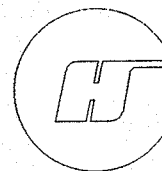


PETROTECH S.A.
LOBITOS MAR LAST
Z-2A-21-LO6
19
SEPT / 94



HALLIBURTON

8/10/94 1027 pm

REPORTE DE OPERACIONES EN POZO

LO6 - 19 - SIDE TRACK # 2

FASE 8 1/2"

JORGE GUERRERO VALENCIA
DIRECTIONAL DRILLER
1994

PETROTECH S.A.
LOBITOS MAR LAST
Z-2A-21-L06

19
SEPT / 94



8/10/94 10:25 pm

COMENTARIOS FASE DE 8 1/2" - SIDE TRACK # 2

Esta operación de side track fue programado a partir de una ventana de 60' en el casing de 9 5/8" y debido a las condiciones en que se encontraba a 5400', el pozo original, el cual perdía inclinación, se propuso sacarlo por el lado alto del pozo levantando hasta 49° y mantener o girar un par de grados a la derecha para hacer el desplazamiento en forma más rápida. Para obtener información del Tool Fase se programo el uso del Steering Tool.

Al llegar a la plataforma el personal de Halliburton fue informado por el Company Man, que el tope de la ventana se encontraba a 5405' y su base a 5465'. Por lo cual se decidió cortar cemento hasta 3' bajo el tope o sea 5408', el tapón de cemento se encontraba en buenas condiciones de dureza, en los últimos 30' registrados dio una rate de penetración de 42 fph. Basados en esta información se decidió bajar el motor con un Bent Sub de 1 1/2°, para así dejar un DLS menor y evitar problemas posteriores.

Se armó, se realizó el test de superficie al motor y se bajo el BHA # 1 con B.S. de 1 1/2° hasta 60' arriba del tope de la ventana en donde se instaló el Side Entry Sub y se procedió a bajar el Steering Tool, al llegar este a fondo se verifico sentado en cinco oportunidades dando la misma variación de TF, por lo cual se dio como correcta. Se oriento T.F. a 20° a la derecha y se perforaron 6' hasta el cambio de turno en donde se informó que se había dejado la canastilla (filtro) arriba del monel, por lo tanto la información del T.F. no era confiable ya que el Stinger no se encontraba sentado en la chaveta de la camisa del Bent Sub.

Durante el test de superficie el direccional supervisó la operación y en ningún momento vio colocar el filtro, que posteriormente fue olvidado en el monel. Al retirar sarta se decidió bajar con un Bent sub de 2° para compensar lo perforado con orientación errada, decisión que más tarde se afirmaría como necesaria al comprobar que la ventana no comenzaba en 5405' sino que 5' arriba. Por lo tanto hasta este punto se habían perdido 14' de ventana, comenzandose nuevamente el side track a una profundidad real de 5414'.

En esta corrida de motor, con B.S. de 2°, se perforó hasta 5470 o sea 10' bajo la base de la ventana, sin tener ninguna manifestación de torque, cabe hacer notar que desde 5465' se tenía 10% de formación en la muestras, el alto porcentaje de cemento se debe a que se esta saliendo por el lado alto del pozo por lo tanto la pared baja siempre sera cemento. Se decidió levantar sarta para cambiar de bent sub, volviendo en esta segunda corrida del motor con uno de 1 1/2°, se continuo perforando con la misma orientación hasta la profundidad de 5564'.

Realizada la salida se procedio a armar sarta estabilizada, BHA # 2, para repasar y continuar perforando. La operación de rimada inicialmente fue sin mayores problemas con torque normal, el cual se mantuvo hasta el final. Basicamente los problemas se presentaron en tres puntos a 5468 - 5472 y el ultimo de donde no se obtuvo más avance, a 5503'. Lo mas comodo para explicar ésta falta de avance es pensar que se colgaron los estabilizadores en el casing y por lo tanto no se pudo continuar. Pero esto no es efectivo, si se toma en consideración la posición de los estabilizadores, como se presentará a continuación.

