	0 m	D.P.	80.49	D.P.	6.66	D.P.	5"						
drilling time	0h 00'	D.P.	80.95	D.P.	11.57	D.C.	9" 1/2						
Ø latest casing	20"	D.C.	80.80	D.C.	7.41	weight on the bit (Tons)							
Ø bit	26"	D.C.	81.65	D.C.	14.01	R.P.M. rotary							
Ø nozzles		lag time	3' 00"	cir. time	21' 12"	deviation							
TIME DISTRIBUTION			drilling	running	circul.	trip	PRODUCTS (Tons)						
			0h 00'										
MUD TYPE FW-GE-PO			DEPTH			MUD VOLUMES (m³)		today's supplies	Consumption		Stock		
MUD PROPERTIES			m	52	m	m	start		end	today		progressive	
Densita' - g/lt			1090			hole	16.4	8.2	Agipak hv	0.575	4.000		
Viscosita' Marsh - sec/lt			55			active pits	46.6	39.8	Agipak lv		1.450		
lettura a 600 giri/ - -			34			circulating	63.0	48.0	Avagum	0.350	0.400		
lettura a 300 giri/ - -			23			res. pit 1	0.0	15.0	Avatensio		2.210		
Viscosita' Apparente - cps			17			res. pit 2	34.0	34.0	Potassa caustica	0.475	2.525		
Viscosita' Plastica - cps			11			res. pit 3			Visco xc 84		2.800		
Yield Value - g/100cm2			6			total res.	34.0	49.0	Granular m		0.840		
Gels 10 " - g/100cm2			2			new mud		0.0	Granular f		1.300		
Gels 10 ' - g/100cm2			6			H ₂ O dil.		5.0	Bicarbonato potassio		2.500		
Filtrato API - cc			11			flows		0.0	Barite sfusa	15.000	43.500		
Ph - -			9			formation lost		0.0	Bentonite sx	5.550	4.550		
N			0.659			surface lost		0.0	Cloruro calcio polv.		2.200		
K - lb/ft x 100 cmq			0.311			evacuation		5.0	De block s 200		1.600		
						wetting		0.0	Avasil	0.200	0.600		
						total lost		5.0	Avacid f 25		1.600		
						reserve mud							
						density pit 1		1090.00					
						density pit 2		1400.00					
						density pit 3							
						REMARKS	Daily mud cost					LIT	0
						LITOLOGIA : ARGILLA E GHIAIA	Other					LIT	9.345.750
							Total mud cost					LIT	9.345.750
							SOLIDS TREATMENTS						
							machine	flowrate screens	light	heavy	hours		
							vibrovgli	20/ 20	0.000	0.000	2.00		
							vibrovgli	20/ 20	0.000	0.000	2.00		
							vibrovgli	20/ 20	0.000	0.000	2.00		
OPERATIONS													
00.00-03.00 circolazione													
00.30-04.30 preparativi discesa casing			04.30-07.00 discesa casing										
07.00-12.00 operazioni di preparazione e cementazione													
12.00-24.00 operazioni varie													
						AVA mud engineer IORELLO ROSSI							



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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 4 12/04/1994
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	89 m	flowrate 3300 l/min	pressure 140.0 atm.	n.3 heavy weight 5" / n.3 drill collar 9" 1/2 /	
depth at start of day	52 m	critical velocity	velocity in annulus		
progress	37 m	D.P.	114.74	D.P.	28.19
drilling time	4h 50'	D.P.	114.20	D.P.	17.36
Ø latest casing	20"	D.C.	116.15	D.C.	39.29
Ø bit	16"	D.C.	114.84	D.C.	21.02
Ø nozzles		lag time	3' 27"	cir. time	38' 23"
				D.P.	5"
				D.C.	9" 1/2
				weight on the bit (Tons)	4.00
				R.P.M. rotary	92
				deviation	0.00
TIME DISTRIBUTION		drilling	returning	circul.	trip
		4h 50'			
		PRODUCTS (Tons)		today's supplies	Consumption
					today
					progressive
					Stock
MUD TYPE FW-GE-PO	DEPTH	MUD VOLUMES (m³)			
MUD PROPERTIES	m 89	m	m		
Densita' - g/lt	1080			start	end
Viscosita' Marsh - sec/lt	51			8.2	13.0
lettura a 600 giri/ - -	44			39.8	115.0
lettura a 300 giri/ - -	34			48.0	128.0
Viscosita' Apparente - cps	22			15.0	15.0
Viscosita' Plastica - cps	10			34.0	34.0
Yield Value - g/100cm2	12			34.0	34.0
Gels 10" - g/100cm2	6			total res.	83.0
Gels 10' - g/100cm2	11			new mud	100.0
Filtrato API - cc	9			H ₂ O dil.	0.0
Ph - -	9			flows	0.0
Pm - ccH2SO4N50	0.8			formation lost	0.0
Pl - ccH2SO4N50	0.15			surface lost	0.0
Mf - ccH2SO4N50	0.3			evacuation	20.0
Solidi - %invol.	8			wetting	0.0
BMT - Kg/mc	42			total lost	20.0
Potassio - g/l	4.8			reserve mud	
N	0.540			density pit 1	1080.00
K - lb/ft x 100 cmq	0.755			density pit 2	1400.00
				density pit 3	1080.00
		REMARKS			
		LITOLOGIA : ARGILLA			
		Daily mud cost			LIT 13.600.750
		Other			LIT 9.345.750
		Total mud cost			LIT 22.946.500
		SOLIDS TREATMENTS			
machine	flowrate screens	light	heavy	hours	
vibrovalgi	20/ 40	0.000	0.000	5.00	
Centrifuga	4	1080.000	1650.000	6.00	
Centrifuga	8	1050.000	1800.000	6.00	
Centrifuga	4	1080.000	1650.000	6.00	
OPERATIONS					
00.00 - 18.30 OPERAZIONI COMPLETAMENTO MONTAGGIO B.O.P					
18.30-19.30 FRESAGGIO CEMENTO					
19.30 - 24.00 SPIAZZATO FANGO E PERFORATO					
AVA mud engineer					
FIORELLO ROSSI					



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country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 5 13/04/1994	
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM		
depth at end of day	312 m	flowrate 3500 l/min	pressure 160.0 atm.	n.6 drill collar 8" / n.6 heavy weight 5" / n.3 drill collar 9" 1/2 /		
depth at start of day	89 m	critical velocity	velocity in annulus			
progress	223 m	D.P.	134.70	D.P.	29.90	
drilling time	15h 00'	D.P.	134.07	D.P.	18.41	
Ø latest casing	20"	D.C.	136.34	D.C.	41.67	
Ø bit	16"	D.C.	134.81	D.C.	22.29	
Ø nozzles		lag time	10' 26"	cir. time	53' 59"	
				D.P.	5"	
				D.C.	9" 1/2	
				weight on the bit (Tons)	5.00	
				R.P.M. rotary	150	
				deviation	0.00	
TIME DISTRIBUTION		drilling	running	circul.	trip	
		15h 00'				
		PRODUCTS (Tons)		today's supplies	Consumption today progressive	
					Stock	
MUD TYPE FW-GE-PO	DEPTH	MUD VOLUMES (m³)				
MUD PROPERTIES	m 312 m m	start	end			
Densita' - g/l	1110	hole	13.0	40.2		
Viscosita' Marsh - sec/lt	60	active pits	115.0	151.8		
lettura a 600 giri/ - -	58	circulating	128.0	192.0		
lettura a 300 giri/ - -	46	res. pit 1	16.0	16.0		
Viscosita' Apparente - cps	29	res. pit 2	34.0	34.0		
Viscosita' Plastica - cps	12	res. pit 3	34.0	10.0		
Yield Value - g/100cm²	17	total res.	84.0	60.0		
Gels 10" - g/100cm²	3	new mud		40.0		
Gels 10' - g/100cm²	12	H₂O dil.		24.0		
Filtrato API - cc	8.7	flows		0.0		
Ph - -	9	formation lost		0.0		
Pm - ccH₂SO₄N50	0.6	surface lost		20.0		
PI - ccH₂SO₄N50	0.15	evacuation		4.0		
Mf - ccH₂SO₄N50	0.2	wetting		0.0		
Solidi - %invol.	9	total lost		24.0		
BMT - Kg/mc	42	reserve mud				
Potassio - g/l	4.75	density pit 1		1080.00		
N	0.378	density pit 2		1400.00		
K - lb/ft x 100 cmq	3.772	density pit 3		1080.00		
		REMARKS				
		SCARICATO ACETATO DI POTASSIO ANCHE DI IERI				
		Daily mud cost			LIT 22.405.000	
		Other			LIT 22.946.500	
		Total mud cost			LIT 45.351.500	
		SOLIDS TREATMENTS				
		machine	flowrate screens	light	heavy	hours
		vibrovagli	20/ 40	0.000	0.000	15.00
		Centrifuga	8	1070.000	1700.000	9.00
		vibrovagli	20/ 40	0.000	0.000	15.00
		Centrifuga	8	1070.000	1700.000	9.00
		Centrifuga	10	1050.000	1830.000	9.00
OPERATIONS						
00.00-08.30 PERFORAZIONE						
08.30-09.30 SHORT TRIP						
09.30-14.30 PERFORAZIONE						
14.30-19.30 MANOVRA E CONTROLLO FORO						
19.30-24.00 PERFORAZIONE						

