

DATE 23 DECEMBER 19 90 DEPTH _____ M

OPERATOR AGIP SPA		CONTRACTOR PERGEMINE		RIG NO. AE 14	
ADDRESS RIG		ADDRESS RIG		SPUD DATE	
REPORT FOR MR. D. RAGUSA		REPORT FOR MR. E. PASQUALE			
WELL NAME AND NO. SORIANO SUD -1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area F066IA	
				COUNTRY ITA9	
OPERATION NIPPLE UP		CASING DRIVEN SURFACE CONDUCTOR 13 3/8 IN. at 28 M.		MUD VOLUME (m³) HOLE PITS O 92	
PRESENT ACTIVITY BIT SIZE (IN.) NO.		INTERMEDIATE IN. at M.		PUMP SIZE X IN ANNULAR VEL (M/MIN) OPPOSITE DP	
DRILL PIPE SIZE TYPE		TOTAL CIRCULATING VOLUME 92		PUMP MAKE NATIONAL MODEL N.300/100/130 STROKE/MIN	
DRILL COLLAR SIZE LENGHT		PRODUCTION OR LINER IN. at M. FW-GE		LT/STROKE STROKE/MIN	
				LT/MIN.	
Sample from ☐ Flowline ☐ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR	
Time Sample Taken		2400		Desilter m.f. 6 OF 8 CONE	
Depth M.		-		Degasser POUR-BGY	
Weight ☐ (ppg) ☒ (G.P.L.)		1040		Shaker 20% 20%	
Funnel Viscosity (SEC./LT.) API at °C		75		Desander NONE	
Plastic Viscosity cp at °C		15		Other	
Yield Point (GR/100 CM²)		18		MUD PROPERTIES SPECIFICATIONS	
Gel Strenght (GR/100 CM²) 10 sec/10 min		5-10 - -		BY AUTHORITY ☐ DRILLING CONTRACTOR ☒ OPERATOR'S REPRESENTATIVE	
pH ☒ Strip ☐ Meter		10.5		MATERIALS USED	
Filtrate API (ml/30 min)		N.L.		PRODUCTS AMOUNT COST	
API HP-HT Filtrate (ml/30 min) °C				BENTONITE 7940 kg 1,905,600	
Cake Thickness (mm) API ☐ HP-HT ☐				CAUSTICA 150 kg 115,500	
Alkalinity, Mud (Pm)					
Alkalinity, Filtrate (Pt/Mf)		- - -			
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl		1.2			
Calcium ☐ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				CUMULATIVE COST LIT 2,021,100 DAILY COST LIT 2,021,100	
Sand Content (% by Vol)				TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)				PRODUCT AMOUNT PRODUCT AMOUNT	
Oil Content (% by Vol)				BENTONITE 7940 kg START O	
Water Content (% by Vol)				CAUSTICA 150 kg PREMIX 92	
Methylene Blue Capacity (me/ml mud)				DILUTION O	
PV/YP RATIO				S. LOSS O	
				H. LOSS O	
				FINAL 92	
				CUM MIX 92	
				CUM LOSS O	
REMARKS MIXED GEL AND CAUSTIC SPUD AND 13 3/8 CONDUCTOR AT 28M. NIPPLE UP FOR SPUD. 1st DAY PERGEMINE SERVICE				STOCK	
				BARITE 60 MT	
				BENTONITE 36450	
				WATER	

THE RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY N L INDUSTRIES, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

REPRESENTATIVE	RAY OUTMA	HOME ADDRESS	Rm #115 HOLIDAY INN	TELEPHONE	6881 41213
		WAREHOUSE LOCATION		TELEPHONE	

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DATE 24 DEC 1964 9:30

DEPTH _____ M

OPERATOR AD SS KIP S.P.O.		CONTRACTOR ADDRESS PERGEMINE		RIG NO. AE 14
REI AT FOR MR 2 RAGUSA		REPORT FOR MR. E. PASQUALE		SPUD DATE
WELL NAME AND NO. DALINO SUB-1		FIELD OR BLOCK NO. M. CALVERLO		Province or offshore area FOGGIA
				COUNTRY ITALY
OPERATION PREV. ACTIVITY DRIVEN		CASING SURFACE 13 7/8 IN. at 28 M.		HOLE MUD VOLUME (m³) FLU - GE
BIT (IN.) NO.		INTERMEDIATE IN. at		PITS
DRILL PIPE SIZE TYPE		PRODUCTION OR LINER IN. at		TOTAL CIRCULATING VOLUME IN STORAGE
DRILL COLLAR SIZE		LENGHT		LIT/STROKE STROKE/MIN LT/MIN.
Sample from ☐ Flowline ☐ Pit Flowline Temperature °C		MUD PROPERTIES		EQUIPMENT
Time Sample Taken		SIZE HRS/TOUR		SIZE HRS/TOURS
Depth m		Centrifuge		Desilter
Weight (ppg) ☒ (G.P.L.)		Degasser		Shaker
Funnel viscosity (SEC./LT.) API at °C		Desander		Other
Plastic viscosity cp at °C		MUD PROPERTIES SPECIFICATIONS		
Yield Point (GR/100 CM²)		BY AUTHORITY ☐ DRILLING CONTRACTOR		
Gel Strength (GR/100 CM²) 10 sec/10 min		☒ OPERATOR'S REPRESENTATIVE		
pH ☒ Strip ☐ Meter		MATERIALS USED		
Filtrate API (ml/30 min)		PRODUCTS AMOUNT COST		
API HP HT Filtrate (ml/30 min) °C		NONE NONE		
Cake Thickness (mm) API ☐ HP-HT ☐				
Alkalinity Mud (P/m)				
Alkalinity Filtrate (P/mf)				
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl				
Calcium ☐ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				
Sand Content (% by Vol)		CUMULATIVE COST DAILY COST		
Solids Contents (% by Vol)		LIT 2,021,000 LIT 2,021,000		
Oil Content (% by Vol)		TOTAL MATERIAL CONSUMPTION		
Water Content (% by Vol)		PRODUCT AMOUNT PRODUCT AMOUNT m³		
Methylene Blue Capacity (me/ml mud)		BENTONITE 7940 kg START 92		
CV/PF RATIO		CAUSTICA 150 kg MIX 0		
REMARKS NIPPLE UP FOR SPUD.		S. LOSS 0		
		H. LOSS 0		
		FINAL 92		
		Cum mix 92		
		Cum loss 0		
		STOCK BARITE 60 mt WATER 25 m³ BENTONITE 21.45 mt		

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REPRESENTATIVE RAY DUMA

HOME ADDRESS
Rm 115 Holiday Inn
WAREHOUSE LOCATION

TELEPHONE 0881 41213

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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 3

DATE 25 OCT 1990 DEPTH 26 M.

OPERATOR AGIP SPA	CONTRACTOR PERGEARNE	RIG NO. AE14
ADDRESS R16	ADDRESS R16	SPUD DATE 25/12/90
REPORT FOR MR. O. RAGUSA	REPORT FOR MR. E. PASQUALE	

WELL NAME AND NO. SORIANO SUB 1	FIELD OR BLOCK NO. M. COLVERIO	Province or offshore area F0661A	COUNTRY ITALY
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OPERATION DRILLING	CASING 13 3/8" at 28 M.	MUD VOLUME (m³) HOLE 1.8 PITS 77 TOTAL CIRCULATING VOLUME 78.8	CIRCULATION DATA PUMP SIZE X IN 6 1/2 x 10 ANNULAR VEL (M/MIN) OPPOSITE DP - PUMP MAKE NATIONAL MODEL H1304 10 P130 OPPOSITE COLLAR - LT/STROKE STROKE/MIN 87 CIRCULATING PRESSURE KG/cm² 70 BOTTOMS UP (MIN.) 1 SYSTEM TOTAL (MIN.) 65
BIT SIZE (IN.) 12 1/4	NO. 1	IN STORAGE 28 m³ @ 1430 GPM	LT/MIN. 1200
DRILL PIPE SIZE 8	TYPE -	PRODUCTION OR LINER IN. at M.	
DRILL COLLAR SIZE 8	LENGTH 26	FW GE	

Sample from ☐ Flowline ☒ Pit	MUD PROPERTIES	EQUIPMENT
Flowline Temperature °C		SIZE HRS/TOUR SIZE HRS/TOURS
Time Sample Taken	2400	Centrifuge NONE
Depth M.	2600	Degasser -
Weight ☐ (ppg) ☒ (G.P.L.)	1070	Desander NONE

Funnel Viscosity (SEC./LT.) API at °C	66	MUD PROPERTIES SPECIFICATIONS
Plastic Viscosity cp at °C	19	
Yield Point (GR/100 CM²)	14	BY AUTHORITY ☐ DRILLING CONTRACTOR
Gel Strength (GR/100 CM²) 10 sec/10 min	5-11	☒ OPERATOR'S REPRESENTATIVE

pH ☒ Strip ☐ Meter	10.5	MATERIALS USED
Filtrate API (ml/30 min)	N.L.	
API HP-HT Filtrate (ml/30 min) °C	-	PRODUCTS AMOUNT COST
Cake Thickness (mm) API ☐ HP-HT ☐	-	BARITE 20 MT 3,580,000
Alkalinity, Mud (Pm)	1.6	BENTONITE 2900 KG 648,000
Alkalinity, Filtrate (P/Mf)	12.28	CAUSTIC A 25 KG 19,250
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl	1.2	

Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)	0.60	CUMULATIVE COST LIT 6268.250 DAILY COST LIT 4,247.250
Sand Content (% by Vol)	0.1	TOTAL MATERIAL CONSUMPTION
Solids Contents (% by Vol)	5	PRODUCT AMOUNT PRODUCT AMOUNT

Oil Content (% by Vol)	-	BARITE 20 MT 92
Water Content (% by Vol)	95	BENTONITE 10640 KG 20
Methylene Blue Capacity (me/ml mud)	62	CAUSTIC A 175 KG 2
PV/YP RATIO	1.4	DILUTION 7.2
REMARKS	COMPLETE MUD LOG DRILL RAT HOLE + MAKE HOLE, MAKE UP BHA SAND WELL.	S. LOSS 0
		H. LOSS 106.8
		FINAL 114
		C. MIX 7.2
		C. LOSS

STOCK	BARITE 40 MT	BENTONITE 28.510 MT
	WATER 20 m³	

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DATE 26 DECEMBER 19 90 DEPTH 72 M

OPERATOR AGIP SPA		CONTRACTOR PERGEMINE		RIG NO. AE14	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25/12/90	
REPORT FOR MR. O. RAGUSA		REPORT FOR MR. E			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION DRILLING		CASING 13 3/4 SURFACE 28 M. INTERMEDIATE IN. at M. PRODUCTION OR LINER IN. at M.		MUD VOLUME (m³) HOLE 3-7 PITS 71.7 TOTAL CIRCULATING VOLUME 75.4 IN STORAGE 28 m³ @ 1430 G/L	
PRESENT ACTIVITY DRILLING				CIRCULATION DATA PUMP SIZE X IN 6 1/2 x 1 1/2 ANNULAR VEL (M/MIN) OPPOSITE DP PUMP MAKE NATIUM MODEL N 1300 OPPOSITE COLLAR 27.5 LT/STROKE 80 STROKE/MIN CIRCULATING PRESSURE KG/cm² 50 LT/MIN. 1200 BOTTOMS UP (MIN.) 2.6 SYSTEM 62 TOTAL (MIN.)	
BIT SIZE (IN.) 12 1/4		NO. 1			
DRILL PIPE SIZE 8		TYPE 72			
DRILL COLLAR SIZE 8		LENGHT 72			
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR	
Time Sample Taken				SIZE HRS/TOURS	
Depth M.				Centrifuge NONE	
Weight ☐ (ppg) ☒ (G.P.L.)				Degasser ☒	
Funnel Viscosity (SEC./LT.) API at °C				Desander NONE	
Plastic Viscosity cp at °C				Desilter 608	
Yield Point (GR/100 CM²)				Shaker 20 20 20	
Gel Strenght (GR/100 CM²) 10 sec/10 min				Other	
pH ☒ Strip ☐ Meter				MUD PROPERTIES SPECIFICATIONS	
Filtrate API (ml/30 min)				BY AUTHORITY ☐ DRILLING CONTRACTOR	
API HP-HT Filtrate (ml/30 min) °C				☒ OPERATOR'S REPRESENTATIVE	
Cake Thickness (mm) API ☒ HP-HT ☐				MATERIALS USED	
Alkalinity, Mud (Pm)				PRODUCTS AMOUNT COST	
Alkalinity, Filtrate (P/mf)				BENTONITE 1350 kg 324,000	
Salt ☐ ppm Chloride ☐ ppm				CAUSTICA 25 kg 19,250	
☒ gpl ☐ gpl					
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				CUMULATIVE COST 6,611,500 DAILY COST 343,250	
Sand Content (% by Vol)				TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)				PRODUCT AMOUNT PRODUCT AMOUNT	
Oil Content (% by Vol)				BARITE 20 mt START 106.8	
Water Content (% by Vol)				BENTONITE 11.990 MIX 20	
Methylene Blue Capacity (me/ml mud)				CAUSTICA 200 DILUTION 10	
PV/VP RATIO				S. LOSS 33.4	
				H. LOSS 0	
				FINAL 103.4	
				E. MIX 144	
				C. LOSS 406	
REMARKS DRILL GUMBO CLASSEMENT				STOCK	
SAMPLE PLUGGING OF FLOWLINE,				BARITE 40 mt	
CAUSING ALSO LOSS TO WASTE				WATER 30 m³	
PIT.				BENTONITE 27.16 mt	