PETROTECH S.A.
LOBITOS MAR LAST
Z-2A-21-L06

19
SEPT / 94



9/10/94 1:40 pm

La posición de los estabilizadores, medida al tope de cada lamina desde la broca, es como sigue: Near Bit = 2.91' - 1er Stab = 24.25' - 2do Stab = 58.9' ; Por lo tanto con estas medidas se puede ver que:

5468' :NB Stb = 5465'
1° - Stb = 5443'
2° - Stb = 5409'

5472' :NB Stb = 5469'
1° - Stb = 5447.5'
2° - Stb = 5413'

5503' :NB Stb = 5500'
1° - Stb = 5478.5'
2° - Stb = 5441'

Con estos valores en profundidad de la posición de cada uno de los estabilizadores, se puede concluir que en ningún momento éstos estuvieron en contacto con la ventana ya que ésta se ubica entre 5400 y 5460. Además esto quedó demostrado al salir la sarta y no encontrarse ninguna marca en ninguno de los componentes del BHA. Cabe hacer notar que la muestra a 5500' daba 60% de formación. La broca salió con todos los dientes, en buen estado, de sus hileras exteriores, en cambio los de las hileras interiores habían desaparecido, una prueba más que no se tocó fierro, ya que de ser así los exteriores serían los quebrados.

Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **lo6-19st2**

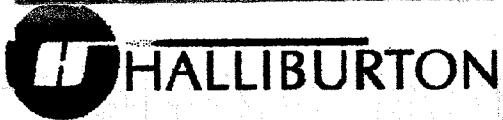
AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s): **Fernando Caldas, Edwar Agurto**
Dir'l Driller(s): **Jorge Guerrero**

Date From: **September 19, 1994**
Date To: **September 24, 1994**

Time From: **00:00**
Time To: **24:00**
Total Hours Logged: **122.00**

Start Depth: **5400.00 ft**
End Depth: **5564.00 ft**
Total Drilled: **164.00 ft**