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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 6 14/04/1994
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	505 m	flowrate 3300 l/min	pressure 120.0 atm.	n.6 drill collar 8" / n.6 heavy weight 5" / n.3 drill collar 9" 1/2 /	
depth at start of day	312 m	critical velocity	velocity in annulus		
progress	193 m	D.P. 137.02	D.P. 28.19	D.P. 5"	
drilling time	15h 00'	D.P. 136.29	D.P. 17.36	D.C. 9" 1/2	
Ø latest casing	20"	D.C. 138.95	D.C. 39.29	weight on the bit (Tons) 8.00	
Ø bit	16"	D.C. 137.15	D.C. 21.02	R.P.M. rotary 120	
Ø nozzles		lag time 18' 40"	cir. time 70' 35"	deviation 0.00	
TIME DISTRIBUTION		drilling 15h 00'	reaming	circul.	trip
		PRODUCTS (Tons)		today's supplies	Consumption today progressive
MUD TYPE FW-PO-K	DEPTH	MUD VOLUMES (m³)			Stock
MUD PROPERTIES	m 505 m m	start	end		
Densita' - g/lt	1110	40.2	65.3	Agipak hv	0.500 1.275 3.300
Viscosita' Marsh - sec/lt	55	151.8	170.7	Agipak lv	0.200 0.200 1.250
lettura a 600 giri/ - -	63	192.0	236.0	Avagum	
lettura a 300 giri/ - -	49	16.0	0.0	Avatensio	0.650 0.100 2.210
Viscosita' Apparente - cps	31.5	34.0	34.0	Potassa caustica	0.475 2.525
Viscosita' Plastica - cps	14	10.0	10.0	Visco xc 84	0.340 0.900 1.900
Yield Value - g/100cm2	17.5	60.0	44.0	Granular m	
Gels 10" - g/100cm2	6			Granular f	1.300
Gels 10' - g/100cm2	18			Bicarbonato potassio	2.500
Filtrato API - cc	8.5			Barite sfusa	21.000 37.500
Ph - -	8.5			Bentonite sx	1.350 6.900 3.200
Pm - ccH2SO4N50	0.4			Cloruro calcio polv.	
Pf - ccH2SO4N50	0.1			De block s 200	0.100 0.500 0.300
Mf - ccH2SO4N50	0.2			Avasil	0.100 0.300 1.300
Cloruri - g/lt	1			Avacid f 25	0.675 3.250 1.750
Solidi - %invol.	9			Potassio acetato	0.300 1.425 3.575
BMT - Kg/mc	43			Victosol	
NaCl - g/lt	1.7			Stearal lqd	0.100 0.400
Calcio - g/lt	0.2			Polifluid	
Potassio - g/lt	4.75				
N	0.463				
K - lb/ft x 100 cmq	2.060				
		REMARKS		Daily mud cost LIT 15.782.750	
		LITOLOGIA : ARGILLA		Other LIT 45.351.500	
				Total mud cost LIT 61.134.250	
				SOLIDS TREATMENTS	
				machine	flowrate screens
				light	heavy
				hours	
				vibrovagli	20/ 40 0.000 0.000 15.00
				Centrifuga	4 1070.000 1700.000 15.00
				vibrovagli	20/ 40 0.000 0.000 15.00
				Centrifuga	4 1070.000 1700.000 15.00
				Centrifuga	7 1050.000 1830.000 15.00
OPERATIONS				AVA mud engineer FIORELLO ROSSI	
00.00-19.00 PERFORAZIONE					
19.00-24.00 MANOVRA					



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DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM		
depth at end of day	505 m	flowrate 0 l/min	pressure 0.0 atm.	n.6 drill collar 8" / n.6 heavy weight 5" / n.3 drill collar 9 1/2 "		
depth at start of day	505 m	critical velocity	velocity in annulus			
progress	0 m	D.P. 139.57	D.P.	D.P. 5"		
drilling time	0h 00'	D.P. 138.83	D.P.	D.C. 9" 1/2		
Ø latest casing	20"	D.C. 141.51	D.C.	weight on the bit (Tons) 0.00		
Ø bit	16"	D.C. 139.70	D.C.	R.P.M. rotary 0		
Ø nozzles		lag time 0' 00"	cir. time 0' 00"	deviation 0.00		
TIME DISTRIBUTION		drilling 0h 00'	running	circul.	trip	
		PRODUCTS (Tons)		today's supplies	Consumption today progressive	
MUD TYPE FW-GE-PO	DEPTH	MUD VOLUMES (m³)			Stock	
	m 505 m m	start	end			
MUD PROPERTIES		hole	65.3 65.3	Agipak hv	1.275 3.300	
Densità - g/lt	1110	active pits	170.7 134.7	Agipak lv	0.200 1.250	
Viscosità Marsh - sec/lt	52	circulating	236.0 200.0	Avagum	0.650 0.100	
lettura a 600 giri/ - -	63	res. pit 1	0.0 16.0	Avatensio	2.210	
lettura a 300 giri/ - -	49	res. pit 2	34.0 34.0	Potassa caustica	0.475 2.525	
Viscosità Apparente - cps	31.5	res. pit 3	10.0 30.0	Visco xc 64	0.900 1.900	
Viscosità Plastica - cps	14	total res.	44.0 80.0	Granular m	0.840	
Yield Value - g/100cm²	18	new mud	0.0	Granular f	1.300	
Gels 10" - g/100cm²	6.5	H₂O dil.	0.0	Bicarbonato potassio	2.500	
Gels 10' - g/100cm²	18	flows	0.0	Barite sfusa	21.000 37.500	
Filtrato API - cc	8	formation lost	0.0	Bentonite sx	6.900 3.200	
Ph - -	8.5	surface lost	0.0	Cloruro calcio polv.	2.200	
Pm - ccH₂SO₄N50	0.4	evacuation	0.0	De block s 200	1.600	
Pf - ccH₂SO₄N50	0.1	wetting	0.0	Avasil	0.500 0.300	
Mf - ccH₂SO₄N50	0.2	total lost	0.0	Avacid f 25	0.300 1.300	
Cloruri - g/lt	1	reserve mud		Potassio acetato	3.250 1.750	
S - %invol.	9	density pit 1	1110.00	Victosol	1.425 3.575	
BMT - Kg/mc	42	density pit 2	1400.00	Stearal lqd	0.360	
NaCl - g/lt	1.4	density pit 3	1110.00	Polifluid	0.100 0.400	
Calcio - g/lt	0.2	REMARKS		Daily mud cost LIT 0		
Potassio - g/l	4.5			Other LIT 61.134.250		
N	0.474			Total mud cost LIT 61.134.250		
K - lb/ft x 100 cmq	1.872			SOLIDS TREATMENTS		
		machine	flowrate screens	light	heavy	hours
OPERATIONS						
00.00-24.00 DISCESA AL FONDO PER CIRCOLAZIONE P.O.O.H. E PREPARATIVI PER DISCESA CSG 13°38 ESEGUITA CEMENTAZIONE						

AVA mud engineer
FIORELLO ROSSI



ava S.p.a.

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tel. 3729101 - 3729102

DAILY DRILLING MUD REPORT

country ITA	operator AGIP S.p.A.	well SAUDONE 1 D
mud company AVA S.p.a.	contractor IDECO 2100	report # 8
mud engineer FIORELLO ROSSI		date 16/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	505 m	flowrate 0 l/min	pressure 0.0 atm.		
depth at start of day	505 m	critical velocity	velocity in annulus		
progress	0 m	D.P.	D.P.	D.P.	
drilling time	0h 00'	D.P.	D.P.	D.C.	
Ø latest casing	13" 3/8	D.C.	D.C.	weight on the bit (Tons)	
Ø bit	12" 1/4	D.C.	D.C.	R.P.M. rotary	
Ø nozzles		lag time 0' 00"	cir. time 0' 00"	deviation 0 0.00	

TIME DISTRIBUTION		drilling		reaming		circul.		trip		PRODUCTS (Tons)		today's supplies		Consumption		Stock	
		0h 00'										today		progressive			
MUD TYPE FW-GE-PO	DEPTH	MUD VOLUMES (m³)								Agipak hv				1.275		3.300	
MUD PROPERTIES	m 505	m	m	start		end		Agipak lv				0.200		1.250			
Densita' - g/l	1110			65.3		39.9		Avagum				0.650		0.100			
Viscosita' Marsh - sec/l	52			134.7		160.1		Avalensio						2.210			
lettura a 600 giri/ -	63			200.0		200.0		Potassa caustica				0.475		2.525			
lettura a 300 giri/ -	49			16.0		16.0		Visco xc 84				0.900		1.900			
Viscosita' Apparente - cps	31.5			34.0		34.0		Granular m						0.840			
Viscosita' Plastica - cps	14			30.0		30.0		Granular f						1.300			
Yield Value - g/100cm2	18			80.0		80.0		Bicarbonato potassio						2.500			
Gels 10" - g/100cm2	6.5			new mud		0.0		Barite sfusa				21.000		37.500			
Gels 10' - g/100cm2	18			H2O dil.		0.0		Bentonite sx				6.900		3.200			
Filtrato API - cc	8			flows		0.0		Cloruro calcio polv.						2.200			
Ph -	8.5			formation lost		0.0		De block s 200						1.600			
Pm - ccH2SO4N50	0.4			surface lost		0.0		Avasil				0.500		0.300			
Pf - ccH2SO4N50	0.1			evacuation		0.0		Avacid f 25				0.300		1.300			
Mf - ccH2SO4N50	0.2			wetting		0.0		Potassio acetato				3.250		1.750			
Cloruri - g/l	1			total lost		0.0		Victosol				1.425		3.575			
Solidi - %invol.	9			reserve mud				Stearal lqd						0.360			
BMT - Kg/mc	42			density pit 1		1110.00		Polifluid				0.100		0.400			
Calcio - g/l	0.2			density pit 2		1400.00											
Potassio - g/l	4.5			density pit 3		1110.00											
N	0.474			REMARKS													
K - lb/ft x 100 cmq	1.872																

Daily mud cost		LIT		0	
Other		LIT		61.134.250	
Total mud cost		LIT		61.134.250	

SOLIDS TREATMENTS				
machine	flowrate screens	light	heavy	hours
Centrifuga	4	1070.000	1700.000	8.00
Centrifuga	4	1070.000	1700.000	8.00
Centrifuga	7	1050.000	1800.000	8.00