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REPRESENTATIVE	HOME ADDRESS	TELEPHONE
RAY DUMMA	H. H. FG. JNN Rm 115	0881 41213
	WAREHOUSE LOCATION	TELEPHONE

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OPERATOR AGIA		CONTRACTOR PERGEHINE		RIG NO. NAT. 8013	
ADDRESS RIC		ADDRESS RIC		SPUD DATE 25-12-90	
REPORT FOR MR. M. CAPORALI		REPORT FOR MR. PASQUALE			
WELL NAME AND NO. SORIANO SUN 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION TRIPPING		CASING SURFACE 13 3/8 IN. at 28 M.		MUD VOLUME (m³) 9 PITS 52	
PRESENT ACTIVITY TRIPPING				CIRCULATION DATA	
BIT SIZE (IN.) 12 1/4		NO. 1		PUMP SIZE X IN 6 3/4 x 16	
DRILL PIPE SIZE 5		TYPE HW		PUMP MAKE NATIONAL	
DRILL COLLAR SIZE 8		LENGHT 96		MODEL	
				LT/STROKE STROKE/MIN 1.300	
				CIRCULATING PRESSURE KG/cm² —	
				OPPOSITE DP —	
				OPPOSITE COLLAR —	
				CIRCULATING PRESSURE KG/cm² —	
				BOTTOMS UP (MIN.) —	
				SYSTEM TOTAL (MIN.) —	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR SIZE HRS/TOURS	
Time Sample Taken		24.00		Centrifuge —	
Depth M.		154		Degasser	
Weight ☐ (ppg) ☒ (G.P.L.)		1110		Desander —	
Funnel Viscosity (SEC./LT.) API at °C		63		Desilter	
Plastic Viscosity cp at °C		15		Shaker 20/10 20/10	
Yield Point (GR/100 CM²)		9		Other K.C. 150	
Gel Strenght (GR/100 CM²) 10 sec/10 min		3-12		MUD PROPERTIES SPECIFICATIONS	
pH ☒ Strip ☐ Meter		10		BY AUTHORITY ☐ DRILLING CONTRACTOR	
Filtrate API (ml/30 min)		13.2		☐ OPERATOR'S REPRESENTATIVE	
API HP-HT Filtrate (ml/30 min) °C		—		MATERIALS USED	
Cake Thickness (mm) API ☐ HP-HT ☐		2		PRODUCTS AMOUNT COST	
Alkalinity, Mud (Pm)		1.1		BENTONITE 1500 kg 360.000	
Alkalinity, Filtrate (Pl/Ml)		1-2.1		CAUSTIC SODA 50 kg 38.500	
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl		1.6		CUMULATIVE COST 7.010.000 DAILY COST 398.500	
Calcium ☐ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		0.1		TOTAL MATERIAL CONSUMPTION	
Sand Content (% by Vol)		0.2		PRODUCT AMOUNT PRODUCT AMOUNT	
Solids Contents (% by Vol)		8		BARITE 20 H.T. NEW MUD MIX 40 182.8	
Oil Content (% by Vol)		—		BENTONITE 13.49 H.T. DILUTION — 12	
Water Content (% by Vol)		92		CAUSTIC SODA 0.25 H.T. SURFACE LOSS 62.4 95.8	
Methylene Blue Capacity (me/ml mud) Kg/m³		60		FORMATION LOSS — —	
PV/YP RATIO		1.7		MUD DUMPED — —	
REMARKS DRILLED AHEAD TO 154 MTS THROUGH CLAY FORMATION WITH SEVERE PLUGGING PROBLEMS CAUSING MUD LOSS TO WASTE PIT - LARGE VOLUMES LOST FROM SHAKERS PARTIALLY REPLACED WITH NEW MUD - CIRCULATED - PULLING OUT OF HOLE				STOCK BARITE 40 H.T. BENTONITE 25.66 H.T.	
				WATER	

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REPRESENTATIVE <i>No Pistol</i>	HOME ADDRESS <i>HOTEL PRESIDENT - ROOM 224</i>	TELEPHONE <i>0881-617930</i>
	WAREHOUSE LOCATION	TELEPHONE

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DATE 28-12-

1

DEPTH 290

M

OPERATOR AGIA		CONTRACTOR PERGEMINE		RIG NO. NAT. 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. CAPORALI		REPORT FOR MR. ZINGARELLI			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOSSIA	
				COUNTRY ITALY	
OPERATION DRILLING		CASING 13 3/4 IN. at 28 M.		MUD VOLUME (m³) 70	
PRESENT ACTIVITY DRILLING		SURFACE 19		PITS 70	
BIT SIZE (IN.) 12 1/4		NO. 1		PUMP SIZE X IN 10 X 130	
DRILL PIPE SIZE 5		TYPE HWY		PUMP MAKE NATIONAL	
DRILL COLLAR SIZE 8		LENGHT 96		MODEL N1300 - 10N130	
				LT/STROKE 27.5/17	
				STROKE/MIN 1.780	
				ANNULAR VEL (M/MIN) 28.2	
				OPPOSITE DP 41	
				OPPOSITE COLLAR 41	
				CIRCULATING PRESSURE KG/cm² 56	
				BOTTOMS UP (MIN.) 9.2	
				SYSTEM TOTAL (MIN.) 50'	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR	
Time Sample Taken		24.00		SIZE HRS/TOURS	
Depth M.		290		Centrifuge ☒	
Weight ☐ (ppg) ☒ (G.P.L.)		1130		Degasser ☒	
Funnel Viscosity (SEC./LT.) API at °C		57		Desander ☒	
Plastic Viscosity cp at °C		16		Desilter ☒	
Yield Point (GR/100 CM²)		10		Shaker 20/40 20/20	
Gel Strength (GR/100 CM²) 10 sec/10 min		4-16		Other H.C. 150	
pH ☒ Strip ☐ Meter		9.5		MUD PROPERTIES SPECIFICATIONS	
Filtrate API (ml/30 min)		12.8		BY AUTHORITY ☐ DRILLING CONTRACTOR	
API HP-HT Filtrate (ml/30 min) °C		—		☐ OPERATOR'S REPRESENTATIVE	
Cake Thickness (mm) API ☐ HP-HT ☐		1.5		MATERIALS USED	
Alkalinity, Mud (Pm)		1.0		PRODUCTS	
Alkalinity, Filtrate (Pm)		8-15		AMOUNT	
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl		1.6		COST	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		0.1		CUMULATIVE COST 7.010.000 DAILY COST —	
Sand Content (% by Vol)		0.5		TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)		7		PRODUCT	
Oil Content (% by Vol)		—		AMOUNT	
Water Content (% by Vol)		93		BARITE 20 H.T.	
Methylene Blue Capacity (me/ml mud) Kg/m³		57		BENTONITE 13.49 H.T.	
PV/YP RATIO		1.6		CAUSTIC SODA 0.25 H.T.	
REMARKS DRILLED TO 290 MTS - LARGE VOLUME				NEW MUD MIXED — 182.8	
LOST FROM SHAKER - MUD RECOVERED FROM CORRAL				DILUTION 20 32	
HEAVY DILUTION TO CONTROL MUD WEIGHT AND VISCOSITY				SURFACE LOSS 20 115.8	
				FORMATION LOSS — —	
				MUD DUMPED — —	
				MUD RECOVERED FROM CORRAL 80 80	
				STOCK	
				BARITE 40 H.T.	
				BENTONITE 25.66 H.T.	
				WATER	

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REPRESENTATIVE

HOME ADDRESS

^S HOTEL PRESIDENT - ROOM 214

TELEPHONE

TELEPHONE
0881-617930

WAREHOUSE LOCATION

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OPERATOR ACIP	CONTRACTOR PERGEMINE	RIG NO. NATIONAL 80B
ADDRESS RIG	ADDRESS RIG	SPUD DATE 25-12-90
REPORT FOR MR. CAPORALI	REPORT FOR MR. ZINGARELLI	

WELL NAME AND NO. SORIANO SUD 1	FIELD OR BLOCK NO. M. CALVELLO	Province or offshore area FOGGIA	COUNTRY ITALY
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OPERATION	CASING	MUD VOLUME (m³)	CIRCULATION DATA
PRESENT ACTIVITY PREP. TO RUN 9 5/8" ESC.	SURFACE IN. at M. 83	HOLE 60	PUMP SIZE X IN NATIONAL
BIT SIZE (IN.) 9 5/8"	INTERMEDIATE IN. at M. 83	TOTAL CIRCULATING VOLUME 83	PUMP MAKE NATIONAL
DRILL PIPE SIZE 9 5/8"	PRODUCTION OR LINER IN. at M. 83	IN STORAGE 20 @ 1330	MODEL N1300 - 10 N130
DRILL COLLAR SIZE 9 5/8"			LT/STROKE 27.5/17
			STROKE/MIN
			LT/MIN.
			ANNULAR VEL (M/MIN) OPPOSITE DP
			OPPOSITE COLLAR
			CIRCULATING PRESSURE KG/cm²
			BOTTOMS UP (MIN.)
			SYSTEM TOTAL (MIN.)