DATE	TIME	FROM ft	TO ft	ROP ft/hr	CODE	COMMENTS
19/09/94	00:00-03:30	5400.00	5400.00		N/U	
19/09/94	03:30-05:15	5400.00	5400.00		OTHER	SUELDA FLOW LINE
19/09/94	05:15-10:00	5400.00	5400.00		MAKBHA	ASSY LISO P/CORTAR CEMENTO
19/09/94	10:00-10:30	5400.00	5400.00		CIRC	Prueba BOP
19/09/94	10:30-16:45	5400.00	5408.00	1.28	ROTATE	Rotando cemento desde 5213' a 5408'
19/09/94	16:45-20:00	5400.00	5408.00		CONMUD	
19/09/94	20:00-22:00	5400.00	5408.00		POOH	
19/09/94	22:00-24:00	5400.00	5408.00		MAKBHA	D-500 MOTOR W/ B.S. 1 1/2"
20/09/94	00:00-04:00	5408.00	5408.00		TRIPIN	
20/09/94	04:00-04:30	5408.00	5408.00		OTHER	Desarma 08 DP a la rampa
20/09/94	04:30-08:15	5408.00	5408.00		R/UWLR	
20/09/94	08:15-08:45	5408.00	5408.00		OTHER	Reparando traba de Mesa rotaria
20/09/94	08:45-09:00	5408.00	5408.00		OTHER	Orienta y transfiere torque
20/09/94	09:00-11:00	5408.00	5414.00	3.00	SLIDE	Se informa que filtro se encuentra en monel, orientación errada.
20/09/94	11:00-22:15	5414.00	5414.00		OTHER	Round trip para retirar filtro y cambiar BS por 2°
20/09/94	22:15-24:00	5414.00	5421.00	4.00	SLIDE	
21/09/94	00:00-15:30	5421.00	5470.00	3.16	SLIDE	Muestra a 5465' 90% cemento 10% formación
21/09/94	15:30-24:00	5470.00	5470.00		OTHER	Round trip para cambiar bs por 1.5° y broca.
22/09/94	00:00-03:00	5470.00	5470.00		SEATST	
22/09/94	03:00-12:00	5470.00	5564.00	10.44	SLIDE	
22/09/94	12:00-13:45	5564.00	5564.00		OTHER	retira steering tool
22/09/94	13:45-17:15	5564.00	0.00		POOH	
22/09/94	17:15-20:30	0.00	5367.00		MAKBHA	
22/09/94	20:30-21:45	5367.00	5367.00		OTHER	Repara bomba #1, Mesa rotaria y kelly bushing
22/09/94	21:45-24:00	5367.00	5440.00		REAM	
23/09/94	00:00-11:45	5440.00	5504.00		REAM	Sienta a 5468' repasa rotando la cañeria y baja sin problema
23/09/94	11:45-12:45	5504.00	5504.00		OTHER	Repara bomba #2
23/09/94	12:45-13:15	5504.00	5504.00		OTHER	Retira 3 DP para repasar inicio de side track
23/09/94	13:15-17:00	5504.00	5504.00		REAM	Repasa reiteradas veces ultimos 3', al bajar sin rotación siempre queda en la misma posición 3' arriba, donde debe repasar nuevamente.
23/09/94	17:00-18:30	5504.00	5507.00		OTHER	Arma botella corta de 5' en kelly y repasa a 5507'. Al levantar y volver a bajar queda 5' del fondo donde debe repasar nuevamente.
23/09/94	18:30-22:00	5507.00	0.00		POOH	
23/09/94	22:00-24:00	0.00	4550.00		TRIPIN	Baja punta libre para colocar nuevo tapon de cemento.
24/09/94	00:00-02:00	4550.00	5564.00		TRIPIN	