OPERATIONS		AVA mud engineer FIORELLO ROSSI	
incumbent e montaggio testa pozzo			

country	ITA	operator	AGIP S.p.A.		well	SAUDONE 1 D						
mud company	AVA S.p.a.	contractor			report #	9						
mud engineer	FIORELLO ROSSI	rig	IDECO 2100		date	17/04/1994						
DRILLING SITUATION			HYDRAULICS			ROTARY DRILL SYSTEM						
depth at end of day		510 m	flowrate 2200 l/min		pressure 100.0 atm.		n.6 drill collar 8" / n.5 heavy weight 5" /					
depth at start of day		505 m	critical velocity		velocity in annulus							
progress		5 m	D.P.	117.07	D.P.	34.71	D.P.	5"				
drilling time		0h 30'	D.P.	116.58	D.P.	28.23	D.C.	8"				
Ø latest casing		13" 3/8	D.C.	119.66	D.C.	50.44	weight on the bit (Tons) 5.00					
Ø bit		12" 1/4	D.C.	118.35	D.C.	37.83	R.P.M. rotary 120					
Ø nozzles			lag time 16' 23"		cir. time 88' 41"		deviation 0.00					
TIME DISTRIBUTION			drilling	running	circul.	trip	PRODUCTS (Tons)	today's supplies	Consumption	Stock		
			0h 30'						today	progressive		
MUD TYPE FW-QE-K		DEPTH		MUD VOLUMES (m³)			Agipak hv Agipak lv Avagum Avatensio Potassa caustica Visco xc 84 Granular m Granular f Bicarbonato potassio Barite sfusa Bentonite sx Cloruro calcio polv. De block s 200 Avasil Acacid f 25 Potassio acetato Victosol Stearal lqd Polifluid			1.275	3.300	
MUD PROPERTIES		m 510	m	m	start	end				0.100	0.300	1.150
Densita' - g/lt		1110			hole	39.9			38.4		0.650	0.100
Viscosita' Marsh - sec/lt		47			active pits	160.1			158.6			2.210
lettura a 600 giri/ -		49			circulating	200.0			197.0		0.475	2.525
lettura a 300 giri/ -		37			res. pit 1	16.0			0.0	0.100	1.000	1.800
Viscosita' Apparente - cps		24.5			res. pit 2	34.0			34.0			0.840
Viscosita' Plastica - cps		12			res. pit 3	30.0			14.0			1.300
Yield Value - g/100cm2		12.5			total res.	80.0			48.0	0.100	0.100	2.400
Gels 10" - g/100cm2		4			new mud				0.0	12.000	33.000	25.500
Gels 10' - g/100cm2		13			H ₂ O dil.				0.0		6.900	3.200
Filtrato API - cc		8			flows				0.0			2.200
Ph - -		11			formation lost				0.0			1.600
Pm - ccH2SO4N50		0.9			surface lost				19.0	0.100	0.600	0.200
Pf - ccH2SO4N50		0.2			evacuation				16.0		0.300	1.300
Mf - ccH2SO4N50		0.3			wetting				0.0	0.200	3.450	1.550
Cloruri - g/lt		1			total lost				35.0	0.200	1.625	3.375
Solidi - %invol.		10			reserve mud					0.360		
BMT - Kg/mc		30			density pit 1		0.00		0.100	0.400		
Calcio - g/lt		0.4			density pit 2		1400.00					
Potassio - g/l		4.5			density pit 3		1110.00					
N		0.499			REMARKS			Daily mud cost LIT 7.047.000				
K - lb/ft x 100 cmq		1.285						Other LIT 61.134.250				
								Total mud cost LIT 68.181.250				
								SOLIDS TREATMENTS				
					machine	flowrate screens	light	heavy	hours			
					vibrovgli	40/ 60	0.000	0.000	2.00			
					Centrifuga	4	1070.000	1700.000	2.00			
					vibrovgli	40/ 60	0.000	0.000	2.00			
					Centrifuga	4	1070.000	1700.000	2.00			
					vibrovgli	60/ 80	0.000	0.000	2.00			
					Centrifuga	8	1050.000	1820.000	2.00			
OPERATIONS												
00.00-05.00 ULTIMATI LAVORI B.O.P. 05.00-15.00 ASSEMBLAGGIO BHA 15.00-20.30 DISCESA AL FONDO 20.30 -23.30 FRESAGGIO CEMENTO 23.30-24.00 PERFORAZIONE A MT 510												
					AVA mud engineer FIORELLO ROSSI							



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DAILY DRILLING MUD REPORT

country	ITA	operator	AGIP S.p.A.	well	SAUDONE 1 D
mud company	AVA S.p.a.	contractor		report #	11
mud engineer	IORELLO ROSSI	rig	IDECO	date	19/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1071 m	flowrate	pressure	n.6 drill collar 8" / n.5 heavy weight 5" /	
		2500 l/min	13.0 atm.		
depth at start of day	848 m	critical velocity	velocity in annulus		
progress	223 m	D.P.	141.49	D.P.	39.45
drilling time	17h 00'	D.P.	140.95	D.P.	32.08
Ø latest casing	13" 3/8	D.C.	144.40	D.C.	57.32
Ø bit	12" 1/4	D.C.	142.93	D.C.	42.99
Ø nozzles		lag time	31' 30"	air. time	99' 39"
				weight on the bit (Tons)	3.00
				R.P.M. rotary	140
				deviation	3.00

TIME DISTRIBUTION				PRODUCTS (Tons)		today's supplies	Consumption		Stock	
				drilling	reaming	circul.	trip	today	progressive	
17h 00'										

MUD TYPE FW-GE-PO	DEPTH			MUD VOLUMES (m³)						
MUD PROPERTIES	m	m	m		start	end				
Densita' - g/lt	1150			hole	64.1	81.1	Agipak hv		1.275	3.300
Viscosita' Marsh - sec/lt	54			active pits	161.9	169.9	Agipak lv		0.450	1.000
lettura a 600 giri/ - -	66			circulating	226.0	251.0	Avagum	1.000	0.650	1.100
lettura a 300 giri/ - -	52			res. pit 1	16.0	16.0	Avatensio			2.210
Viscosita' Apparente - cps	33			res. pit 2	34.0	34.0	Potassa caustica		0.475	2.525
Viscosita' Plastica - cps	14			res. pit 3	14.0	14.0	Visco xc 84	0.100	1.400	1.400
Yield Value - g/100cm2	19			total res.	64.0	64.0	Granular m			0.840
Gels 10" - g/100cm2	7			new mud		40.0	Granular f			1.300
Gels 10' - g/100cm2	19			H ₂ O dil.		10.0	Bicarbonato potassio	0.100	0.550	1.950
Filtrato API - cc	6.5			flows		0.0	Barite sfusa		33.000	50.500
Ph - -	9.5			formation lost		0.0	Bentonite sx		7.600	2.500
Pm - ccH2SO4N50	0.9			surface lost		5.0	Cloruro calcio polv.			2.200
Pf - ccH2SO4N50	0.3			evacuation		20.0	De block s 200			1.600
Mf - ccH2SO4N50	0.6			wetting		0.0	Avasil		0.800	
Cloruri - g/lt	1			total lost		25.0	Avacid f 25	0.100	0.600	1.000
Solidi - %invol.	11			reserve mud			Potassio acetato	4.950	0.950	5.000
Sand Content - %invol	0.5			density pit 1		1150.00	Victosol	0.400	2.425	2.575
BMT - Kg/mc	42			density pit 2		1400.00	Stearal lqd	0.360		0.720
Calcio - g/lt	0.2			density pit 3		1110.00	Polifluid		0.100	0.400
Potassio - g/l	4.2			REMARKS LITOLOGIA: ARGILLA - H2O POZZO GG 126 MC PROGR. 1246 MC						
- -	18									
- -	15									
N	0.452									
K - lb/ft x 100 cmq	2.259									

OPERATIONS		Daily mud cost		LIT	8.957.500
00.00-10.30 PERFORAZIONE-10.30-11.30 CIRCOLAZIONE 11.30-17.30 MANOVRA 17.30-24.00		Other		LIT	82.564.250
TURBOPERFORATO		Total mud cost		LIT	91.521.750
N.B. LA CENTRIFUGA Z42 E' STATA UTILIZZATA PER TRATTAMENTO REFLUO					

SOLIDS TREATMENTS				
machine	flowrate screens	light	heavy	hours
vibrovagli	40/ 60	0.000	0.000	18.00
Centrifuga	5	1090.000	1740.000	8.00
vibrovagli	60/ 80	0.000	0.000	18.00
Centrifuga	5	1090.000	1740.000	8.00
Centrifuga	8	1020.000	1380.000	8.00

AVA mud engineer
IORELLO ROSSI



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DAILY DRILLING MUD REPORT

country	ITA	operator	AGIP S.p.A.	well	SAUDONE 1 D
mud company	AVA S.p.a.	contractor		report #	12
mud engineer	IORELLO ROSSI	rig	IDECO 2100	date	20/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1250 m	flowrate	pressure	n.6 drill collar 8" / n.5 heavy weight 5" /	
		2700 l/min	14.0 atm.		
depth at start of day	1071 m	critical velocity	velocity in annulus		
progress	179 m	D.P.	125.30	D.P.	42.60
drilling time	24h 00'	D.P.	124.87	D.P.	34.65
Ø latest casing	13" 3/8	D.C.	127.58	D.C.	61.91
Ø bit	12" 1/4	D.C.	126.42	D.C.	46.43
Ø nozzles		lag time	34' 12"	cir. time	105' 36"
				weight on the bit (Tons)	3.00
				R.P.M. rotary	140
				deviation	16.70