MUD PROPERTIES	EQUIPMENT
Sample from ☐ Flowline ☒ Pit	SIZE HRS/TOUR
Flowline Temperature °C	SIZE HRS/TOURS

Time Sample Taken	24.00	Centrifuge		Desilter	
Depth M,	300	Degasser		Shaker	20/10 20/20
Weight ☐ (ppg) ☒ (G.P.L.)	1130	Desander		Other	K.C. 150

MUD PROPERTIES SPECIFICATIONS
BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE

MATERIALS USED
PRODUCTS AMOUNT COST

Funnel Viscosity (SEC./LT.) API at °C	45
Plastic Viscosity cp at °C	11
Yield Point (GR/100 CM²)	3
Gel Strength (GR/100 CM²) 10 sec/10 min	2-6
pH ☒ Strip ☐ Meter	9.8
Filtrate API (ml/30 min)	7.5
API HP-HT Filtrate (ml/30 min) °C	-
Cake Thickness (mm) API ☐ HP-HT ☐	1
Alkalinity, Mud (Pm)	1.5
Alkalinity, Filtrate (Pt/Mf)	0.6-1.2
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl	1.2
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)	0.2
Sand Content (% by Vol)	0.5
Solids Contents (% by Vol)	7
Oil Content (% by Vol)	-
Water Content (% by Vol)	93
Methylene Blue Capacity (me/ml mud) kg/m³	43
PV/YP RATIO	3.7

CUMULATIVE COST	7.010.000	DAILY COST	-
-----------------	------------------	------------	----------

TOTAL MATERIAL CONSUMPTION			
PRODUCT	AMOUNT	PRODUCT	AMOUNT
BARITE	20 H.T.	NEW MUD MIXED	182.8
BENTONITE	13.49 H.T.	DILUTION	1 36
CAUSTIC SODA	0.25 H.T.	SURFACE LOSS	115.8
		FORMATION LOSS	-
		MUD DUMPED	-
		RECOVERED	28
		FROM CORRAL	-

REMARKS	DRILLED TO 300mts - CIRCULATED - POOH - CLEANED STAB AND BIT - R1H - CIRCULATED AND CONDITIONED MUD - POOH - PREPARING TO RUN 9 5/8" CASING
STOCK	BARITE 20 H.T. BENTONITE 25.66 H.T.
	WATER

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REPRESENTATIVE F. Pistola	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0881 614930
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

2 - PINK COPY TO CONTRACTOR
4 - YELLOW COPY - EXTRA COPY

3 - BLUE COPY TO AREA MGR.
5 - GREEN COPY TO ENGINEER

DATE 30-12- 19 90 DEPTH 300

OPERATOR AGIP		CONTRACTOR PERGEMINE		RIG NO. NAT. 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. CAPORALI		REPORT FOR MR. ZINGARELLI			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION W.O.C.		CASING 28" IN. at 28' SURFACE		MUD VOLUME (m³) 36	
BIT SIZE (IN.) 9 5/8		NO. 9 5/8		CIRCULATION DATA 6 1/2 x 16 - 6 3/4 x 10	
DRILL PIPE SIZE 4 1/2		TYPE INTERMEDIATE		PUMP MAKE NATIONAL	
DRILL COLLAR SIZE 4 1/2		LENGHT FW - GE		MODEL N 1300 - 10 N 130	
				ANNULAR VEL (M/MIN) 20/40	
				OPPOSITE DP 20/20	
				OPPOSITE COLLAR —	
				CIRCULATING PRESSURE KG/cm² —	
				BOTTOMS UP (MIN.) —	
				SYSTEM —	
				TOTAL (MIN.) —	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR	
Time Sample Taken		24.00		SIZE HRS/TOURS	
Depth M.		300		Desilter	
Weight ☐ (ppg) ☒ (G.P.L.)		1130		Degasser	
Funnel Viscosity (SEC./LT.) API at °C		45		Desander	
Plastic Viscosity cp at °C		11		Other	
Yield Point (GR/100 CM²)		3		MUD PROPERTIES SPECIFICATIONS	
Gel Strenght (GR/100 CM²) 10 sec/10 min		2-6		BY AUTHORITY ☐ DRILLING CONTRACTOR	
pH ☒ Strip ☐ Meter		9.8		☐ OPERATOR'S REPRESENTATIVE	
Filtrate API (ml/30 min)		7.5		MATERIALS USED	
API HP-HT Filtrate (ml/30 min) °C		—		PRODUCTS	
Cake Thickness (mm) API ☐ HP-HT ☐		1		AMOUNT	
Alkalinity, Mud (Pm)		1.5		COST	
Alkalinity, Filtrate (Pm/Mf)		6-1.2			
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl		1.2			
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		0.2		CUMULATIVE COST 7.010.000 DAILY COST —	
Sand Content (% by Vol)		0.5		TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)		7		PRODUCT	
Oil Content (% by Vol)		—		AMOUNT	
Water Content (% by Vol)		93		PRODUCT	
Methylene Blue Capacity (me/ml mud) kg/m³		43		AMOUNT	
PV/YP RATIO		3.7		BARITE 20 H.T.	
REMARKS RUN INTO HOLE 9 5/8" CASING WITH SHOE AT 296 MTS - CIRCULATED - RIH WITH 5" STRING - CEMENTED CASING WITH STINGER - W.O.C. DUMPED AND CLEANED SETTLING PITS 1A AND 1B				BENTONITE 13.49 H.T.	
				CAUSTIC SODA 0.25 H.T.	
				NEW MUD MIXED — 182.8	
				DILUTION — 36	
				LOST SURF. — 115.8	
				LOST FORM. — —	
				MUD DUMPED 42 42	
				RECOV. FROM CORRAL — 28	
				STOCK	
				BARITE 40 H.T.	
				BENTONITE 25.66 H.T.	
				WATER	

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REPRESENTATIVE Joe Pistone

HOME ADDRESS HOTEL PRESIDENT - ROOM 224
WAREHOUSE LOCATION _____

TELEPHONE	0204-617930
TELEPHONE	

1 - WHITE COPY TO OIL COMPANY

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DATE 31-12- 19 90 DEPTH 300 M.

OPERATOR AGIP		CONTRACTOR PERGEHINE		RIG NO. NAT. 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. CAPORALI		REPORT FOR MR. BEATO			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION TESTING BOP		CASING 13 3/4 IN. at 26 M.		MUD VOLUME (m³) 11	
PRESENT ACTIVITY BIT SIZE (IN.)		SURFACE INTERMEDIATE		HOLE 11	
NO.		IN. at 296		PITS 13	
DRILL PIPE SIZE		TYPE		PUMP SIZE X 6 1/2 X 16 - 6 3/4 X 10	
DRILL COLLAR SIZE		LENGHT		PUMP MAKE NATIONAL	
		FW - GE		MODEL N 1300 - 10 N 130	
				LT/STROKE 27.5 - 17	
				STROKE/MIN	
				LT/MIN.	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C		SIZE		HRS/TOUR	
Time Sample Taken		SIZE		HRS/TOURS	
Depth M,		SIZE		HRS/TOURS	
Weight ☐ (ppg) ☒ (G.P.L.)		SIZE		HRS/TOURS	
Funnel Viscosity (SEC./LT.) API at °C		SIZE		HRS/TOURS	
Plastic Viscosity cp at °C		SIZE		HRS/TOURS	
Yield Point (GR/100 CM²)		SIZE		HRS/TOURS	
Gel Strenght (GR/100 CM²) 10 sec/10 min		SIZE		HRS/TOURS	
pH ☒ Strip ☐ Meter		SIZE		HRS/TOURS	
Filtrate API (ml/30 min)		SIZE		HRS/TOURS	
API HP-HT Filtrate (ml/30 min) °C		SIZE		HRS/TOURS	
Cake Thickness (mm) API ☐ HP-HT ☐		SIZE		HRS/TOURS	
Alkalinity, Mud (Pm)		SIZE		HRS/TOURS	
Alkalinity, Filtrate (Pm/Mf)		SIZE		HRS/TOURS	
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl		SIZE		HRS/TOURS	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		SIZE		HRS/TOURS	
Sand Content (% by Vol)		SIZE		HRS/TOURS	
Solids Contents (% by Vol)		SIZE		HRS/TOURS	
Oil Content (% by Vol)		SIZE		HRS/TOURS	
Water Content (% by Vol)		SIZE		HRS/TOURS	
Methylene Blue Capacity (me/ml mud) kg/m³		SIZE		HRS/TOURS	
PV/YP RATIO		SIZE		HRS/TOURS	
REMARKS ASSEMBLED 13 3/4" BOP STACK - TESTING		MUD PROPERTIES SPECIFICATIONS		MATERIALS USED	
		BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE		PRODUCTS	
				AMOUNT	
				COST	
				CUMULATIVE COST 7.010.000	
				DAILY COST	
				TOTAL MATERIAL CONSUMPTION	
				PRODUCT	
				AMOUNT	
				PRODUCT	
				AMOUNT	
				STOCK	
				BARITE 40 H.T.	
				BENTONITE 30.62 H.T	
				WATER	

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REPRESENTATIVE <i>Gene Pizolo</i>	HOME ADDRESS <i>MOTEL PRESIDENT - ROOM 224</i>	TELEPHONE <i>0081-617930</i>
	WAREHOUSE LOCATION	TELEPHONE

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Agip

S.p.A.

Settore

SECE

RAPPORTO DI TUBAGGIO E CEMENTAZIONE

POZZO SORIANO SUD 1 Terra ☒; Mare ☐; Foro $\varnothing$ 12 1/4" Colonna $\varnothing$ 9 5/8"

Cementazione da m 296 a m _____; Colonna ☒; 1° Stadio ☐; 2° Stadio ☐; Liner ☐; Tie back ☐

DATI GENERALI

PTR ÷ livello mare _____ m; PTR ÷ quota housing _____ m; PTR ÷ fondo mare _____ m; PTR ÷ quota hanger _____ m;
PTR ÷ flangia base 7.5 m
Profondità: misurata 300 m; verticale ☒ m; KOP a _____ m
Inclinazione max 1/2 ° a 296 m; caliper da log _____ no ☒ si ☐ tipo _____
Diametro medio del foro $\varnothing$ 12 1/8; scarpa colonna precedente $\varnothing$ 13 7/8 (e.r.) a m 28
BHT da log dopo _____ ore dall'ultima circolazione _____ °C
Gradienti in atm/10 m { Sottoscarpa colonna precedente: dei pori 1.03 di fratturazione 1.74
Fondo pozzo : dei pori 1.03 di fratturazione 1.79

PROFILO COLONNA

Colonna	Peso lbs/ft	Grado	Filetto tipo	Coppia serr. lbs-ft	Tubi n°	da m	a m
<u>9 5/8</u>	<u>43.5</u>	<u>N 80</u>	<u>ANTARES</u>	<u>13000</u>	<u>23</u>	<u>296</u>	<u>9</u>

Controllo non distruttivo tipo ☒; trattamento anticorrosivo tipo _____; grasso tipo API 5L
Controllo tenuta filetti: serraggio si ☐ no ☒; pressione si ☐ no ☒

EQUIPAGGIAMENTO COLONNA

Scarpa marca HALLIBURTON tipo FLOAT BALL VALVE a m 296
Collare marca HALLIBURTON tipo FLOAT BALL VALVE a m 272
DV marca _____ tipo _____ a m _____

Installazione	Centralizzatori		Raschiatori	
	marca	tipo	marca	tipo
	<u>WEATHER.</u>	<u>SP II</u>		
	n° <u>15</u>	n° _____	n° _____	n° _____
<u>C1</u>	da m <u>296</u> a m <u>196</u>	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____
<u>C2</u>	da m <u>196</u> a m <u>9</u>	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____
	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____
	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____
	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____	da m _____ a m _____

Stop collars marca WEATHERFORD tipo _____ n° 15

REOLOGIA E CARATTERISTICHE DEI FLUIDI

Fluidi	Tipo	Densità kg/l	Visc. API	600	300	Lecture Fann g.p.m.				6	3	V. app.	V.P.	Y.V.	Gels 10"/10'	K'	n'	pH	NaCl g/l
Fango	<u>FW-GE</u>	<u>1.13</u>	<u>45</u>										<u>11</u>	<u>3</u>	<u>270</u>			<u>9.2</u>	<u>1.2</u>
Cuscino	<u>H.O</u>	<u>1</u>																	
Malta		<u>1.9</u>																	

Cod. 11 0482 Centro Stampa Agip

Confezione malta { diretta ☒, con ricircolazione ☐ tipo
1° malta durata 20 min; 2° malta durata min
spiazzamento malta con 2,5 m³ di FANGO durata totale 3 min; pressione finale atm.

[illegible]

MATERIALI IMPIEGATI

	Volume m³	Densità kg/l	Cemento t	 t	% Correttivi
Premalta					
1° malta	15,5	1,9	20		—
2° malta					

OSSERVAZIONI:

Operazione	Personale AGIP presente	dal		al	
		giorno	ore	giorno	ore
Tubaggio	PAFORALI LAVATI E BESENZONI (ADDESTRAMI)				
Cementazione	C. S.				

Cod. 110482 (retro)

52/42/90 Data

11/12/2012
 Compileri

SUCCESSIONE OPERATIVA:

Prova circolazione valvola si ☒ no ☐

Circolazione intermedie: min a m; min a m; min a m; min a m

Circolazione di fondo: inizio ore 05 fine ore 07; portata 1400 l/min; pressione 10 atm

Reciprocazione colonna: si ☐, no ☒ inizio ore fine ore

Inner string si ☐, no ☐ Tappi ☐ ☐ Marca tipo

Cuscino separatore: volume 4.5 m³; altezza 5 m; tempo contatto _____ min

Confezione malta { diretta ☒, con ricircolazione ☐ tipo.....