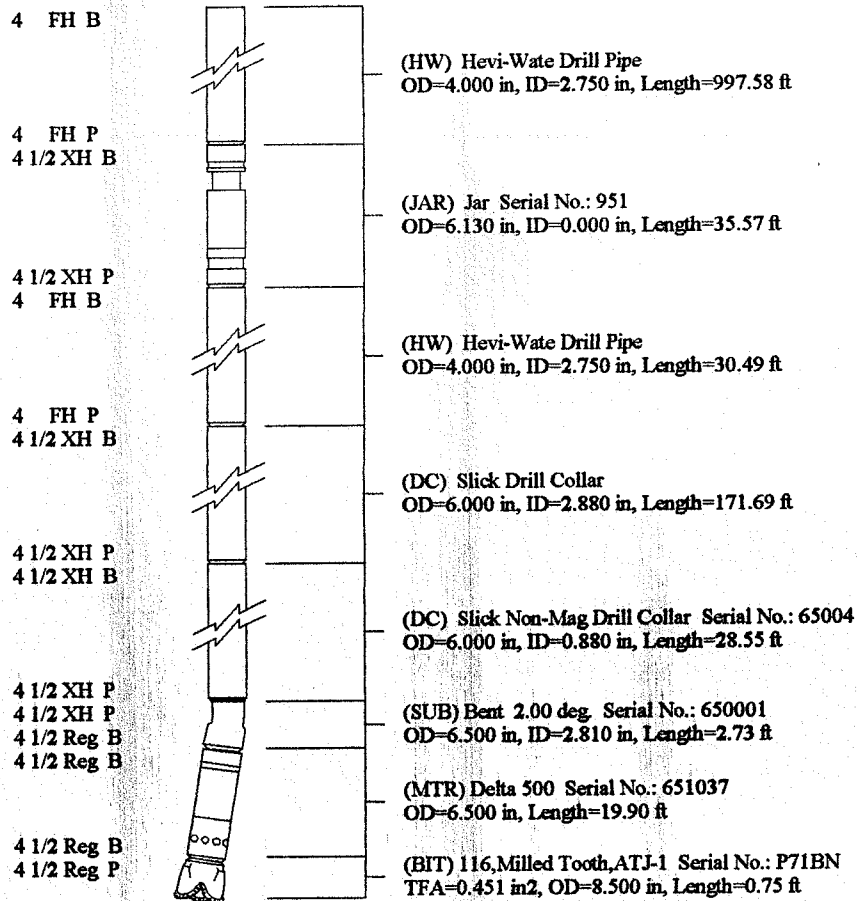


Bottom Hole Assembly #1 8-1/2" Hole Size

Company: PETROTECH
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: lo6-19st2
Run No: 1
Operators(s): Fernando Caldas, Edwar Agurto
Directional Driller(s): Jorge Guerrero

Assembly Type: Motor w/ Bent Sub

Total Length = 1287.26 ft



Job No.:	AFE No.:	
Operator: PETROTECH S.A.	Location: TALARA, PIURA, PERU	
Field: LOBITOS MAR LAST	MWD Operator(s): Fernando Caldas, Edwar Agurto	
Well: lo6-19st2	Dir'l Driller(s): Jorge Guerrero	
Run No.: 1	BHA No.: 1	Hole Size: 8-1/2"

BOTTOM HOLE ASSEMBLY

Assembly Type: Motor w/ Bent Sub	Reason Pulled: BHA - Change BHA
Objective: Side Track from 9 5/8 window @ 5400	
Motor Size / Type: 6.500 in / Delta 500	Serial No.: 651037
Sliding(81.9%): 156.00 ft @ 28.25 hrs ==> 5.52 ft/hr	Circulating: 3.75 hrs
Rotating(18.1%): 8.00 ft @ 6.25 hrs ==> 1.28 ft/hr	
Total Drilled: 164.00 ft @ 34.50 hrs ==> 4.75 ft/hr	

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1	P71BN	(BIT) HTC,ATJ-1,Milled Tooth	8.500		0.75	0.75	4 1/2 Reg		P
2	651037	(MTR) Halliburton,Delta 500	6.500	4.649	19.90	20.65	4 1/2 Reg	4 1/2 Reg	B/B
3	650001	(SUB) 2.000" Bend Sub	6.500	2.810	2.73	23.38	4 1/2 XH	4 1/2 Reg	P/B
4	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	51.93	4 1/2 XH	4 1/2 XH	B/P
5		(DC) 6 jts, Slick Drill Collar	6.000	2.880	171.69	223.62	4 1/2 XH	4 1/2 XH	B/P
6		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	254.11	4 FH	4 FH	B/P
7	951	(JAR) bowen Jar	6.130		35.57	289.68	4 1/2 XH	4 1/2 XH	B/P
8		(HW) 33 jts, Hevi-Wate Drill Pipe	4.000	2.750	997.58	1287.26	4 FH	4 FH	B/P

MUD/PUMP DATA

Mud Type: KLM	Wt: 10.30 lb/gal	PV: 29.00 cp	YP: 15.00 lb/100ft ²	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc.: 48.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.10%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 12.00%
Diesel Grade: 0	Aniline Pt.: 0.00 °F		Chlorides: 21000 PPM	H2S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

Pump Type: Triplex - T-1000	Volume: 0.00 gpm	SPM: 0	Stroke: 10.00 in	Liner: 6.00 in
Triplex - PZ-8	0.00 gpm	0	8.00 in	6.00 in

BIT DATA

Manufacturer: HTC	IADC: 116	Length: 0.75 ft
Bit Type: Milled Tooth	Depth In: 5400.00 - 5564.00 (164.00) ft	Gage Length: 0.00 in
Serial No.: P71BN	Nozzles: 14 14 14 /32nd	TFA: 0.451 in ²
Hours On Bit: 34.50	FTG On Bit: 164.00	