TIME DISTRIBUTION		drilling		reaming		circul.		trip		PRODUCTS (Tons)		today's supplies		Consumption		Stock	
		24h 00'															
MUD TYPE FW-PO-K		DEPTH		MUD VOLUMES (m³)													
MUD PROPERTIES		m		start		end											
Densita' - g/lt	1150			hole	81.1	94.7											
Viscosita' Marsh - sec/lt	46			active pits	169.9	192.3											
lettura a 600 giri/ -	52			circulating	251.0	287.0											
lettura a 300 giri/ -	41			res. pit 1	16.0	16.0											
Viscosita' Apparente - cps	26			res. pit 2	34.0	34.0											
Viscosita' Plastica - cps	11			res. pit 3	14.0	14.0											
Yield Value - g/100cm2	15			total res.	64.0	64.0											
Gels 10" - g/100cm2	7			new mud		36.0											
Gels 10" - g/100cm2	15			H ₂ O dil.		6.0											
Filtrato API - cc	7			flows		0.0											
Ph -	9			formation lost		0.0											
Pm - ccH ₂ SO ₄ N ₅ O	0.7			surface lost		6.0											
Pl - ccH ₂ SO ₄ N ₅ O	0.2			evacuation		0.0											
Mf - ccH ₂ SO ₄ N ₅ O	0.3			wetting		0.0											
Cloruri - g/lt	1.4			total lost		6.0											
Solidi - %invol.	11			reserve mud													
Sand Content - %invol	0.5			density pit 1		1100.00											
BMT - Kg/mc	40			density pit 2		1400.00											
Calcio - g/lt	0.2			density pit 3		1110.00											
Potassio - g/lt	4.2																
N	0.493																
K - lb/ft x 100 cmq	1246																
Fann6	22																
Fann3	20																
Pannello	0.5																

OPERATIONS		00.00-24.00 TURBOPERFORAZIONE	
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REMARKS		LITOLOGIA: ARGILLA-PROGR.H2O 1246 MC	
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Daily mud cost		LIT 6.865.650	
Other		LIT 91.521.750	
Total mud cost		LIT 98.387.400	

SOLIDS TREATMENTS				
machine	flowrate screens	light	heavy	hours
vibrovagli	40/ 60	0.000	0.000	24.00
Centrifuga	5	1090.000	1740.000	24.00
vibrovagli	60/ 80	0.000	0.000	24.00
Centrifuga	5	1090.000	1740.000	24.00
Centrifuga	8	1070.000	1850.000	24.00

AVA mud engineer
IORELLO ROSSI



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DAILY DRILLING MUD REPORT

country ITA	operator AGIP S.p.A.	well SAUDONE 1 D
mud company AVA S.p.a.	contractor IDECO 2100	report # 13
mud engineer FIORELLO ROSSI		date 21/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1299 m	flowrate 2800 l/min	pressure 140.0 atm.	n.6 drill collar 8" / n.5 heavy weight 5" /	
depth at start of day	1250 m	critical velocity	velocity in annulus		
progress	49 m	D.P.	116.87	D.P.	44.18
drilling time	10h 00'	D.P.	116.44	D.P.	35.93
Ø latest casing	13" 3/8	D.C.	119.15	D.C.	64.20
Ø bit	12" 1/4	D.C.	118.00	D.C.	48.15
Ø nozzles		lag time	34' 18"	cir. time	109' 41"
				D.P.	5"
				D.C.	8"
				weight on the bit (Tons)	4.00
				R.P.M. rotary	140
				deviation	18.00

TIME DISTRIBUTION				PRODUCTS (Tons)				today's supplies		Consumption		Stock	
				drilling	reaming	circul.	trip			today	progressive		
10h 00'													

MUD TYPE FW-PO-K	DEPTH			MUD VOLUMES (m³)			Agipak hv		Agipak lv		today's supplies		Consumption		Stock	
MUD PROPERTIES	m	m	m	start	end											
Densita' - g/l	1150			hole	94.7	98.4	Avagum						1.275	3.300		
Viscosita' Marsh - sec/lt	43			active pits	192.3	210.6	Avalensio						0.550	0.900		
lettura a 600 giri/ - -	48			circulating	287.0	309.0	Potassa caustica						0.650	1.100		
lettura a 300 giri/ - -	37			res. pit 1	16.0	16.0	Visco xc 84						0.170	2.040		
Viscosita' Apparente - cps	24			res. pit 2	34.0	32.0	Potassa caustica						0.475	2.525		
Viscosita' Plastica - cps	11			res. pit 3	14.0	14.0	Visco xc 84						0.050	1.590	1.210	
Yield Value - g/100cm2	13			total res.	64.0	62.0	Granular m							0.840		
Gels 10" - g/100cm2	4.5			new mud		25.0	Granular f							1.300		
Gels 10' - g/100cm2	14			H2O dil.		0.0	Bicarbonato potassio							0.650	1.850	
Filtrato API - cc	7			flows		0.0	Barite sfusa							33.000	50.500	
Ph - -	9			formation lost		0.0	Bentonite ex							7.600	2.500	
Pm - ccH2SO4N50	0.7			surface lost		5.0	Cloruro calcio polv.								2.200	
Pl - ccH2SO4N50	0.2			evacuation		0.0	De block s 200								1.600	
Ml - ccH2SO4N50	0.3			wetting		0.0	Avasil							0.800		
Cloruri - g/l	1.4			total lost		5.0	Avacid f 25							0.600	1.000	
Solidi - %invol.	11			reserve mud			Potassio acetato						0.250	5.550	4.400	
BMT - Kg/mc	40			density pit 1		1100.00	Victosol						0.200	2.925	2.075	
Calcio - g/l	0.2			density pit 2		1400.00	Steeral lqd						0.100	0.100	0.620	
Potassio - g/l	4			density pit 3		1110.00	Poliifluid						0.100	0.200	0.300	
Fann6	17			REMARKS LITOLOGIA: ARGILLA-PROGR.H2O 1246 MC			Daily mud cost		LIT	4.238.500						
Fann3	8		Other				LIT	98.387.400								
N	0.607		Total mud cost				LIT	102.623.900								
K - lb/ft x 100 cmq	0.474															
SOLIDS TREATMENTS																
machine		flowrate screens	light	heavy	hours											
vibrovagli		40/ 80	0.000	0.000	15.00											
Centrifuga		5	1090.000	1740.000	9.00											
vibrovagli		60/ 80	0.000	0.000	15.00											
Centrifuga		5	1090.000	1740.000	9.00											
Centrifuga		8	1070.000	1850.000	9.00											
OPERATIONS 00.00-10.00 Turboperforazione 10.00-21.00 Manovra e circolazione 21.00-24.00 Silhumberger							AVA mud engineer FIORELLO ROSSI									



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DAILY DRILLING MUD REPORT

country	ITA	operator	AGIP S.p.A.	well	SAUDONE 1 D
mud company	AVA S.p.a.	contractor		report #	14
mud engineer	FIORELLO ROSSI	rig	IDECO 2100	date	22/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1302 m	flowrate	pressure	n.6 drill collar 8" / n.5 heavy weight 5" /	
depth at start of day	1299 m	2600 l/min	11.5 atm.		
progress	3 m	critical velocity	velocity in annulus		
drilling time	0h 30'	D.P.	116.87	D.P.	41.02
Ø latest casing	13" 3/8	D.P.	116.44	D.P.	33.37
Ø bit	12" 1/4	D.C.	119.15	D.C.	59.62
Ø nozzles		D.C.	118.00	D.C.	44.71
		lag time	37' 01"	cir. time	118' 53"
				D.P.	5"
				D.C.	8"
				weight on the bit (Tons)	10.00
				R.P.M. rotary	80
				deviation	17.00

TIME DISTRIBUTION		PRODUCTS (Tons)		today's supplies	Consumption		Stock	
		drilling	reaming	circul.	trip	today	progressive	
MUD TYPE FW-PO-K		MUD VOLUMES (m³)						
MUD PROPERTIES	DEPTH							
	m	m	m	start	end			
Densita' - g/l	1150	hole	98.4	98.6	Agipak hv		1.275	3.300
Viscosita' Marsh - sec/l	43	active pits	210.6	212.4	Agipak lv		0.550	0.900
lettura a 600 giri/ - -	48	circulating	309.0	311.0	Avagum		0.650	1.100
lettura a 300 giri/ - -	37	res. pit 1	16.0	16.0	Avatensio		0.170	2.040
Viscosita' Apparente - cps	24	res. pit 2	32.0	30.0	Potassa caustica		0.475	2.525
Viscosita' Plastica - cps	11	res. pit 3	14.0	14.0	Visco xc 84		1.590	1.210
Yield Value - g/100cm2	13	total res.	62.0	60.0	Granular m			0.840
Gels 10" - g/100cm2	1.5	new mud		0.0	Granular f			1.300
Gels 10' - g/100cm2	14	H ₂ O dil.		0.0	Bicarbonato potassio		0.650	1.850
Filtrato API - cc	7	flows		0.0	Barite sfusa		33.000	50.500
Ph - -	9	formation lost		0.0	Bentonite sx		7.600	2.500
Pm - ccH2SO4N50	0.7	surface lost		0.0	Cloruro calcio polv.			2.200
Pf - ccH2SO4N50	0.2	evacuation		0.0	De block s 200			1.600
Mf - ccH2SO4N50	0.3	wetting		0.0	Avasil		0.800	
Cloruri - g/l	1.4	total lost		0.0	Acidif 25		0.600	1.000
BMT - Kg/mc	40	reserve mud			Potassio acetato		5.550	4.400
Calcio - g/l	0.2	density pit 1		1100.00	Victosol		2.925	2.075
Potassio - g/l	4	density pit 2		1400.00	Stearal lqd		0.100	0.620
N	0,478	density pit 3		1110.00	Polifluid		0.200	0.300
K - lb/ft x 100 cmq	1,424	REMARKS		Daily mud cost		LIT	0	
Fann6	12	LITOLOGIA: ARGILLA		Other		LIT	102.623.900	
Fann3	8			Total mud cost		LIT	102.623.900	
Pannello	1			SOLIDS TREATMENTS				
Selwa	11			machine	flowrate screens	light	heavy	hours
				vibrovalgi	40/ 60	0.000	0.000	2.00
				vibrovalgi	40/ 60	0.000	0.000	2.00
				vibrovalgi	60/ 80	0.000	0.000	2.00