Confezione malta { 1° malta durata 20 min; 2° malta durata min
spiazzamento malta con 2,5 m³ di FANGO durata totale 3 min; pressione finale atm.

Contatto tappi: si ☐, no ☒; prova tenuta colonna atm per min.

Spiazzamento eseguito con pompa impianto ☐, pompa Compagnia di cementazione ☒

Malta a giorno 3 m³, densità Kg/l, pH

Tenuta valvola: si ☒ no ☐; pressurizzazione intercapedine atm; durata ore

Tempo discesa bomba DV min; pressione: apertura atm; chiusura atm

Assorbimenti in: tubaggio m³; circolaz. m³; pompamento m³, spiazzamento m³, all'apertura DV m³

MATERIALI IMPIEGATI

Tipo cemento G. - H. 50

Tipo miscela ☒ a secco ☐ preidratata ☐

Acqua confezione: dolce ☒ mare ☐ satura sale ☐

Compagnia cementazione HALLIBURTON n° 4135 ticket operaz. Operatori 00101 - BT190611

Unità di cementazione: n° tipo n° utilizzate

Registrazioni: volume ☐ portata ☐ densità ☐ pressione ☐

Impianto di perforazione tipo NA: 20 B74 Contrattista LEONE

OSSERVAZIONI:

Cod. 110482 (retro)

Data

Compilatori

Compilatori

OPERATOR AGIP				CONTRACTOR PERGENINE				RIG NO. NATIONAL 90 B			
ADDRESS RIG				ADDRESS RIG				SPUD DATE 25-12-90			
REPORT FOR MR. CAPORALI				REPORT FOR MR. BEATO							
WELL NAME AND NO. SORIANO SUD 1				FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA		COUNTRY ITALY			
OPERATION DRILLING		CASING 13 7/8 IN. at 28 M.		MUD VOLUME (m³) HOLE 10 PITS 95		CIRCULATION DATA PUMP SIZE X IN 6 1/2 X 16 6 3/4 X 10		ANNULAR VEL (M/MIN) OPPOSITE DP			
BIT SIZE (IN.) 8 1/2		NO. 2		INTERMEDIATE 9 7/8 IN. at 296 M.		TOTAL CIRCULATING VOLUME 105		PUMP MAKE NATIONAL		OPPOSITE COLLAR	
DRILL PIPE SIZE 5		TYPE E+HV		PRODUCTION OR LINER IN. at		IN STORAGE		MODEL N1300 - 10N130		OPPOSITE COLLAR	
DRILL COLLAR SIZE 6 1/2		LENGHT FW-LS				LT/STROKE 27.5/17		STROKE/MIN - 190		CIRCULATING PRESSURE KG/cm² 70	
Sample from ☐ Flowline ☒ Pit				MUD PROPERTIES				EQUIPMENT			
Flowline Temperature °C								SIZE HRS/TOUR SIZE HRS/TOURS			
Time Sample Taken				24.00				Centrifuge			
Depth M.				326				Degasser			
Weight ☐ (ppg) ☐ (G.P.L.)				1130				Desander			
Funnel Viscosity (SEC./LT.) API at °C				43				Desilter			
Plastic Viscosity cp at °C				16				Shaker 40/60 40/60			
Yield Point (GR/100 CM²)				5				Other H.C. 150			
Gel Strenght (GR/100 CM²) 10 sec/10 min				2-5				MUD PROPERTIES SPECIFICATIONS			
pH ☒ Strip ☐ Meter				10.5				BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE			
Filtrate API (ml/30 min)				4.8				MATERIALS USED			
API HP-HT Filtrate (ml/30 min) °C				-				PRODUCTS AMOUNT COST			
Cake Thickness (mm) API ☐ HP-HT ☐				4				BENTONITE 2000 Kg 480.000			
Alkalinity, Mud (Pm)				3.6				SODA CAUSTICA 100 Kg 77.000			
Alkalinity, Filtrate (Pf/Mf)				- 1.8-3.5 -				SODA ASH 100 Kg 45.000			
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl				2.3				Q-BROKIN 725 Kg 1087.500			
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				0.3				CNC-LV 300 Kg 855.000			
Sand Content (% by Vol)				1				CUMULATIVE COST 9.554.500 DAILY COST 2.544.500			
Solids Contents (% by Vol)				6				TOTAL MATERIAL CONSUMPTION			
Oil Content (% by Vol)				-				PRODUCT AMOUNT PRODUCT AMOUNT			
Water Content (% by Vol)				94				BENTONITE 2 H.T. MUD FROM PREVIOUS PHASE			
Methylene Blue Capacity (me/ml mud) kg/m³				50				SODA CAUST. 0.1 H.T. 71			
PV/YP RATIO				3.2				SODA ASH 0.1 H.T. NEW MUD MIXED 34 34			
REMARKS RIG DOWN 8" D.C. - ASSEMBLED NEW								Q-BROKIN 0.725 H.T. DILUTION - -			
STRING - KILLED CEMENT AND SHOES								CNC-LV 0.3 H.T. MUD LOST SURF. - -			
DRILLED TO 326 mts.								MUD LOST FORM. - -			
CONVERTED MUD FROM FW-GE TO FW-LS								MUD DUMPED - -			
								STOCK			
								BARITE 40 H.T.			
								BENTONITE 28.6 H.T.			
								WATER			

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REPRESENTATIVE 	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0981 - 517930
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 11

DATE 02-01-1991 DEPTH 486 M.

OPERATOR AGIP	CONTRACTOR PERGEMINE	RIG NO. NAT. 80 B
ADDRESS RIG	ADDRESS RIG	SPUD DATE 25-12-90
REPORT FOR MR. CAPORALI	REPORT FOR MR. BEATO	

WELL NAME AND NO. SORIANO SUD 1	FIELD OR BLOCK NO. M. CALVELLO	Province or offshore area FOGGIA	COUNTRY ITALY
---	--	--	-------------------------

OPERATION	CASING	MUD VOLUME (m³)	CIRCULATION DATA
PRESENT ACTIVITY DRILLING	SURFACE 13 3/8 IN. at 28 M.	HOLE 18.5 PITS 91.5	PUMP SIZE X IN 6 1/2 X 16 6 3/4 X 10
BIT SIZE (IN.) 8 1/2	INTERMEDIATE 9 3/8 IN. at 296 M.	TOTAL CIRCULATING VOLUME 110	PUMP MAKE NATIONAL
DRILL PIPE SIZE 5	PRODUCTION OR LINER IN. at M.	IN STORAGE	MODEL N 1300-10N130
DRILL COLLAR SIZE 6 1/2	LENGHT 135	LT/STROKE 27.5/17	STROKE/MIN -/90
	FW-LS	LT/MIN. 1550	

Sample from ☐ Flowline ☒ Pit	MUD PROPERTIES	EQUIPMENT
Flowline Temperature °C		SIZE HRS/TOUR SIZE HRS/TOURS
Time Sample Taken	24.00	Centrifuge
Depth M,	486	Degasser
Weight ☐ (ppg) ☒ (G.P.L.)	1150	Desander

Funnel Viscosity (SEC./LT.) API at °C	47	MUD PROPERTIES SPECIFICATIONS
Plastic Viscosity cp at °C	17	BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE
Yield Point (GR/100 CM²)	6	

Gel Strenght (GR/100 CM²) 10 sec/10 min	2-6	MATERIALS USED
pH ☒ Strip ☐ Meter	10	PRODUCTS AMOUNT COST
Filtrate API (ml/30 min)	4.6	BENTONITE 1600 kg 384.000
API HP-HT Filtrate (ml/30 min) °C	-	CAUSTIC SODA 125 kg 96.250
Cake Thickness (mm) API ☐ HP-HT ☐	1	Q. BROXIN 200 kg 300.000
Alkalinity, Mud (Pm)	2.8	CHC-LUS 175 kg 498.750
Alkalinity, Filtrate (P/Mf)	- 12-23 -	SODA ASH 100 kg 45.000
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl	1.8	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)	0.2	CUMULATIVE COST 10.878.500 DAILY COST 1.324.000

Sand Content (% by Vol)	1	TOTAL MATERIAL CONSUMPTION
Solids Contents (% by Vol)	6	PRODUCT AMOUNT PRODUCT AMOUNT
Oil Content (% by Vol)	-	BENTONITE 3.6 H.T. MUD FROM PREVIOUS PHASE 71 m³
Water Content (% by Vol)	94	SODA CAUST. 0.225 H.T. NEW MUD MIXED 15 49
Methylene Blue Capacity (me/ml mud) kg/m³	50	SODA ASH 0.2 H.T. DILUTION - -
PV/YP RATIO	2.8	Q. BROXIN 0.925 H.T. MUD LOST SURF. 10 10
		CHC-LUS 0.475 H.T. MUD LOST FORM. - -
		MUD DUMPED - -

REMARKS	STOCK	BARITE	BENTONITE
DRILLED TO 392mts - PULLED INTO SHOE TO		40 H.T.	27.0 H.T.
REPAIR SHAKER - BACK TO BOTTOM - DRILLED TO 449mts -			
CIRC. - SURVEY - DRILLED TO 486mts -			
LARGE VOLUME OF MUD LOST FROM SHAKER - SHAKER			
RUNNING WITH TOP SCREEN ONLY (40 MESH)			

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REPRESENTATIVE F. Pistoletto	HOME ADDRESS HOTEL PRESIDENT - Room 224	TELEPHONE 0881-617930
	WAREHOUSE LOCATION	TELEPHONE

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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 12

DATE 03-01-1991

DEPTH 665 M.

OPERATOR AGIP		CONTRACTOR PERGEHINE		RIG NO. NAT. 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. BEATO			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION PRESENT ACTIVITY		CASING SURFACE 8 3/8 IN. at 28 M.		MUD VOLUME (m³) HOLE 24.5	
NO. 2		INTERMEDIATE 9 7/8 IN. at 296 M.		PITS 85	
BIT SIZE (IN.) 6 1/2		PRODUCTION OR LINER IN. at		PUMP SIZE X IN. 6 1/2 X 15 6 3/4 X 10	
DRILL PIPE SIZE 5		TYPE HW+E		PUMP MAKE NATIONAL	
DRILL COLLAR SIZE 6 1/2		LENGTH 135		MODEL N1300-10N130	
		FW-LS		LT/STROKE 27.5/17	
				STROKE/MIN 1550	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C		SIZE		HRS/TOUR	
Time Sample Taken		SIZE		HRS/TOURS	
Depth M.		SIZE		HRS/TOURS	
Weight ☐ (ppg) ☒ (G.P.L.)		SIZE		HRS/TOURS	
Funnel Viscosity (SEC./LT.) API at °C		SIZE		HRS/TOURS	
Plastic Viscosity cp at °C		SIZE		HRS/TOURS	
Yield Point (GR/100 CM²)		SIZE		HRS/TOURS	
Gel Strength (GR/100 CM²) 10 sec/10 min		SIZE		HRS/TOURS	
pH ☒ Strip ☐ Meter		SIZE		HRS/TOURS	
Filtrate API (ml/30 min)		SIZE		HRS/TOURS	
API HP-HT Filtrate (ml/30 min) °C		SIZE		HRS/TOURS	
Cake Thickness (mm) API ☐ HP-HT ☐		SIZE		HRS/TOURS	
Alkalinity, Mud (Pm)		SIZE		HRS/TOURS	
Alkalinity, Filtrate (Pm)		SIZE		HRS/TOURS	
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl		SIZE		HRS/TOURS	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		SIZE		HRS/TOURS	
Sand Content (% by Vol)		SIZE		HRS/TOURS	
Solids Contents (% by Vol)		SIZE		HRS/TOURS	
Oil Content (% by Vol)		SIZE		HRS/TOURS	
Water Content (% by Vol)		SIZE		HRS/TOURS	
Methylene Blue Capacity (me/ml mud) Kg/m³		SIZE		HRS/TOURS	
PV/YP RATIO		SIZE		HRS/TOURS	
REMARKS DRILLED TO 533 mts - CIRC. - HOLE CONTROL DRILLED TO 599 mts - CIRC. - SURVEY - DRILLED TO 665 mts - LARGE VOLUME OF MUD LOST FROM SHAKER		MUD PROPERTIES SPECIFICATIONS		MATERIALS USED	
		BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE		PRODUCTS	
				AMOUNT	
				COST	
				BENTONITE 1350 kg 324.000	
				CAUSTIC SODA 25 kg 19.250	
				Q-BROKIN 450 kg 675.000	
				CNC-LVS 25 kg 71.250	
				SODA ASH 50 kg 22.500	
				CUMULATIVE COST 11.990.500 DAILY COST 1.112.000	
				TOTAL MATERIAL CONSUMPTION	
				PRODUCT	
				AMOUNT	
				PRODUCT	
				AMOUNT	
				BENTONITE 4.95 H.T. FROM PREVIOUS PHASE 71	
				CAUSTIC SODA 0.25 H.T. NEW MUD MIXED 15 64	
				SODA ASH 0.25 H.T. DILUTION - -	
				Q-BROKIN 1.375 H.T. SURFACE LOSS 15.5 25.5	
				CNC-LVS 0.5 H.T. FORMAT. LOSS - -	
				DUMPED - -	
				STOCK	
				BARITE 40 H.T.	
				BENTONITE 25.65 H.T.	
				WATER	