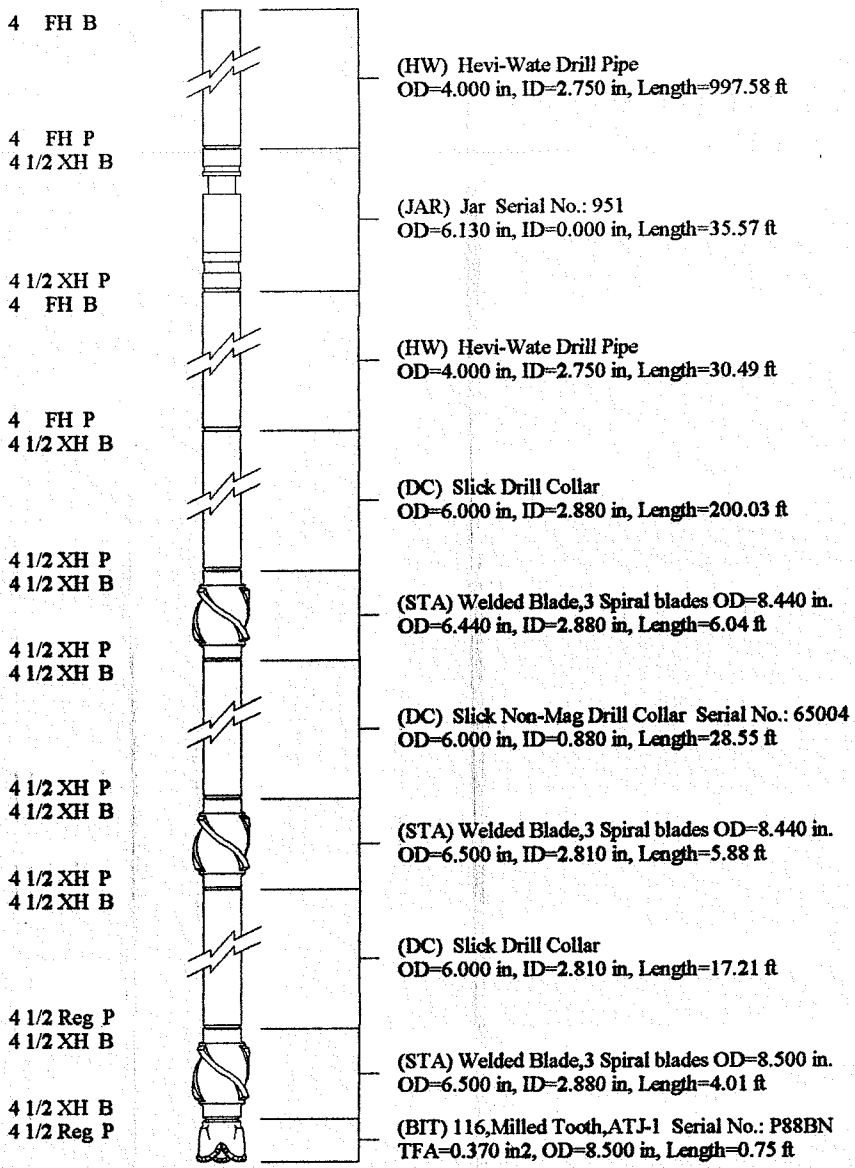


Bottom Hole Assembly #2
8-1/2" Hole Size

Company: PETROTECH
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: lo6-19st2
Run No: 1
Operators(s):
Directional Driller(s):

Assembly Type: Packed Assembly

Total Length = 1326.11 ft




HALLIBURTON

BHA REPORT

From September 22, 1994 To September 24, 1994

Page 1
Date: 8/10/94
Time: 9:28 pm

Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **lo6-19st2**
Run No.: **1**

AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s):
Dir'l Driller(s):
BHA No.: **2**