OPERATIONS	
00.00-11.00 SHLUMBERGER 11.00-19.00 MANOVRA E CIRCOLAZIONE 19.00-23.00 CONTROLLO STATICO ED ESTRAZIONE	
23.00-24.00 PREPARAZIONE DISCESA CASING	

AVA mud engineer
FIORELLO ROSSI



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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 15 23/04/1994						
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM							
depth at end of day	1302 m	flowrate 0 l/min	pressure 0.0 atm.	D.P. D.C. weight on the bit (Tons) R.P.M. rotary deviation 0 22.00							
depth at start of day	1302 m	critical velocity	velocity in annulus								
progress	0 m	D.P.	D.P.								
drilling time	0h 00'	D.P.	D.P.								
Ø latest casing	9" 5/8	D.C.	D.C.								
Ø bit	12" 1/4	D.C.	D.C.								
Ø nozzles		lag time 0' 00"	cir. time 0' 00"								
TIME DISTRIBUTION		drilling 0h 00'	reaming	circul.	trip	PRODUCTS (Tons)	today's supplies	Consumption		Stock	
								today	progressive		
MUD TYPE FW-PO-K	DEPTH			MUD VOLUMES (m³)		Agipak hv			1.275	3.300	
MUD PROPERTIES	m	m	m	start	end	Agipak lv			0.550	0.900	
	1302					Avagum			0.650	1.100	
Densita' - g/l	1150			hole	98.6	49.7	Avatensio		0.170	2.040	
Viscosita' Marsh - sec/l	43			active pits	212.4	236.3	Potassa caustica		0.475	2.525	
lettura a 600 giri/ -	48			circulating	311.0	286.0	Visco xc 84		1.590	1.210	
lettura a 300 giri/ -	37			res. pit 1	16.0	16.0	Granular m			0.840	
Viscosita' Apparente - cps	24			res. pit 2	30.0	30.0	Granular l			1.300	
Viscosita' Plastica - cps	11			res. pit 3	14.0	14.0	Bicarbonato potassio		0.650	1.850	
Yield Value - g/100cm2	13			total res.	60.0	60.0	Barite sfusa		33.000	50.500	
Gels 10" - g/100cm2	4.5			new mud		0.0	Bentonite sx		7.600	2.500	
Gels 10' - g/100cm2	14			H ₂ O dil.		0.0	Cloruro calcio polv.			2.200	
Filtrato API - cc	7			flows		0.0	De block s 200			1.600	
Ph - -	9			formation lost		0.0	Avasil		0.800		
Pm - ccH2SO4N50	0.7			surface lost		0.0	Avacid f 25		0.600	1.000	
Pf - ccH2SO4N50	0.2			evacuation		25.0	Potassio acetato		5.550	4.400	
MI - ccH2SO4N50	0.3			wetting		0.0	Victosol		2.925	2.075	
Cloruri - g/l	1.4			total lost		25.0	Stearal lqd		0.100	0.620	
Solidi - %invol.	11			reserve mud			Polifluid		0.200	0.300	
BMT - Kg/mc	40			density pit 1		1110.00	Daily mud cost LIT 0 Other LIT 102.623.900 Total mud cost LIT 102.623.900				
Calcio - g/l	0.2			density pit 2		1400.00					
Potassio - g/l	4			density pit 3		1110.00					
N	0.478			REMARKS							
K - lb/ft x 100 cmq	1.419			LITOLOGIA : ARGILLA							
Fann6	8						SOLIDS TREATMENTS				
Fann3	4.5						machine	flowrate screens	light	heavy	hours
Pannello	1										
OPERATIONS 00.00-24.00 CIRCOLAZIONE DISCESA CASING - CEMENTAZIONE 9 5/8							AVA mud engineer FIORELLO ROSSI				



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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 16 24/04/1994
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1302 m	flowrate 0 l/min	pressure 0.0 atm.	D.P. D.C. weight on the bit (Tons) R.P.M. rotary deviation 0 22.00	
depth at start of day	1302 m	critical velocity	velocity in annulus		
progress	0 m	D.P.	D.P.		
drilling time	0h 00'	D.P.	D.P.		
Ø latest casing	9" 5/8	D.C.	D.C.		
Ø bit	12" 1/4	D.C.	D.C.		
Ø nozzles		lag time 0' 00"	cir. time 0' 00"		
TIME DISTRIBUTION		drilling 0h 00'	returning	circul.	trip
		PRODUCTS (Tons)		today's supplies	Consumption today progressive
MUD TYPE FW-PO-K	DEPTH		MUD VOLUMES (m³)		Stock
MUD PROPERTIES	m	m	m	start	end
Densita' - g/lt	1150			hole	49.7 49.7
Viscosita' Marsh - sec/lt	43			active pits	236.3 236.3
lettura a 600 giri/ - -	48			circulating	286.0 286.0
lettura a 300 giri/ - -	37			res. pit 1	16.0 16.0
Viscosita' Apparente - cps	24			res. pit 2	30.0 30.0
Viscosita' Plastica - cps	11			res. pit 3	14.0 14.0
Yield Value - g/100cm2	13			total res.	60.0 60.0
Gels 10" - g/100cm2	4.5			new mud	0.0
Gels 10' - g/100cm2	14			H ₂ O dil.	0.0
Filtrato API - cc	7			flows	0.0
Ph - -	9			formation lost	0.0
Pm - coH2SO4N50	0.7			surface lost	0.0
Pf - coH2SO4N50	0.2			evacuation	0.0
Mf - coH2SO4N50	0.3			wetting	0.0
Cloruri - g/lt	1.4			total lost	0.0
- PANNELLO	1			reserve mud	
Solidi - %invol.	11			density pit 1	1110.00
BMT - Kg/mc	40			density pit 2	1400.00
Calcio - g/lt	0.2			density pit 3	1110.00
Potassio - g/lt	4			REMARKS	
Lettura a 6 giri/ - -	17			LITOLOGIA ARGILLA	
Lettura a 3 giri/ - -	8				
N	0.478				
K - lb/ft x 100 cmq	1.419				
OPERATIONS 00.00-18.00 OPERAZIONI B.O.P. E TEST 18.00-24.00 ASSEMBLAGGIO NUOVA BHA					
Daily mud cost LIT 0 Other LIT 102.623.900 Total mud cost LIT 102.623.900					
SOLIDS TREATMENTS					
machine	flowrate screens	light	heavy	hours	
AVA mud engineer FIORELLO ROSSI					



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DAILY DRILLING MUD REPORT

country ITA	operator AGIP S.p.A.	well SAUDONE 1 D
mud company AVA S.p.a.	contractor IDECO 2100	report # 17
mud engineer FIORELLO ROSSI		date 25/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1434 m	flowrate 1600 l/min	pressure 100.0 atm.	n.6 drill collar 6" 3/4 / n.9 heavy weight 5" /	
depth at start of day	1302 m	critical velocity	velocity in annulus		
progress	132 m	D.P.	121.84	D.P.	66.82
drilling time	19h 00'	D.P.	119.32	D.P.	46.74
Ø latest casing	9" 5/8	D.C.	132.72	D.C.	118.31
Ø bit	8" 1/2	D.C.	124.16	D.C.	67.20
Ø nozzles		lag time	31' 27"	cir. time	148' 55"
				D.P.	5"
				D.C.	6" 3/4
				weight on the bit (Tons)	4.00
				R.P.M. rotary	230
				deviation	22.00

TIME DISTRIBUTION		drilling		reaming		circul.		trip		PRODUCTS (Tons)		today's supplies		Consumption		Stock	
		19h 00'												today		progressive	
MUD TYPE	F-WP-OK	DEPTH		MUD VOLUMES (m³)													
MUD PROPERTIES		m	m	m		start	end										
		1434															
Densita' - g/lt	1190				hole	49.7	52.6			Agipak hv			0.625	1.900	2.675		
Viscosita' Marsh - sec/lt	48				active pits	236.3	187.4			Agipak lv				0.550	0.900		
lettura a 600 giri/ - -	60				circulating	286.0	240.0			Avagum			0.175	0.825	0.925		
lettura a 300 giri/ - -	43				res. pit 1	16.0	16.0			Avatensio			0.340	0.510	1.700		
Viscosita' Apparente - cps	30				res. pit 2	30.0	30.0			Potassa caustica				0.475	2.525		
Viscosita' Plastica - cps	17				res. pit 3	14.0	30.0			Visco xc 84				1.590	1.210		
Yield Value - g/100cm2	13				total res.	60.0	76.0			Granular m					0.840		
Gels 10" - g/100cm2	4				new mud		0.0			Granular f					1.300		
Gels 10' - g/100cm2	14				H ₂ O dil.		0.0			Bicarbonato potassio			0.300	0.950	1.550		
Filtrato API - cc	8				flows		0.0			Barite sfusa			30.000	63.000	20.500		
Ph - -	11				formation lost		0.0			Bentonite sx			0.600	8.200	1.900		
Pm - ccH2SO4N50	1.2				surface lost		15.0			Cloruro calcio polv.					2.200		
Pl - ccH2SO4N50	0.5				evacuation		15.0			De block s 200					1.600		
Mf - ccH2SO4N50	1				wetting		0.0			Avasil				0.800			
Cloruri - g/lt	1.4				total lost		30.0			Avacid f 25				0.600	1.000		
- PANNELLO	0.5				reserve mud					Potassio acetato			0.200	5.750	4.200		
Solidi - %invol.	12				density pit 1		1150.00			Victoal				2.925	2.075		
Sand Content - %invol	0.05				density pit 2		1350.00			Stearal lqd				0.100	0.620		
BMT - Kg/mc	50				density pit 3		1160.00			Polifluid				0.200	0.300		
Calcio - g/lt	0.2				REMARKS					Daily mud cost		LIT	12.247.300				
Potassio - g/l	3.5				LITOLOGIA: argilla					Other		LIT	102.623.900				
Letture a 6 giri/ - -	6				Scaricati alcuni prodotti come					Total mud cost		LIT	114.871.200				
Letture a 3 giri/ - -	5				sfidri: Agipak Hv- Avatensio					SOLIDS TREATMENTS							
N	0.571							machine	flowrate screens	light	heavy	hours					
K - lb/ft x 100 cmq	0.992							vibrovagli	60/ 80	0.000	0.000	19.00					
								Centrifuga	83	1110.000	1760.000	7.00					
								vibrovagli	60/ 80	0.000	0.000	19.00					
								Centrifuga	83	1110.000	1760.000	7.00					
								Centrifuga	133	1080.000	1860.000	7.00					