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REPRESENTATIVE 	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0881-617930
	WAREHOUSE LOCATION	TELEPHONE
1 - WHITE COPY TO OIL COMPANY	2 - PINK COPY TO CONTRACTOR 4 - YELLOW COPY - EXTRA COPY	3 - BLUE COPY TO AREA MGR. 5 - GREEN COPY TO ENGINEER



BAROID PETROLEUM SERVICES

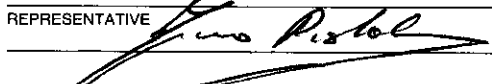
(METRIC)
DRILLING MUD REPORTREPORT
NO. 13

DATE 04-01-1991

DEPTH 825 M.

OPERATOR AGIP		CONTRACTOR PERGEKINE		RIG NO. NAT. 8013	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. BEATO			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION CIRCULATION		CASING SURFACE IN. at 28 M.		MUD VOLUME (m³) 120	
PRESENT ACTIVITY CIRCULATION		HOLE 30 PITS 90		PUMP SIZE X IN. 6 1/2 X 16 6 3/4 X 10	
BIT SIZE (IN.) 8 1/2		NO. 2		PUMP MAKE NATIONAL	
DRILL PIPE SIZE 5		TYPE HWIE		MODEL N1300 10N130	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		LT/STROKE 27.5/17	
		FW-LS		STROKE/MIN 1390	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C		SIZE		HRS/TOUR	
Time Sample Taken		Centrifuge		Desilter	
Depth M,		Degasser		Shaker	
Weight ☐ (ppg) ☐ (G.P.L.)		Desander		Other	
Funnel Viscosity (SEC./LT.) API at °C				MUD PROPERTIES SPECIFICATIONS	
Plastic Viscosity cp at °C				BY AUTHORITY ☐ DRILLING CONTRACTOR	
Yield Point (GR/100 CM²)				☐ OPERATOR'S REPRESENTATIVE	
Gel Strenght (GR/100 CM²) 10 sec/10 min				MATERIALS USED	
pH ☒ Strip ☐ Meter				PRODUCTS	
Filtrate API (ml/30 min)				AMOUNT	
API HP-HT Filtrate (ml/30 min) °C				COST	
Cake Thickness (mm) API ☐ HP-HT ☐				BENTONITE 1350 Kg 324.000	
Alkalinity, Mud (Pm)				SODA CAUSTICA 50 Kg 38.500	
Alkalinity, Filtrate (P/Ml)				Q-BROXIN 300 Kg 150.000	
Salt ☐ ppm Chloride ☐ ppm				CHC-HVS 25 Kg 85.000	
☒ gpl ☐ gpl					
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				CUMULATIVE COST 12.888.000 DAILY COST 897.500	
Sand Content (% by Vol)				TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)				PRODUCT	
Oil Content (% by Vol)				AMOUNT	
Water Content (% by Vol)				PRODUCT	
Methylene Blue Capacity (me/ml mud) Kg/m³				AMOUNT	
PV/YP RATIO				BENTONITE 6.3 H.T. FROM PREVIOUS PHASE 71m³	
REMARKS CIRC. - SHORT TRIP - DRILLED TO 825 mts -				SODA CAUSTICA 0.3 H.T. NEW MUD MIXED 25 89	
CIRC. - SHORT TRIP TO 529 mlt WITH MAX 10 TONS				SODA ASH 0.25 H.T. DILUTION 10 10	
OVERPULL - CIRCULATION				Q-BROXIN 1.675 H.T. LOST SURFACE 22.5 50	
				CHC-LVS 0.5 H.T. LOST FORM. - -	
				CHC-HVS 0.025 H.T. DUMPED - -	
		STOCK		BARITE M.T. 40	
				BENTONITE 24.3 H.T.	
				WATER	

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REPRESENTATIVE 	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0881-617930
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

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4 - YELLOW COPY - EXTRA COPY3 - BLUE COPY TO AREA MGR.
5 - GREEN COPY TO ENGINEER



BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORT

REPORT NO. 124

DATE 05-01-1991

DEPTH 939 M.

OPERATOR AGIP		CONTRACTOR PERGEMINE		RIG NO. NAT. 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. BEATO			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION TRIPPING		CASING 13 3/4" IN. at 28 M.		MUD VOLUME (m³) 34	
PRESENT ACTIVITY TRIPPING		HOLE 34		PITS 85	
BIT SIZE (IN.) 8 1/2		NO. 2		PUMP SIZE X IN. 6 1/2 X 16 6 3/4 X 10	
DRILL PIPE SIZE 5		TYPE HWT-E		PUMP MAKE NATIONAL	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		MODEL N1300-10N130	
				LT/STROKE 27.5/17	
				STROKE/MIN 1380	
				LT/MIN. 1380	
				CIRCULATION DATA	
				ANNULAR VEL (M/MIN) 57.8	
				OPPOSITE DP 91	
				OPPOSITE COLLAR 91	
				CIRCULATING PRESSURE KG/CM² 78	
				BOTTOMS UP (MIN.) 14	
				SYSTEM TOTAL (MIN.) 86	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C		SIZE		HRS/TOUR	
Time Sample Taken		SIZE		HRS/TOUR	
Depth M.		SIZE		HRS/TOUR	
Weight ☐ (ppg) ☒ (G.P.L.)		SIZE		HRS/TOUR	
Funnel Viscosity (SEC./LT.) API at °C		SIZE		HRS/TOUR	
Plastic Viscosity cp at °C		SIZE		HRS/TOUR	
Yield Point (GR/100 CM²)		SIZE		HRS/TOUR	
Gel Strength (GR/100 CM²) 10 sec/10 min		SIZE		HRS/TOUR	
pH ☒ Strip ☐ Meter		SIZE		HRS/TOUR	
Filtrate API (ml/30 min)		SIZE		HRS/TOUR	
API HP-HT Filtrate (ml/30 min) °C		SIZE		HRS/TOUR	
Cake Thickness (mm) API ☐ HP-HT ☐		SIZE		HRS/TOUR	
Alkalinity, Mud (Pm)		SIZE		HRS/TOUR	
Alkalinity, Filtrate (P/Mf)		SIZE		HRS/TOUR	
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl		SIZE		HRS/TOUR	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		SIZE		HRS/TOUR	
Sand Content (% by Vol)		SIZE		HRS/TOUR	
Solids Contents (% by Vol)		SIZE		HRS/TOUR	
Oil Content (% by Vol)		SIZE		HRS/TOUR	
Water Content (% by Vol)		SIZE		HRS/TOUR	
Methylene Blue Capacity (me/ml mud) kg/m³		SIZE		HRS/TOUR	
PV/YP RATIO		SIZE		HRS/TOUR	
REMARKS CIRC. - SURVEY - DRILLED TO 835 - RIG REPAIR - DRILLED TO 844 mts - STOP FOR RIG REPAIR - DRILLED TO 939 mts. - CIRCULATED - PULLED OUT STRING TO 643 mts FOR CONTROL WITH SOME OVERPULL (MAX 15 TONS) HIGH MUD LOSSES FROM SHAKER		MUD PROPERTIES SPECIFICATIONS		MATERIALS USED	
		BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE		PRODUCTS	
				AMOUNT	
				COST	
				CUMULATIVE COST 14.306.750 DAILY COST 1.418.750	
				TOTAL MATERIAL CONSUMPTION	
				PRODUCT	
				AMOUNT	
				PRODUCT	
				AMOUNT	
				BENTONITE 7.65 H.T. FROM PREVIOUS PHASE 71	
				SODA CAUSTIC 0.375 H.T. NEW MUD MIXED 15 104	
				SODA ASH 0.25 H.T. DILUTION 5 15	
				Q-BROXIN 2.015 H.T. LOST SURFACE 21 71	
				CHE-LVS 0.65 H.T. LOST FORM. - -	
				CHE-HVS 0.05 H.T. DUMPED - -	
				STOCK	
				BARITE 40 H.T.	
				BENTONITE 22.95 H.T.	
				WATER	

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REPRESENTATIVE Fino Pistone	HOME ADDRESS HOTEL PRESIDENT - Room 224	TELEPHONE 0881-617930
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

2 - PINK COPY TO CONTRACTOR
4 - YELLOW COPY - EXTRA COPY3 - BLUE COPY TO AREA MGR.
5 - GREEN COPY TO ENGINEER



BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 15

DATE 06-01-1991

DEPTH 1068 M.

OPERATOR ACIP		CONTRACTOR PERGENINE		RIG NO. NAT. 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. BEATO			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION PRESENT ACTIVITY		CASING SURFACE 28 M. INTERMEDIATE 296 M. PRODUCTION OR LINER IN. at		MUD VOLUME (m³) HOLE 38.5 TOTAL CIRCULATING VOLUME 198.5 IN STORAGE 1	
BIT SIZE (IN.) 8 1/2		NO. 3		PUMP SIZE X IN. 6 1/2 x 16 6 3/4 x 10	
DRILL PIPE SIZE 5		TYPE HW+E		PUMP MAKE NATIONAL MODEL N1300-10N130	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		STROKE/MIN 27.5/17 LT/MIN. 1450	
		FW-LS		CIRCULATION DATA ANNULAR VEL (M/MIN) OPPOSITE DP 60.8 OPPOSITE COLLAR 95.7 CIRCULATING PRESSURE KG/cm² 86 BOTTOMS UP (MIN.) 17.5 SYSTEM TOTAL (MIN.) 95.5	
Sample from ☐ Flowline ☒ Pit Flowline Temperature °C		MUD PROPERTIES		EQUIPMENT	
Time Sample Taken		SIZE		HRS/TOUR	
Depth M.		SIZE		HRS/TOUR	
Weight (ppg) ☐ (G.P.L.)		SIZE		HRS/TOUR	
Funnel Viscosity (SEC./LT.) API at °C		SIZE		HRS/TOUR	
Plastic Viscosity cp at °C		SIZE		HRS/TOUR	
Yield Point (GR/100 CM²)		SIZE		HRS/TOUR	
Gel Strenght (GR/100 CM²) 10 sec/10 min		SIZE		HRS/TOUR	
pH ☒ Strip ☐ Meter		SIZE		HRS/TOUR	
Filtrate API (ml/30 min)		SIZE		HRS/TOUR	
API HP-HT Filtrate (ml/30 min) °C		SIZE		HRS/TOUR	
Cake Thickness (mm) API ☒ HP-HT ☐		SIZE		HRS/TOUR	
Alkalinity, Mud (Pm)		SIZE		HRS/TOUR	
Alkalinity, Filtrate (P/Mf)		SIZE		HRS/TOUR	
Salt ☐ ppm Chloride ☐ ppm ☒ gpl ☐ gpl		SIZE		HRS/TOUR	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		SIZE		HRS/TOUR	
Sand Content (% by Vol)		SIZE		HRS/TOUR	
Solids Contents (% by Vol)		SIZE		HRS/TOUR	
Oil Content (% by Vol)		SIZE		HRS/TOUR	
Water Content (% by Vol)		SIZE		HRS/TOUR	
Methylene Blue Capacity (me/ml mud) kg/m³		SIZE		HRS/TOUR	
PV/YP RATIO		SIZE		HRS/TOUR	
REMARKS R.I.H - DRILLED TO 1004mts - CIRCULATED. SURVEY - POOH AND CHANGED BIT. - R.I.H. - DRILLED TO 1068mts FIXED NEW MUD TO REPLACE THE VOLUME LOST FROM SHAKER AND MUD CLEANER		MUD PROPERTIES SPECIFICATIONS BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE		MATERIALS USED PRODUCTS AMOUNT COST BENTONITE 1500 kg 360.000 SODA CAUSTICA 75 kg 57.750 Q-BROXIN 300 kg 450.000 CHC-LVS 150 kg 427.500 BARADEFOAM W300 50 kg 175.000	
		CUMULATIVE COST 15.777.000		DAILY COST 1.470.250	
		TOTAL MATERIAL CONSUMPTION PRODUCT AMOUNT PRODUCT AMOUNT			
		BENTONITE 9.15 M.T. FROM PREVIOUS PHASE 71m³			
		SODA CAUSTICA 0.45 M.T. NEW MOD MIXED 25 129			
		SODA ASH 0.25 M.T. DILUTION - 15			
		Q-BROXIN 2.325 M.T. LOST SURFACE 5.5 76.5			
		CHC-LVS 0.8 M.T. LOST FORMATION - -			
		CHC-HVS 0.05 M.T. DUMPED - -			
		BARADEFOAM W300 50 kg			
		STOCK BARITE 40 M.T.		BENTONITE 21.45 M.T.	
		WATER			