Hole Size: **8-1/2"**

BOTTOM HOLE ASSEMBLY

Assembly Type: **Packed Assembly**

Reason Pulled: **<undefined>**

Objective: **Perder inclinacion lentamente.**

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1	P88BN	(BIT) HTC,ATJ-1,Milled Tooth	8.500		0.75	0.75	4 1/2 Reg		P
2		(STA) Welded Blade,3 Spiral blades, blade OD=8.500	6.500	2.880	4.01	4.76	4 1/2 XH	4 1/2 XH	B/B
3		(DC) 3 jts, Slick Drill Collar	6.000	2.810	17.21	21.97	4 1/2 XH	4 1/2 Reg	B/P
4		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.500	2.810	5.88	27.85	4 1/2 XH	4 1/2 XH	B/P
5	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	56.40	4 1/2 XH	4 1/2 XH	B/P
6		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.440	2.880	6.04	62.44	4 1/2 XH	4 1/2 XH	B/P
7		(DC) 7 jts, Slick Drill Collar	6.000	2.880	200.03	262.47	4 1/2 XH	4 1/2 XH	B/P
8		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	292.96	4 FH	4 FH	B/P
9	951	(JAR) bowen Jar	6.130		35.57	328.53	4 1/2 XH	4 1/2 XH	B/P
10		(HW) 33 jts, Hevi-Wate Drill Pipe	4.000	2.750	997.58	1326.11	4 FH	4 FH	B/P

MUD/PUMP DATA

Mud Type: KLM	Wt: 10.30 lb/gal	PV: 26.00 cp	YP: 16.00 lb/100ft²	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc: 47.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.10%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 12.00%
Diesel Grade: 0	Aniline Pt.: 0.00 °F		Chlorides: 21000 PPM	H2S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

BIT DATA

Manufacturer: HTC	IADC: 116	Length: 0.75 ft
Bit Type: Milled Tooth	Depth In: 5564.00 - 5564.00 (0.00) ft	Gage Length: 0.00 in
Serial No.: P88BN	Nozzles: 13 13 12 /32nd	TFA: 0.370 in2
Hours On Bit: 0.00	FTG On Bit: 0.00	

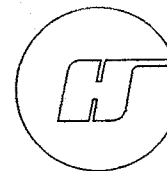
COMMENTS / RESULTS

- Las muestras a 5500 indicaban 60% de formacion , 40% de cemento y 5% de fierro.
- Near bit in gage, 1er y 2do Stab con 1/16" undergage.
- Ningun componente(N.Bit,Stab's,Monel o DC'S) presentan marcas de trabajo contra fierro
- Stab's no presentan marcar en las laminas de haber quedado colgados sobre fierro.
- Broca presenta, en las tres rolas, todos los dientes de la corrida exterior nuevos, las corridas interiores sin dientes

PETROTECH S.A.
LOBITOS MAR LAST
Z-2A-21-LO6

19

SEPT / 94



HALLIBURTON

8/10/94 10:26 pm

REPORTE DE OPERACIONES EN POZO

LO6 - 19 - SIDE TRACK # 3

FASE 8 1/2"