OPERATIONS	
00.00-02.30 DISCESA BHA; 02.30-05.00 FRESAGGIO CEMENTO; 05.00-24.00 TURBOPERFORATO	
AVA mud engineer FIORELLO ROSSI	



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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 18 26/04/1994												
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM													
depth at end of day	1630 m	flowrate 1600 l/min	pressure 100.0 atm.	n.6 drill collar 6"3/4 / n.9 heavy weight 5" /													
depth at start of day	1434 m	critical velocity	velocity in annulus														
progress	196 m	D.P. 137.85	D.P. 66.82	D.P. 5"													
drilling time	21h 00'	D.P. 135.49	D.P. 46.74	D.C. 6" 3/4													
Ø latest casing	9" 5/8	D.C. 147.97	D.C. 118.31	weight on the bit (Tons) 4.00													
Ø bit	8" 1/2	D.C. 140.01	D.C. 67.20	R.P.M. rotary 230													
Ø nozzles		lag time 35' 57"	cir. time 142' 40"	deviation 22.00													
TIME DISTRIBUTION		drilling 21h 00'	running	circul.	trip												
		PRODUCTS (Tons)		today's supplies	Consumption today progressive												
					Stock												
MUD TYPE F-WP-OK	DEPTH		MUD VOLUMES (m³)														
MUD PROPERTIES	m	m	m	start	end												
Densità - g/lt	1180			52.6	59.8												
Viscosità Marsh - sec/lt	58			187.4	170.2												
lettura a 600 giri/ - -	66			240.0	230.0												
lettura a 300 giri/ - -	50			16.0	16.0												
Viscosità Apparente - cps	33			30.0	30.0												
Viscosità Plastica - cps	16			30.0	30.0												
Yield Value - g/100cm2	17			76.0	76.0												
Gels 10" - g/100cm2	8			new mud 0.0													
Gels 10" - g/100cm2	22			H ₂ O dil. 0.0													
Filtrato API - cc	7			flows 0.0													
Ph - -	10			formation lost 0.0													
Pm - ccH2SO4N50	0.8			surface lost 5.0													
Pf - ccH2SO4N50	0.3			evacuation 5.0													
Mf - ccH2SO4N50	0.7			wetting 0.0													
Cloruri - g/lt	1.4			total lost 10.0													
- PANNELLO	1			reserve mud													
Solidi - %invol.	14			density pit 1 1150.00													
Sand Content - %invol	0.1			density pit 2 1350.00													
BMT - Kg/mc	52			density pit 3 1160.00													
Caldo - g/lt	0.2			REMARKS													
Potassio - g/l	3			LITOLOGIA : ARGILLA													
Lettura a 6 giri/ - -	16																
Lettura a 3 giri/ - -	16																
N	0.556																
K - lb/ft x 100 cmq	1.057																
OPERATIONS																	
00.00-11.30 TURBOPERFORATO 11.30-14.30 MANOVRA 14.30-24.00 TURBOPERFORATO																	
<table border="1"> <tr> <td colspan="2">Daily mud cost</td> <td>LIT</td> <td>3.848.000</td> </tr> <tr> <td colspan="2">Other</td> <td>LIT</td> <td>114.871.200</td> </tr> <tr> <td colspan="2">Total mud cost</td> <td>LIT</td> <td>118.719.200</td> </tr> </table>						Daily mud cost		LIT	3.848.000	Other		LIT	114.871.200	Total mud cost		LIT	118.719.200
Daily mud cost		LIT	3.848.000														
Other		LIT	114.871.200														
Total mud cost		LIT	118.719.200														
SOLIDS TREATMENTS																	
machine	flowrate screens	light	heavy	hours													
vibrovagli	60/ 80	0.000	0.000	21.00													
Centrifuga	83	1110.000	1750.000	7.00													
vibrovagli	60/ 60	0.000	0.000	21.00													
Centrifuga	83	1110.000	1750.000	7.00													
Centrifuga	133	1060.000	1800.000	7.00													

AVA mud engineer
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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 19 27/04/1994
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	1821 m	flowrate 1600 l/min	pressure 110.0 atm.	n.6 drill collar 6"3/4 / n.9 heavy weight 5" / n.187.3 drill pipe 5" /	
depth at start of day	1630 m	critical velocity	velocity in annulus		
progress	191 m	D.P. 137.23	D.P. 66.82	D.P. 5"	
drilling time	24h 00'	D.P. 135.03	D.P. 46.74	D.C. 6" 3/4	
Ø latest casing	9" 5/8	D.C. 146.67	D.C. 118.31	weight on the bit (Tons) 4.00	
Ø bit	8" 1/2	D.C. 139.26	D.C. 67.20	R.P.M. rotary 230	
Ø nozzles		lag time 23' 25"	cir. time 139' 06"	deviation 22.00	
TIME DISTRIBUTION		drilling 24h 00'	reaming	circul.	trip
		PRODUCTS (Tons)		today's supplies	Consumption today progressive
MUD TYPE F-WP-OK	DEPTH		MUD VOLUMES (m³)		Stock
MUD PROPERTIES	m	m	m	start	end
Densita' - g/l	1180			59.8	61.1
Viscosita' Marsh - sec/l	64			170.2	168.9
lettura a 600 giri/ - -	64			230.0	230.0
lettura a 300 giri/ - -	49			16.0	16.0
Viscosita' Apparente - cps	32			30.0	30.0
Viscosita' Plastica - cps	15			30.0	30.0
Yield Value - g/100cm2	17			76.0	76.0
Gels 10" - g/100cm2	9				
Gels 10' - g/100cm2	30				
Filtrato API - cc	9				
Ph - -	10				
Pm - ccH2SO4N50	0.8				
Pf - ccH2SO4N50	0.3				
Mf - ccH2SO4N50	0.6				
Cloruri - g/l	1.4				
- PANNELLO	1				
Solidi - %invol.	14				
BMT - Kg/mc	50				
Calcio - g/l	0.2				
Potassio - g/l	3				
Lettura a 6 giri/ - -	29				
Lettura a 3 giri/ - -	29				
N	0.569				
K - lb/ft x 100 cmq	0.889				
		hole			
		active pits			
		circulating			
		res. pit 1			
		res. pit 2			
		res. pit 3			
		total res.			
		new mud			
		H₂O dil.			
		flows			
		formation lost			
		surface lost			
		evacuation			
		wetting			
		total lost			
		reserve mud			
		density pit 1			
		density pit 2			
		density pit 3			
		REMARKS			
		LITOLOGIA : ARGILLA			
		Daily mud cost		LIT	7.250.000
		Other		LIT	118.719.200
		Total mud cost		LIT	125.969.200
		SOLIDS TREATMENTS			
		machine	flowrate screens	light	heavy
					hours
		vibrovgli	60/ 80	0.000	0.000
		Centrifuga	83	1110.000	1750.000
		vibrovgli	60/ 80	0.000	0.000
		Centrifuga	83	1110.000	1750.000
		Centrifuga	133	1060.000	1800.000
OPERATIONS		TURBOPERFORAZIONE			