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REPRESENTATIVE 	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0881-617930
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

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OPERATOR AGIP				CONTRACTOR PERCEMINO				RIG NO. NAT. 80 B			
ADDRESS RIG				ADDRESS RIG				SPUD DATE 25-12-90			
REPORT FOR MR. RAEUSA				REPORT FOR MR. BEATO							
WELL NAME AND NO. SORIANO SUD 1				FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA		COUNTRY ITALY			
OPERATION		CASING		MUD VOLUME (m³)		CIRCULATION DATA					
PRESENT ACTIVITY		SURFACE 13 3/4 IN. at 28		HOLE 44		PITS 100		PUMP SIZE X IN 6 1/2 X 16 3/4 X 10		ANNULAR VEL (M/MIN) 57.8	
BIT SIZE (IN.) 8 1/2		NO. 3		INTERMEDIATE 9 7/8 IN. at 296		TOTAL CIRCULATING VOLUME 144		PUMP MAKE NATIONAL		OPPOSITE DP 91	
DRILL PIPE SIZE 5		TYPE HW+E		PRODUCTION OR LINER IN. at		IN STORAGE —		MODEL N1300 - 10N130		OPPOSITE COLLAR 91	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		FW - LS		LT/STROKE 21.5/11		STROKE/MIN 1380		CIRCULATING PRESSURE KG/cm² 86	
						LT/MIN. 1380				BOTTOMS UP (MIN.) 21	
										SYSTEM TOTAL (MIN.) 104	
Sample from ☐ Flowline ☒ Pit				MUD PROPERTIES				EQUIPMENT			
Flowline Temperature °C								SIZE HRS/TOUR SIZE HRS/TOURS			
Time Sample Taken				24.00				Centrifuge			
Depth M,				1220				Degasser			
Weight ☐ (ppg) ☐ (G.P.L.)				1180				Desander			
Funnel Viscosity (SEC./LT.) API at °C				48				BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE			
Plastic Viscosity cp at °C				16				MATERIALS USED			
Yield Point (GR/100 CM²)				5				PRODUCTS AMOUNT COST			
Gel Strenght (GR/100 CM²) 10 sec/10 min				2-5				BENTONITE 1000 Kg 240.000			
pH ☒ Strip ☐ Meter				9.5				SODA CAUSTICA 50 Kg 38.500			
Filtrate API (ml/30 min)				5				Q-BROXIN 275 Kg 412.500			
API HP-HT Filtrate (ml/30 min) °C				—				CNC-LVS 300 Kg 855.000			
Cake Thickness (mm) API ☐ HP-HT ☐				1							
Alkalinity, Mud (Pm)				2.7							
Alkalinity, Filtrate (P/mf)				4-1.5							
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl				2.6				CUMULATIVE COST 17.223.000 DAILY COST 1.546.000			
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				0.1							
Sand Content (% by Vol)				0.8				TOTAL MATERIAL CONSUMPTION			
Solids Contents (% by Vol)				10				PRODUCT AMOUNT PRODUCT AMOUNT			
Oil Content (% by Vol)				—				BENTONITE 10.15 M.T. FROM PREVIOUS PHASE 71			
Water Content (% by Vol)				90				SODA CAUSTICA 0.5 M.T. NEW MUD MIXED 15 144			
Methylene Blue Capacity (me/ml mud) Kg/m³				49				SODA ASH 0.25 M.T. DILUTION — 15			
PV/YP RATIO				3.2				Q-BROXIN 2.6 M.T. LOST SURF. 9.5 86			
								CNC-LVS 1.1 M.T. LOST FORM. — —			
								CNC-HVS 0.05 M.T. DUMPED — —			
REMARKS DRILLED TO 1144 mts - CIRCULATED - SHORT TRIP TO 842 mts - DRILLED AHEAD TO 1220 mts. - MUD LOSSES FROM SHAKER								BARADEFOAM W300 50 Kg			
								STOCK BARITE 40 M.T. BENTONITE 20.45 M.T.			
								WATER			

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REPRESENTATIVE <i>Joe Patal</i>	HOME ADDRESS <i>HOTEL PRESIDENT-ROOM 224</i>	TELEPHONE <i>0881 614930</i>
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORT

REPORT NO. 17

DATE 08-01-1991 DEPTH 1343 M.

OPERATOR AGIP		CONTRACTOR PERGEHINE		RIG NO. NATIONAL 803	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. BEATO			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION DRILLING		CASING SURFACE 13 7/8 IN. at 28 M.		MUD VOLUME (m³) 148	
PRESENT ACTIVITY DRILLING		HOLE 48		PITS 100	
BIT SIZE (IN.) 8 1/2		NO. 3		PUMP SIZE X IN. 6 1/2 x 16 6 3/4 x 10	
DRILL PIPE SIZE 5		TYPE HWY		PUMP MAKE NATIONAL	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		MODEL N1300-10N130	
				OPPOSITE DP 57.8	
				OPPOSITE COLLAR 91	
				CIRCULATING PRESSURE KG/cm² 74	
				BOTTOMS UP (MIN.) 23	
				SYSTEM TOTAL (MIN.) 107	
Sample from ☐ Flowline ☒ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR SIZE HRS/TOURS	
Time Sample Taken		24.00		Centrifuge	
Depth M,		1343		Degasser	
Weight ☐ (ppg) ☐ (G.P.L.)		1180		Desander	
Funnel Viscosity (SEC./LT.) API at °C		47		Desilter	
Plastic Viscosity cp at °C		14		Shaker	
Yield Point (GR/100 CM²)		5		Other H.C.	
Gel Strength (GR/100 CM²) 10 sec/10 min		2-6		Other H.C.	
pH ☒ Strip ☐ Meter		9.5		Other H.C.	
Filtrate API (ml/30 min)		5.1		Other H.C.	
API HP-HT Filtrate (ml/30 min) °C		-		Other H.C.	
Cake Thickness (mm) API ☒ HP-HT ☐		1		Other H.C.	
Alkalinity, Mud (Pm)		2.3		Other H.C.	
Alkalinity, Filtrate (P/M)		4-1.2		Other H.C.	
Salt ☐ ppm Chloride ☐ ppm		2.6		Other H.C.	
Calcium ☐ gpl Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		0.1		Other H.C.	
Sand Content (% by Vol)		4		Other H.C.	
Solids Contents (% by Vol)		10		Other H.C.	
Oil Content (% by Vol)		-		Other H.C.	
Water Content (% by Vol)		90		Other H.C.	
Methylene Blue Capacity (me/ml mud) kg/m³		69		Other H.C.	
PV/YP RATIO				Other H.C.	
REMARKS				CUMULATIVE COST 18.549.500 DAILY COST 1.226.500	
DRILLED TO 1277mts - CIRCULATED - SHORT TRIP				TOTAL MATERIAL CONSUMPTION	
TO 986mts WITH OVERPULL MAX 15 TONS - BACK TO				PRODUCT AMOUNT PRODUCT AMOUNT	
BOTTOM - CIRCULATED - SURVEY - DRILLED TO 1343mts				BENTONITE 10.85 H.T. FROM PREVIOUS PHASE 71 m³	
				SODA CAUSTICA 0.55 H.T. NEW MUD MIXED - 144	
				SODA ASH 0.25 H.T. DILUTION 15 30	
				Q-BROXIN 2.4 H.T. LOST SURF. 11 47	
				CNC-LVS 1.3 H.T. LOST FORM. - -	
				CNC-HVS 0.05 H.T. DUMPED - -	
				BARADEFOAM W300 50kg.	
				STOCK BARITE 40 H.T. BENTONITE 19.75 H.T.	
				WATER	

THE RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY N L INDUSTRIES, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

REPRESENTATIVE Fino Pistola	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0881-617930
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

2 - PINK COPY TO CONTRACTOR
4 - YELLOW COPY - EXTRA COPY3 - BLUE COPY TO AREA MGR.
5 - GREEN COPY TO ENGINEER

OPERATOR AGIP	CONTRACTOR PERGEHINE	RIG NO. NAT. 80 B
ADDRESS RIG	ADDRESS RIG	SPUD DATE 25-12-90
REPORT FOR MR. RAGUSA	REPORT FOR MR. ZINGARELLI	

WELL NAME AND NO. SORIANO SUD 1	FIELD OR BLOCK NO. M. CALVELLO	Province or offshore area FOGGIA	COUNTRY ITALY
---	--	--	-------------------------

OPERATION		CASING		MUD VOLUME (m³)		CIRCULATION DATA	
PRESENT ACTIVITY		SURFACE 13 7/8 IN. at 28 M.		HOLE 50 PITS 100		PUMP SIZE X IN. 6 1/2 X 16 - 6 3/4 X 10	
BIT SIZE (IN.) 8 1/2		INTERMEDIATE 9 5/8 IN. at 296 M.		TOTAL CIRCULATING VOLUME 150		PUMP MAKE NATIONAL	
DRILL PIPE SIZE 5		TYPE HW+E		IN STORAGE 5 @ 1100		MODEL N1300 - 10N130	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		FW-LS		LT/STROKE 27.5/17 STROKE/MIN 50/-	
						LT/MIN. 1380	
						ANNULAR VEL (M/MIN) OPPOSITE DP 57.8	
						OPPOSITE COLLAR 91	
						CIRCULATING PRESSURE KG/cm² 80	
						BOTTOMS UP (MIN.) 24	
						SYSTEM TOTAL (MIN.) 108.7	

MUD PROPERTIES		EQUIPMENT	
Sample from ☐ Flowline ☐ Pit		SIZE	HRS/TOUR
Flowline Temperature °C		SIZE	HRS/TOURS
Time Sample Taken	24.00	Centrifuge	
Depth M,	1410	Degasser	
Weight ☐ (ppg) ☒ (G.P.L.)	1170	Desander	
Funnel Viscosity (SEC./LT.) API at °C	45	Desilter	
Plastic Viscosity cp at °C	14	Shaker	50% 60%
Yield Point (GR/100 CM²)	5	Other H.C.	150

MUD PROPERTIES SPECIFICATIONS	
BY AUTHORITY	☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE

MATERIALS USED		
PRODUCTS	AMOUNT	COST
BENTONITE	300 kg	72.000
G-BROXIN	200 kg	300.000
CHC-LVS	200 kg	570.000
BARADEFOAM W300	50 kg	175.000
SODA CAUSTICA	25 kg	19.250
CUMULATIVE COST 19.685.750 DAILY COST 1.136.250		

TOTAL MATERIAL CONSUMPTION			
PRODUCT	AMOUNT	PRODUCT	AMOUNT
BENTONITE	11.15 H.T.	FROM PREVIOUS PHASE	71 m³
SODA CAUSTICA	0.575 H.T.	NEW MUD MIXED	144
SODA ASH	0.25 H.T.	DILUTION	10 40
G-BROXIN	3.1 H.T.	LOST SURF.	3 100
CHC-LVS	1.5 H.T.	LOST FORM.	- -
CHC-HVS	0.05 H.T.	DUMPED	- -
BARADEFOAM W300	50 kg		
STOCK	BARITE 40 H.T.	BENTONITE	19.45 H.T.
	WATER		

REMARKS DRILLED TO 1391 m/s - CIRCULATED - POOH AND CHANGED BIT - R14 - DRILLED AHEAD TO 1480 m/s

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REPRESENTATIVE 	HOME ADDRESS HOTEL PRESIDENT - ROOM 224	TELEPHONE 0981-617930
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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 19

DATE 10-01-1991 DEPTH 1553 M.