AVA mud engineer
FIORELLO ROSSI

country	ITA	operator	AGIP S.p.A.		well	SAUDONE 1 D				
mud company	AVA S.p.a.	contractor			report #	20				
mud engineer	FIORELLO ROSSI	rig	IDECO 2100		date	28/04/1994				
DRILLING SITUATION		HYDRAULICS			ROTARY DRILL SYSTEM					
depth at end of day	1870 m	flowrate	pressure		n.6 drill collar 6"3/4 / n.9 heavy weight 5" / n.192.7 drill pipe 5" /					
		1600 l/min	110.0 atm.							
depth at start of day	1821 m	critical velocity	velocity in annulus							
progress	49 m	D.P.	137.23	D.P.	66.82	D.P.				
drilling time	6h 50'	D.P.	135.03	D.P.	46.74	D.C.				
Ø latest casing	9" 5/8	D.C.	146.67	D.C.	118.31	weight on the bit (Tons)				
Ø bit	8" 1/2	D.C.	139.26	D.C.	67.20	R.P.M. rotary				
Ø nozzles		lag time	24' 02"	cir. time	135' 52"	deviation				
TIME DISTRIBUTION		drilling	reaming	circul.	trip	PRODUCTS (Tons)	today's supplies	Consumption today	progressive	Stock
		6h 50'								
MUD TYPE F-WP-OK	DEPTH			MUD VOLUMES (m³)		Agipak hv	1.000	0.200	1.900	2.675
MUD PROPERTIES	m	m	m	start	end	Agipak lv				
Densita' - g/lt	1870			hole	61.1	62.7	Avagum		0.825	0.925
Viscosita' Marsh - sec/lt	64			active pits	168.9	162.3	Avatensio		0.510	1.700
lettura a 600 giri/ - -	64			circulating	230.0	225.0	Potassa caustica		0.475	2.525
lettura a 300 giri/ - -	45			res. pit 1	16.0	16.0	Visco xc 84		1.590	1.210
Viscosita' Apparente - cps	32			res. pit 2	30.0	30.0	Granular m			0.840
Viscosita' Plastica - cps	15			res. pit 3	30.0	30.0	Granular f			1.300
Yield Value - g/100cm2	17			total res.	76.0	76.0	Bicarbonato potassio		1.250	1.250
Gels 10" - g/100cm2	9			new mud		20.0	Barite sfusa		73.000	41.000
Gels 10' - g/100cm2	30			H ₂ O dil.		0.0	Bentonite sx		8.200	1.900
Filtrato API - cc	10			flows		0.0	Cloruro calcio polv.			2.200
Ph - -	10			formation lost		0.0	De block s 200			1.600
Pm - ccH2SO4N50	0.7			surface lost		5.0	Avasil		0.800	
Pf - ccH2SO4N50	0.25			evacuation		20.0	Avacid f 25		0.600	1.000
Mf - ccH2SO4N50	0.6			wetting		0.0	Potassio acetato		0.100	6.550
Solidi - %invol.	14			total lost		25.0	Victosol		0.100	3.225
Sand Content - %invol	0.1			reserve mud			Stearyl lqd		0.100	0.620
BMT - Kg/mc	56			density pit 1		1110.00	Polifluid	0.750	0.500	0.750
NaCl - g/lt	2.4			density pit 2		1180.00	Ecol-Hube	0.850		0.850
Calcio - g/lt	0.2			density pit 3		1180.00				
Potassio - g/l	2.5			REMARKS		Daily mud cost LIT 1.619.000				
Lettura a 6 giri/ - -	20			LITOLOGIA: ARGILLA		Other LIT 125.969.200				
Lettura a 3 giri/ - -	21					Total mud cost LIT 127.588.200				
N	0.768									
K - lb/ft x 100 cmq	0.223									
OPERATIONS						SOLIDS TREATMENTS				
00.00 06.30 TURBOPERFORAZIONE 06.30 - 24.00 MANOVRA DI ESTRAZIONE DISCESA E RIPASSO FORO						machine	flowrate screens	light	heavy	hours
						vibrovagli	60/ 80	0.000	0.000	6.50
						Centrifuga	83	1110.000	1750.000	6.00
						vibrovagli	60/ 80	0.000	0.000	6.50
						Centrifuga	83	1110.000	1750.000	6.00
						Centrifuga	133	1060.000	1800.000	6.00
						AVA mud engineer FIORELLO ROSSI				



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DAILY DRILLING MUD REPORT

country mud company mud engineer	ITA AVA S.p.a. FIORELLO ROSSI	operator contractor rig	AGIP S.p.A. IDECO 2100	well report # date	SAUDONE 1 D 21 29/04/1994
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	2060 m	flowrate 1800 l/min	pressure 100.0 atm.	n.6 drill collar 6"3/4 / n.9 heavy weight 5" / n.213.8 drill pipe 5" /	
depth at start of day	1870 m	critical velocity	velocity in annulus		
progress	190 m	D.P. 133.41	D.P. 75.18	D.P. 5"	
drilling time	15h 00'	D.P. 131.21	D.P. 52.59	D.C. 6" 3/4	
Ø latest casing	9" 5/8	D.C. 142.97	D.C. 133.10	weight on the bit (Tons) 7.00	
Ø bit	8" 1/2	D.C. 135.44	D.C. 75.61	R.P.M. rotary 140	
Ø nozzles		lag time 23' 31"	cir. time 120' 25"	deviation 22.00	
TIME DISTRIBUTION		drilling 15h 00'	returning	circul.	trip
		PRODUCTS (Tons)		today's supplies	Consumption today progressive
MUD TYPE F-WP-OK		DEPTH		Stock	
MUD PROPERTIES		m	m	m	
2060					
Densità - g/lt	1180	hole	62.7	69.0	1.900 2.675
Viscosità Marsh - sec/lt	64	active pits	162.3	156.0	1.450 1.000
lettura a 600 giri/ - -	62	circulating	225.0	225.0	
lettura a 300 giri/ - -	47	res. pit 1	16.0	16.0	0.825 0.925
Viscosità Apparente - cps	31	res. pit 2	30.0	30.0	0.850 1.360
Viscosità Plastica - cps	15	res. pit 3	30.0	30.0	0.475 2.525
Yield Value - g/100cm2	16	total res.	76.0	76.0	1.590 1.210
Gels 10" - g/100cm2	8	new mud		32.0	0.840 1.300
Gels 10" - g/100cm2	22	H ₂ O dil.		8.0	1.250 1.250
Filtrato API - cc	9	flows		0.0	73.000 41.000
Ph - -	9.5	formation lost		0.0	8.200 1.900
Pm - ccH ₂ SO ₄ N50	0.8	surface lost		10.0	2.200 1.600
Pf - ccH ₂ SO ₄ N50	0.3	evacuation		30.0	
Mf - ccH ₂ SO ₄ N50	0.5	wetting		0.0	0.800 1.000
Solidi - %invol.	14	total lost		40.0	0.600 1.000
BMT - Kg/mc	49	reserve mud			7.325 2.625
NaCl - g/lt	2.4	density pit 1		1110.00	3.225 1.775
Calcio - g/lt	0.2	density pit 2		1190.00	0.100 0.620
Potassio - g/lt	3.5	density pit 3		1190.00	0.150 0.650
Lettura a 6 giri/ - -	27	REMARKS		Daily mud cost LIT 6.795.550	
Lettura a 3 giri/ - -	27	LITOLOGIA: ARGILLA		Other LIT 127.588.200	
N	0.569	# SCARICATI n° 2 FUSI		Total mud cost LIT 194.383.750	
K - lb/ft x 100 cmq	0.889	DI AVATENSIO COME SFREDDO.		SOLIDS TREATMENTS	
OPERATIONS		00.00 - 08.00 R.PASSO TORO (1388.1870)		machine flowrate light heavy hours	
		09.00 - 24.00 PERFORAZIONE		screens	
				Centrifuga 83 1110.000 1700.000 10.00	
				vibrovasi 60/ 80 0.000 0.000 15.00	
				Centrifuga 83 1100.000 1750.000 10.00	
				vibrovasi 60/ 80 0.000 0.000 15.00	
				Centrifuga 133 1060.000 1800.000 0.00	
				AVA mud engineer FIORELLO ROSSI	



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DAILY DRILLING MUD REPORT

country	ITA	operator	AGIP S.p.A.	well	SAUDONE 1 D
mud company	AVA S.p.a.	contractor		report #	22
mud engineer	FIGRELLO ROSSI	rig	IDECO 2100	date	30/04/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	2079 m	flowrate 1800 l/min	pressure 110.0 atm.	n.6 drill collar 6"3/4 / n.9 heavy weight 5" / n.216.0 drill pipe 5" /	
depth at start of day	2060 m	critical velocity	velocity in annulus		
progress	19 m	D.P. 121.16	D.P. 75.18	D.P. 5"	
drilling time	3h 00'	D.P. 118.94	D.P. 52.59	D.C. 6" 3/4	
Ø latest casing	9" 5/8	D.C. 130.72	D.C. 133.10	weight on the bit (Tons) 4.00	
Ø bit	8" 1/2	D.C. 123.20	D.C. 75.61	R.P.M. rotary 140	
Ø nozzles		lag time 23' 43"	cir. time 117' 36"	deviation 0.00	

TIME DISTRIBUTION		drilling	reaming	circul.	trip	PRODUCTS (Tons)	today's supplies	Consumption		Stock
		3h 00'						today	progressive	
MUD TYPE FW-PO-K	DEPTH	MUD VOLUMES (m ³)				Agipak hv			1.900	2.675
MUD PROPERTIES	m 2079	m	m	start	end	Agipak lv		0.100	1.550	0.900
Densita' - g/l	1180			hole	69.0	69.6	Avagum		0.825	0.925
Viscosita' Marsh - sec/l	50			active pits	156.0	150.4	Avatensio	0.340	1.190	1.020
lettura a 600 giri/ - -	56			circulating	225.0	220.0	Potassa caustica		0.475	2.525
lettura a 300 giri/ - -	41			res. pit 1	16.0	16.0	Visco xc 84		1.590	1.210
Viscosita' Apparente - cps	28			res. pit 2	30.0	30.0	Granular m			0.840
Viscosita' Plastica - cps	15			res. pit 3	30.0	30.0	Granular f			1.300
Yield Value - g/100cm2	13			total res.	76.0	76.0	Bicarbonato potassio		1.250	1.250
Gels 10" - g/100cm2	7			new mud		30.0	Barite sfusa	15.000	88.000	26.000
Gels 10' - g/100cm2	14			H ₂ O dil.		10.0	Bentonite sx		8.200	1.900
Filtrato API - cc	8			flows		0.0	Cloruro calcio polv.			2.200
Ph - -	9			formation lost		0.0	De block s 200			1.600
Pm - ccH2SO4N50	0.4			surface lost		5.0	Avasil		0.800	
Pf - ccH2SO4N50	0.2			evacuation		40.0	Acacid f 25		0.600	1.000
Mf - ccH2SO4N50	0.3			wetting		0.0	Potassio acetato	0.500	7.825	2.125
Solidi - %invol.	13			total lost		45.0	Victosol	0.150	3.375	1.625
BMT - Kg/mc	42			reserve mud			Stearal lqd		0.100	0.620
NaCl - g/l	2.4			density pit 1		1110.00	Poliifluid	0.350	1.000	0.250
Calcio - g/l	0.1			density pit 2		1180.00	Ecol-tube	0.510	0.510	0.340
Potassio - g/l	3.2			density pit 3		1180.00				
Lettura a 6 giri/ - -	11			REMARKS			DAILY MUD COST			
Lettura a 3 giri/ - -	9			LITOLOGIA: ARGILLA E CALCARE			LIT 11.856.300			
N	0.637						Other LIT 134.383.750			
K - lb/ft x 100 cmq	0.506						Total mud cost LIT 146.240.050			

SOLIDS TREATMENTS				
machine	flowrate screens	light	heavy	hours
vibrovalgi	60/ 80	0.000	0.000	15.00
Centrifuga	83	1110.000	1700.000	4.00
vibrovalgi	60/ 80	0.000	0.000	15.00
Centrifuga	83	1110.000	1700.000	4.00
Centrifuga	133	1060.000	1800.000	4.00

OPERATIONS
00.00-01.00 PERFORAZIONE 01.00-09.00 MANOVRA E CIRCOLAZIONE 09.00-10.00
PERFORAZIONE 10.00-10.30 CI
RCOLAZIONE 10.30-11.30 PERFORATO 11.30-24.00 CICOLAZIONE E MANOVRA

AVA mud engineer
FIGRELLO ROSSI



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DAILY DRILLING MUD REPORT

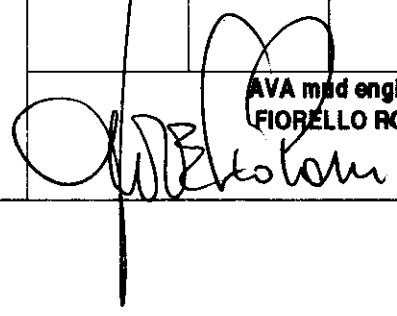
country	ITA	operator	AGIP S.p.A.	well	SAUDONE 1 D
mud company	AVA S.p.a.	contractor		report #	23
mud engineer	IORELLO ROSSI	rig	IDECO 2100	date	01/05/1994

DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	2102 m	flowrate 1500 l/min	pressure 100.0 atm.	n.6 drill collar 6"3/4 / n.9 heavy weight 5" / n.218.5 drill pipe 5" /	
depth at start of day	2079 m	critical velocity	velocity in annulus		
progress	23 m	D.P.	136.51	D.P.	62.65
drilling time	4h 00'	D.P.	133.79	D.P.	43.82
Ø latest casing	9" 5/8	D.C.	148.29	D.C.	110.92
Ø bit	8" 1/2	D.C.	139.02	D.C.	63.00
Ø nozzles		lag time	28' 52"	cir. time	139' 04"
				weight on the bit (Tons)	7.00
				R.P.M. rotary deviation	140 0.00

TIME DISTRIBUTION		drilling	reaming	circul.	trip	PRODUCTS (Tons)	today's supplies	Consumption		Stock
		4h 00'						today	progressive	
MUD TYPE F-WP-OK	DEPTH	MUD VOLUMES (m³)				Agipak hv			1.900	2.675
MUD PROPERTIES	m	m	m	start	end	Agipak lv			1.550	0.900
	2102					Avagum			0.825	0.925
Densita' - g/l	1160			hole	69.6	70.5	Avatensio		1.190	1.020
Viscosita' Marsh - sec/l	70			active pits	150.4	146.5	Potassa caustica		0.475	2.525
lettura a 600 giri/ - -	68			circulating	220.0	217.0	Visco xc 84		1.590	1.210
lettura a 300 giri/ - -	50			res. pit 1	16.0	16.0	Granular m			0.840
Viscosita' Apparente - cps	34			res. pit 2	30.0	10.0	Granular f			1.300
Viscosita' Plastica - cps	18			res. pit 3	30.0	10.0	Bicarbonato potassio		1.250	1.250
Yield Value - g/100cm2	16			total res.	76.0	36.0	Barite sfusa	6.000	94.000	20.000
Gels 10" - g/100cm2	8			new mud		0.0	Bentonite sx	1.900	10.100	
Gels 10' - g/100cm2	25			H2O dil.		0.0	Cloruro calcio polv.			2.200
Filtrato API - cc	8			flows		0.0	De block s 200			1.600
Ph - -	10			formation lost		43.0	Avasil		0.800	
Pm - ccH2SO4N50	0.9			surface lost		0.0	Avacid f 25		0.600	1.000
Pf - ccH2SO4N50	0.3			evacuation		0.0	Potassio acetato		7.825	2.125
Mf - ccH2SO4N50	0.6			wetting		0.0	Victosal		3.375	1.625
Solidi - %invol.	13			total lost		43.0	Stearal lqd		0.100	0.620
BMT - Kg/mc	42			reserve mud			Polifluid		1.000	0.250
NaCl - g/l	2.4			density pit 1		1110.00	Ecol-hube	0.340	0.850	
Calcio - g/l	0.3			density pit 2		1180.00				
Potassio - g/l	2.5			density pit 3		1180.00				
Lettura a 6 giri/ - -	22			REMARKS			Daily mud cost	LIT	2.791.000	
Lettura a 3 giri/ - -	21			LITOLOGIA: ARGILLA			Other	LIT	146.240.050	
N	0.613						Total mud cost	LIT	149.031.050	
K - lb/ft x 100 cmq	0.742						SOLIDS TREATMENTS			
				machine	flowrate screens	light	heavy	hours		
				vibrovgli	60/ 80	0.000	0.000	15.00		
				vibrovgli	60/ 80	0.000	0.000	15.00		
				Centrifuga	133	1110.000	1800.000	8.00		

OPERATIONS 00.00-05.00 Logs elettrici 05.00-09.30 Discesa al fondo	
09.30-12.30 Perforazione 12.30-13.30 Controllo statico per assorbimenti	
13.30-15.30 Estrazione in scarpa 15.30 - Discesa al fondo Perforazione, Circolazione, Estrazione	

AVA mud engineer
IORELLO ROSSI



country	ITA	operator	AGIP S.p.A.	well	SAUDONE I D
mud company	AVA S.p.a.	contractor		report #	24
mud engineer	FIORELLO ROSSI	rig	IDECO 2100	date	02/05/1994
DRILLING SITUATION		HYDRAULICS		ROTARY DRILL SYSTEM	
depth at end of day	2102 m	flowrate 0 l/min	pressure 0.0 atm.		
depth at start of day	2102 m	critical velocity	velocity in annulus		
progress	0 m	D.P.	D.P.	D.P.	
drilling time	0h 00'	D.P.	D.P.	D.C.	
Ø latest casing	9" 5/8	D.C.	D.C.	weight on the bit (Tons)	
Ø bit	8" 1/2	D.C.	D.C.	R.P.M. rotary	
Ø nozzles		lag time 0' 00"	cir. time 0' 00"	deviation 0.00	
TIME DISTRIBUTION		drilling 0h 00'	reaming	circul.	trip
MUD TYPE F-WP-OK		DEPTH		PRODUCTS (Tons)	
MUD PROPERTIES		MUD VOLUMES (m³)		Consumption	
	m	m	m	today's supplies	today progressive Stock
	2102				
Densita' - g/lit	1160	hole	70.5	78.9	1.900 2.675
Viscosita' Marsh - sec/lit	70	active pits	146.5	138.1	1.775 0.675
lettura a 600 giri/ - -	68	circulating	217.0	217.0	
lettura a 300 giri/ - -	50	res. pit 1	16.0	16.0	1.000 0.750
Viscosita' Apparente - cps	34	res. pit 2	10.0	10.0	1.190 1.020
Viscosita' Plastica - cps	18	res. pit 3	10.0	10.0	0.475 2.525
Yield Value - g/100cm²	16	total res.	36.0	36.0	1.590 1.210
Gels 10" - g/100cm²	8	new mud		0.0	1.300 1.300
Gels 10' - g/100cm²	25	H₂O dil.		0.0	Bicarbonato potassio 1.250 1.250
Filtrato API - cc	8	flows		0.0	Barite sfusa 94.000 20.000
Ph - -	10	formation lost		0.0	Bentonite sx 10.100
Pm - ccH₂SO₄N50	0.9	surface lost		0.0	Cloruro calcio polv. 2.200
Pf - ccH₂SO₄N50	0.3	evacuation		0.0	De block s 200 1.800
Mf - ccH₂SO₄N50	0.6	wetting		0.0	Avasil 0.800
- PANNELLO	1	total lost		0.0	Avacid f 25 0.600 1.000
Solidi - %invol.	13	reserve mud			Potassio acetato 0.375 8.200 1.750
BMT - Kg/mc	42	density pit 1		1110.00	Victosal 0.150 3.525 1.475
NaCl - g/lit	2.4	density pit 2		1180.00	Stearal lqd 0.080 0.180 0.540
Calcio - g/lit	0.3	density pit 3		1180.00	Polifluid 1.000 0.250
Potassio - g/l	2.5	REMARKS		Daily mud cost LIT 4.792.050	
Lettura a 6 giri/ - -	22	LITOLOGIA : DOLOMIA		Other LIT 149.031.050	
Lettura a 3 giri/ - -	21			Total mud cost LIT 153.823.100	
N	0.613			SOLIDS TREATMENTS	
K - lb/ft x 100 cmq	0.742				
OPERATIONS					
00.00 - 24.00 LOGS ELETTRICI					
R. FANGO = 0,835	26°C	SALINITA' EQUIV.			
R FILTRO = 0,622	21°C	13,2 gr/e			
R PANN. = 1,27	20°C				
				AVA mud engineer FIORELLO ROSSI	

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