OPERATOR AGIP		CONTRACTOR PERGEMINE		RIG NO. NAT 80B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. ZINGARELLI			
WELL NAME AND NO. SORIANO SUD A		FIELD OR BLOCK NO. H. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION Drilling		CIRCUATION DATA			
PRESENT ACTIVITY Drilling		SURFACE 13 1/8 IN. at 28 M.		HOLE 55 PITS	
BIT SIZE (IN.) 8 1/2		INTERMEDIATE 9 7/8 IN. at 296 M.		TOTAL CIRCULATING VOLUME 160	
DRILL PIPE SIZE 5 1/2		TYPE HWTE		PUMP MAKE NAT	
DRILL COLLAR SIZE 6 1/2		LENGTH 135		MODEL NB20-10N130	
				STROKE/MIN 27.5/16	
				LT/MIN. 12.75	
Sample from ☐ Flowline ☐ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR	
Time Sample Taken 24⁰⁰				SIZE HRS/TOURS	
Depth M. 1553				Desilter	
Weight ☐ (ppg) ☒ (G.P.L.) 1190				Degasser	
Funnel Viscosity (SEC./LT.) API at °C 45				Desander	
Plastic Viscosity cp at °C 15				Other MC 150	
Yield Point (GR/100 CM ²) 5				MUD PROPERTIES SPECIFICATIONS	
Gel Strength (GR/100 CM ²) 10 sec/10 min 2-5				BY AUTHORITY ☐ DRILLING CONTRACTOR	
pH ☒ Strip ☐ Meter 9.0				☐ OPERATOR'S REPRESENTATIVE	
Filtrate API (ml/30 min) 5.1				MATERIALS USED	
API HP-HT Filtrate (ml/30 min) °C 1				PRODUCTS AMOUNT COST	
Cake Thickness (mm) API ☒ HP-HT ☐ 1				CAUSTICA 25 kg 19250	
Alkalinity, Mud (Pm) 2.4				CMC-LVS 100 kg 285000	
Alkalinity, Filtrate (P/mf) 2-1.3				Q-BIOXIN 200 kg 300000	
Salt ☐ ppm Chloride ☐ ppm ☒ gpl ☐ gpl				CUMULATIVE COST 20290000 DAILY COST 604250	
Calcium ☒ gpl ☐ Gyp (Kg/m ³) ☐ Excess Lime (Kg/m ³) 0.1				TOTAL MATERIAL CONSUMPTION	
Sand Content (% by Vol) 1				PRODUCT AMOUNT PRODUCT AMOUNT	
Solids Contents (% by Vol) 10				Bentonite 11.15 mt Fresh Pre mix Paste 714 kg	
Oil Content (% by Vol) 1				CAUSTICA 0.600 mt New Mud Mix - 1144 kg	
Water Content (% by Vol) 90				SODA ASH 0.25 mt Dilution 5 145 kg	
Methylene Blue Capacity (me/ml mud) kg/mc 52				Q-BIOXIN 3.3 mt Loss Surf 3 100	
PV/YP RATIO 3.0				CMC-LVS 1.6 Loss Form. 0 0	
				CMC-HVS 0.05 mt Dumped 0 0	
REMARKS Drilling ahead from mt 1440 to mt 1553. Drilled mt 143 in 24 hours.				BMA 2000 50 kg	
				STOCK BARITE 10 mt BENTONITE 19.45 mt	
				WATER	

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REPRESENTATIVE Giordano Bruno	HOME ADDRESS Hotel President Park 4 226	TELEPHONE
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

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5 - GREEN COPY TO ENGINEER

DATE 11-01- 19 91 DEPTH 1597 M

OPERATOR AGIP				CONTRACTOR PERGENINE				RIG NO. NAT 803			
ADDRESS RIG				ADDRESS RIG				SPUD DATE 25-12-90			
REPORT FOR MR. RAGUSA				REPORT FOR MR. ZINGARE LL							
WELL NAME AND NO. SORIANO SUD1				FIELD OR BLOCK NO. M. CALVELLO		Province or offshore area FOGGIA		COUNTRY ITALY			
OPERATION POOH		CASING 13 3/8 IN. at 28 M.		MUD VOLUME (m³) 57 M³		CIRCULATION DATA PUMP SIZE X IN. 6 1/2 x 16 - 6 3/4 x 10		ANNULAR VEL (M/MIN) OPPOSITE DP			
PRESENT ACTIVITY 8 1/2 IN. at 4 M.		SURFACE INTERMEDIATE		HOLE 57 M³		PITS 170		PUMP MAKE NAT		OPPOSITE COLLAR 10N130	
BIT SIZE (IN.) 8 1/2		NO. 4		TOTAL CIRCULATING VOLUME 170		IN STORAGE		LT/STROKE 27.5 / 16		STROKE/MIN 50	
DRILL PIPE SIZE 5		TYPE HWTE		PRODUCTION OR LINER IN. at M.				LT/MIN. 1375		CIRCULATING PRESSURE KG/cm² 86	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		FW-LS						BOTTOMS UP (MIN.) 27	
										SYSTEM TOTAL (MIN.) 125	
Sample from ☐ Flowline ☐ Pit				MUD PROPERTIES				EQUIPMENT			
Flowline Temperature °C				SIZE HRS/TOUR				SIZE HRS/TOURS			
Time Sample Taken				Centrifuge				Desilter			
Depth M.				Degasser				Shaker			
Weight ☐ (ppg) ☒ (G.P.L.)				Desander				Other			
Funnel Viscosity (SEC./LT.) API at °C				BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE				MUD PROPERTIES SPECIFICATIONS			
Plastic Viscosity cp at °C											
Yield Point (GR/100 CM²)								MATERIALS USED			
Gel Strenght (GR/100 CM²) 10 sec/10 min				PRODUCTS				AMOUNT			
pH ☒ Strip ☐ Meter				CAUSTICA				50 Kg			
Filtrate API (ml/30 min)								38500			
API HP-HT Filtrate (ml/30 min) °C											
Cake Thickness (mm) API ☒ HP-HT ☐											
Alkalinity, Mud (Pm)											
Alkalinity, Filtrate (Pm)											
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl											
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)								CUMULATIVE COST 20328500 DAILY COST 38500			
Sand Content (% by Vol)								TOTAL MATERIAL CONSUMPTION			
Solids Contents (% by Vol)								PRODUCT AMOUNT			
Oil Content (% by Vol)								PRODUCT AMOUNT			
Water Content (% by Vol)											
Methylene Blue Capacity (me/ml mud) Kg/mc											
PV/YP RATIO											
REMARKS				Drilling Ahead to HT 15-97 -							
				SHORT TRIP TO SHOP - CIRCULATION							
				for conditioning F.V. for logs. - POOH -							
				Schulenburg logs.							
								STOCK			
								BARITE 140 MT			
								WATER			
								BENTONITE 19.65 MT			

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REPRESENTATIVE <i>GIORDANO Bruno</i>	HOME ADDRESS <i>Hotel President Room #226</i>	TELEPHONE
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

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5 - GREEN COPY TO ENGINEER



BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 21

DATE 12-01-1991

DEPTH 1597 M.

OPERATOR AGIP		CONTRACTOR PRINEMINE		RIG NO. NAT 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. Zingarelli			
WELL NAME AND NO. SORMANO SUD A		FIELD OR BLOCK NO. H. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION Scrubbing logs		CASING 28" SURFACE		MUD VOLUME (m³) 57	
PRESENT ACTIVITY Scrubbing logs		HOLE 57		PITS 64	
BIT SIZE (IN.) 8 1/2		INTERMEDIATE 296		TOTAL CIRCULATING VOLUME 121	
DRILL PIPE SIZE 5 1/2		TYPE HW + E		PUMP MAKE MODEL N/300 - 10N/130	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		LT/STROKE 27.5 - 16	
		FW - LS		STROKE/MIN	
Sample from ☐ Flowline ☐ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR SIZE HRS/TOURS	
Time Sample Taken				Centrifuge	
Depth M.				Degasser	
Weight ☐ (ppg) ☒ (G.P.L.)				Desander	
Funnel Viscosity (SEC./LT.) API at °C				Other	
Plastic Viscosity cp at °C				MUD PROPERTIES SPECIFICATIONS	
Yield Point (GR/100 CM²)				BY AUTHORITY ☐ DRILLING CONTRACTOR	
Gel Strength (GR/100 CM²) 10 sec/10 min				☐ OPERATOR'S REPRESENTATIVE	
pH ☒ Strip ☐ Meter				MATERIALS USED	
Filtrate API (ml/30 min)				PRODUCTS AMOUNT COST	
API HP-HT Filtrate (ml/30 min) °C				NO PRODUCTS USED IN PAST 24 HOURS	
Cake Thickness (mm) API ☒ HP-HT ☐					
Alkalinity, Mud (Pm)					
Alkalinity, Filtrate (P/Mf)					
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl					
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)				CUMULATIVE COST 20 325 500 DAILY COST 0	
Sand Content (% by Vol)				TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)				PRODUCT AMOUNT PRODUCT AMOUNT	
Oil Content (% by Vol)				Bentonite 11.15 MT Previous Phase 71	
Water Content (% by Vol)				CAUSTIC 0.150 MT New mud mix 144	
Methylene Blue Capacity (me/ml mud) 19/100				SODA ASH 0.25 MT Dilution 0 5540	
PV/YP RATIO				Q-PROXIN 3.3 MT Lost surf. 0 102	
REMARKS Scrubbing logs - Dumped				Cmc - LVS 1.6 MT Lost FORTH. - -	
Pit # 1A-1B AND WASHED - next change				Cmc - HVS 0.05 MT Dumped 149 149	
tion we will try Pass THAT Pit -				BENTONITE 19.15 MT	
CHANGE SCREENS ON SHAKER - new screens				STOCK BARITE 40 MT WATER	
60/100.					

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REPRESENTATIVE GIORDANO BRUNO	HOME ADDRESS Hotel President Room # 228	TELEPHONE
	WAREHOUSE LOCATION	TELEPHONE

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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 22

DATE 13-01-1991

DEPTH 1597 M.

OPERATOR AGIP	CONTRACTOR FARGEMINE	RIG NO. MAT 80 B
ADDRESS RIG	ADDRESS RIG	SPUD DATE 25-12-90
REPORT FOR MR. RAGUSA	REPORT FOR MR. Zingarelli	
WELL NAME AND NO. SORIANO Sud A	FIELD OR BLOCK NO. H. CALVELLO	Province or offshore area FOGGIA
		COUNTRY ITALY

OPERATION Schulenberg logs	CASING 3" IN. at 28 M.	MUD VOLUME (m³) 57	PITS 88	PUMP SIZE X IN 6 1/2 x 16 - 6 3/4 x 10	ANNULAR VEL (M/MIN) OPPOSITE DP
BIT SIZE (IN.) 5 1/2	NO. HWT	INTERMEDIATE 9 1/2" IN. at 296 M.	TOTAL CIRCULATING VOLUME 123	PUMP MAKE MODEL N1300 - 10N 130	OPPOSITE COLLAR
DRILL PIPE SIZE 5 1/2	TYPE HWT	PRODUCTION OR LINER IN. at	IN STORAGE	LT/STROKE 24.5 - 16	CIRCULATING PRESSURE KG/cm²
DRILL COLLAR SIZE 6 1/2	LENGHT 135	FW - LS		STROKE/MIN	BOTTOMS UP (MIN.)
				LT/MIN.	SYSTEM TOTAL (MIN.)

Sample from ☐ Flowline ☐ Pit	MUD PROPERTIES		EQUIPMENT				
Flowline Temperature °C			SIZE		HRS/TOUR	SIZE	HRS/TOURS
Time Sample Taken			Centrifuge			Desilter	
Depth M.			Degasser			Shaker	60% 60%
Weight ☐ (ppg) ☒ (G.P.L.)			Desander			Other	
Funnel Viscosity (SEC./LT.) API at °C			MUD PROPERTIES SPECIFICATIONS				
Plastic Viscosity cp at °C			BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE				
Yield Point (GR/100 CM²)			MATERIALS USED				
Gel Strenght (GR/100 CM²) 10 sec/10 min			PRODUCTS AMOUNT COST				
pH ☒ Strip ☐ Meter			CAUSTICA 100 Kg 77000				
Filtrate API (ml/30 min)							
API HP-HT Filtrate (ml/30 min) °C							
Cake Thickness (mm) API ☒ HP-HT ☐							
Alkalinity, Mud (Pm)							
Alkalinity, Filtrate (P/Mf)							
Salt ☐ ppm Chloride ☐ ppm ☒ gpl ☐ gpl			CUMULATIVE COST 20405500 DAILY COST 77000				
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)			TOTAL MATERIAL CONSUMPTION				
Sand Content (% by Vol)			PRODUCT AMOUNT PRODUCT AMOUNT				
Solids Contents (% by Vol)			Bentonite 19.15 mt Previous PH 71				
Oil Content (% by Vol)			CAUSTICA 0.750 mt New Mud Mix 114				
Water Content (% by Vol)			SODA ASH 0.25 mt Dilution 2 58m				
Methylene Blue Capacity (me/ml mud) 1.9/m			Q. Borex 3.3 mt Lost Sump 102				
PV/YP RATIO 8.0			CHC-LVS 1.6 mt Lost Tonn. -				
			CHC-HVS 0.05 mt Dumped. 1 49				
			BARAN 50 Kg				
			W 500				
			STOCK BARITE 10 mt BENTONITE 19.15 mt				
			WATER				

REMARKS Schulenberg logs - RIM to Bottom
for circulation - Treated mud with
CAUSTIC for PH - Bottom up Trip GAS
3.3 TOTAL GAS - POOH - Schulenberg
logs.

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REPRESENTATIVE GIORDANO Bruno	HOME ADDRESS Hotel President Room 226	TELEPHONE
	WAREHOUSE LOCATION	TELEPHONE

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BAROID PETROLEUM SERVICES

(METRIC)
DRILLING MUD REPORTREPORT
NO. 23

DATE 14-01-1991

DEPTH 1597 M.

OPERATOR AGIP		CONTRACTOR PUGEMINE		RIG NO. NAT 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAGUSA		REPORT FOR MR. Zingari Hi			
WELL NAME AND NO. SORIANO SUD 1		FIELD OR BLOCK NO. H. CALVELLO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION PRESENT ACTIVITY Cement Plugs		CASING SURFACE 13 3/8 IN. at 28 M.		MUD VOLUME (m³) HOLE 10 PITS 90	
BIT SIZE (IN.) NO.		INTERMEDIATE 9 5/8 IN. at 296 M.		TOTAL CIRCULATING VOLUME 100	
DRILL PIPE SIZE 5 1/2		TYPE HWTC		IN STORAGE	
DRILL COLLAR SIZE 6 1/2		LENGHT 135		LT/STROKE 29.5/16	
		FW-L-S		STROKE/MIN	
Sample from ☐ Flowline ☐ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C				SIZE HRS/TOUR SIZE HRS/TOURS	
Time Sample Taken		26.2		Centrifuge	
Depth M,		1597		Degasser	
Weight ☐ (ppg) ☒ (G.P.L.)		1190		Desander	
Funnel Viscosity (SEC./LT.) API at °C		48		Desilter	
Plastic Viscosity cp at °C		13		Shaker	
Yield Point (GR/100 CM²)		5		Other	
Gel Strenght (GR/100 CM²) 10 sec/10 min		2-6		MUD PROPERTIES SPECIFICATIONS	
pH ☒ Strip ☐ Meter		9.8		BY AUTHORITY ☐ DRILLING CONTRACTOR	
Filtrate API (ml/30 min)		10.2		☐ OPERATOR'S REPRESENTATIVE	
API HP-HT Filtrate (ml/30 min) °C				MATERIALS USED	
Cake Thickness (mm) API ☒ HP-HT ☐		2		PRODUCTS AMOUNT COST	
Alkalinity, Mud (Pm)		3.1		Soda Ash 50 Kg 22500	
Alkalinity, Filtrate (P/Mf)		- - 9.9-2.0			
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☐ gpl		2.8			
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		0.4		CUMULATIVE COST 20 428 000 DAILY COST 22500	
Sand Content (% by Vol)		1		TOTAL MATERIAL CONSUMPTION	
Solids Contents (% by Vol)		11		PRODUCT AMOUNT PRODUCT AMOUNT	
Oil Content (% by Vol)		-		Bentonite 11.15 mt Previous PMM 7.1	
Water Content (% by Vol)		89		CAUSTICA 0.750 mt New Mud Max 164	
Methylene Blue Capacity (me/ml mud) Kg/mc		53		SODA ASH 0.3 mt Dilution - 57mc	
PV/YP RATIO		2.6		Q-BOXIN 3.3 mt Lost Sump - 102	
REMARKS		Schulenberg Logs (velocity test)		CHC-LVS 1.6 mt Lost Forth. -	
		Rim with Tbg and DP for Plugs. I from 1150 to		CHC-HVS 0.05 mt	
		1350 - II from 1150 to 1050 - III from 780 to		BARADEPAM 50 Kg Dumped 23 #2	
		650 - IV from 600 to 270 -		W 300 Mud recovered 24mc 24	
				STOCK BARITE 110 mt BENTONITE 19.45 mt	
				WATER	

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REPRESENTATIVE Gloriano Bruno	HOME ADDRESS Hotel President Room # 201	TELEPHONE
	WAREHOUSE LOCATION	TELEPHONE

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DATE 15-01- 19 91 DEPTH 1597

OPERATOR AGIP		CONTRACTOR PERGERNE		RIG NO. NAT 80 B	
ADDRESS RIG		ADDRESS RIG		SPUD DATE 25-12-90	
REPORT FOR MR. RAZUSA		REPORT FOR MR. Zingarelli			
WELL NAME AND NO. SORIANO Sud 1		FIELD OR BLOCK NO. M. CALVEHO		Province or offshore area FOGGIA	
				COUNTRY ITALY	
OPERATION Cement Plug		CASING 13 3/8 IN. at 28 M. SURFACE		MUD VOLUME (m³) 39	
BIT SIZE (IN.) 9 5/8		NO. 28		PITS 1	
DRILL PIPE SIZE 9 5/8		TYPE INTERMEDIATE		CIRCULATION DATA PUMP SIZE X IN 6 1/2 x 16 - 6 3/4 x 10	
DRILL COLLAR SIZE 9 5/8		LENGHT FWLS		ANNULAR VEL (M/MIN) OPPOSITE DP	
				PUMP MAKE MODEL NA300-10N130	
				OPPOSITE COLLAR LT/STROKE 27.5/16	
				CIRCULATING PRESSURE KG/cm² STROKE/MIN	
				BOTTOMS UP (MIN.) LT/MIN.	
				SYSTEM TOTAL (MIN.)	
Sample from ☐ Flowline ☐ Pit		MUD PROPERTIES		EQUIPMENT	
Flowline Temperature °C		SIZE		HRS/TOUR	
Time Sample Taken		SIZE		HRS/TOURS	
Depth M.		SIZE		HRS/TOURS	
Weight ☐ (ppg) ☒ (G.P.L.)		SIZE		HRS/TOURS	
Funnel Viscosity (SEC./LT.) API at °C		SIZE		HRS/TOURS	
Plastic Viscosity cp at °C		SIZE		HRS/TOURS	
Yield Point (GR/100 CM²)		SIZE		HRS/TOURS	
Gel Strenght (GR/100 CM²) 10 sec/10 min		SIZE		HRS/TOURS	
pH ☒ Strip ☐ Meter		SIZE		HRS/TOURS	
Filtrate API (ml/30 min)		SIZE		HRS/TOURS	
API HP-HT Filtrate (ml/30 min) °C		SIZE		HRS/TOURS	
Cake Thickness (mm) API ☒ HP-HT ☐		SIZE		HRS/TOURS	
Alkalinity, Mud (Pm)		SIZE		HRS/TOURS	
Alkalinity, Filtrate (Pf/Mf)		SIZE		HRS/TOURS	
Salt ☐ ppm ☒ gpl Chloride ☐ ppm ☒ gpl		SIZE		HRS/TOURS	
Calcium ☒ gpl ☐ Gyp (Kg/m³) ☐ Excess Lime (Kg/m³)		SIZE		HRS/TOURS	
Sand Content (% by Vol)		SIZE		HRS/TOURS	
Solids Contents (% by Vol)		SIZE		HRS/TOURS	
Oil Content (% by Vol)		SIZE		HRS/TOURS	
Water Content (% by Vol)		SIZE		HRS/TOURS	
Methylene Blue Capacity (me/ml mud) Kg/m³		SIZE		HRS/TOURS	
PV/YP RATIO		SIZE		HRS/TOURS	
REMARKS POOH DISASSEMBLING Drilling string - Pump last Plug at 50m with 2.4 m. of slurry - Dumped 114 m. of mud and preparing for cleaning pits.		MUD PROPERTIES SPECIFICATIONS		MATERIALS USED	
		BY AUTHORITY ☐ DRILLING CONTRACTOR ☐ OPERATOR'S REPRESENTATIVE		PRODUCTS	
				AMOUNT	
				COST	
				CUMULATIVE COST 20 428 000 DAILY COST 0	
				TOTAL MATERIAL CONSUMPTION	
				PRODUCT	
				AMOUNT	
				PRODUCT	
				AMOUNT	
				Bentonite 11.15 m³	
				Previous Phase 74	
				CRUSTICA 0.750 m³	
				New Mud Mix 114	
				Soda Ash 0.3 m³	
				Dilution 57	
				Q-Broxin 3.3 m³	
				Lost Surf. 102	
				CNC-LUS 1.6 m³	
				Lost Foam -	
				CNC-HUS 0.05 m³	
				Dumped 161	
				BANADEFORM 100 Kg	
				233	
				STOCK	
				BARITE 110 m³	
				BENTONITE 19.65 m³	
				WATER	

THE RECOMMENDATIONS MADE HEREON SHALL NOT BE CONSTRUED AS AUTHORIZING THE INFRINGEMENT OF ANY VALID PATENT, AND ARE MADE WITHOUT ASSUMPTION OF ANY LIABILITY BY N L INDUSTRIES, INC. OR ITS AGENTS, AND ARE STATEMENTS OF OPINION ONLY.

REPRESENTATIVE <i>Giordano Bruno</i>	HOME ADDRESS <i>Hotel President Room #226.</i>	TELEPHONE
	WAREHOUSE LOCATION	TELEPHONE

1 - WHITE COPY TO OIL COMPANY

2 - PINK COPY TO CONTRACTOR
4 - YELLOW COPY - EXTRA COPY

3 - BLUE COPY TO AREA MGR.
5 - GREEN COPY TO ENGINEER