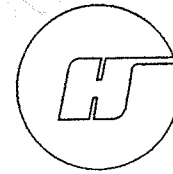
JORGE GUERRERO VALENCIA

DIRECTIONAL DRILLER

1994

PETROTECH S.A.
LOBITOS MAR LAST
Z-2A-21-L06

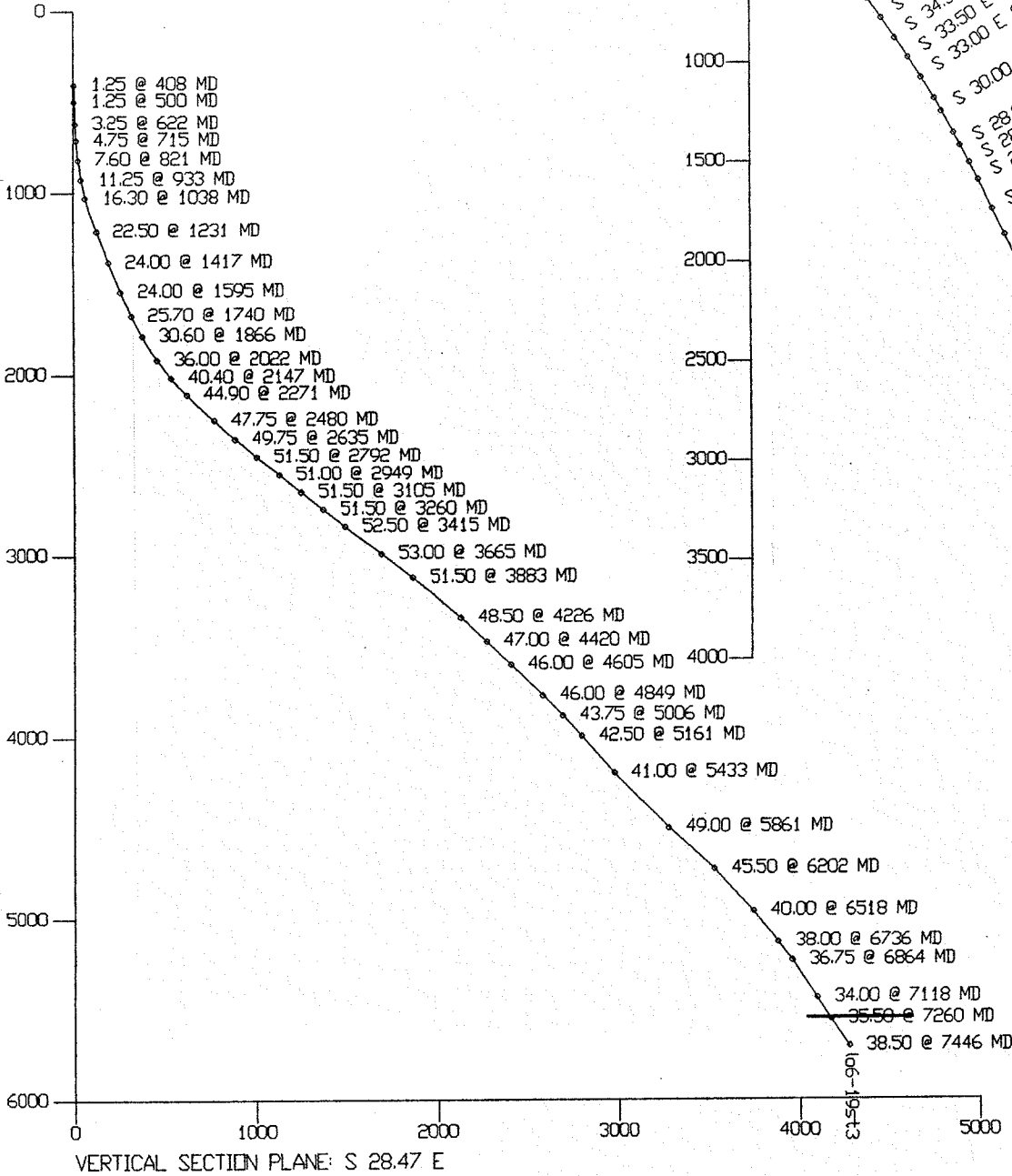
19
L06-19-ST3



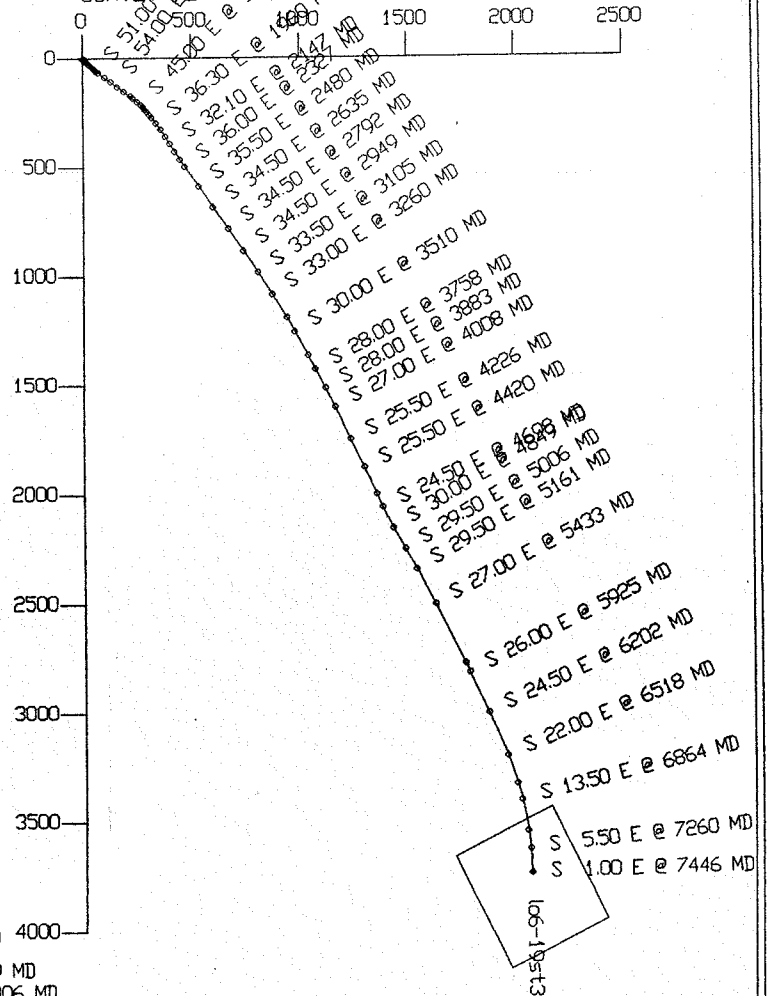
HALLIBURTON

9/10/94 2:29 pm

VERTICAL VIEW
SCALE 1000 ft. / DIVISION
TVD REF: WELLHEAD
VERTICAL SECTION REF: WELLHEAD



HORIZONTAL VIEW (TRUE NORTH)
SCALE 500 ft. / DIVISION
SURVEY REF: WELLHEAD



Survey Report

Page 1

Date: 9/10/94

Time: 2:23 pm

Wellpath ID: lo6-19st3

Date Created: 16/06/94

Last Revision: 9/10/94

Calculated using the Minimum Curvature Method
Computed using WTN-CADDS REV2.1A
Vertical Section Plane: S 28.47 E

Survey Reference: WELLHEAD
Reference World Coordinates: Lat. 4.26.30 S - Long. 81.22.00 W
Reference GRID System: UTM Zone: 17, Cent. Merid: 81.00.00 W
Reference GRID Coordinates: (m): 9509029.43 N 459310.56 E
North Aligned To: TRUE NORTH
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

PETROTECH S.A.
LOBITOS MAR LAST
Z-2A-21-LO6
19
LO6-19-ST3

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		DLS (dg/100ft)	Build Rate (dg/100ft)	Walk Rate (dg/100ft)
TIE-IN SIDE TRACK # 3										
5433.00	41.00	S 27.00 E	272.00	4202.39	2977.21	2505.44 S	1625.28 E	0.82	-0.55	0.92
5861.00	49.00	S 27.00 E	428.00	4504.79	3279.51	2774.88 S	1762.56 E	1.87	1.87	0.00
5925.00	49.75	S 26.00 E	64.00	4546.46	3328.06	2818.35 S	1784.23 E	1.67	1.17	1.56
6202.00	45.50	S 24.50 E	277.00	4733.11	3532.31	3003.34 S	1871.58 E	1.59	-1.53	0.54
6518.00	40.00	S 22.00 E	316.00	4965.09	3745.83	3200.22 S	1956.43 E	1.82	-1.74	0.79
6736.00	38.00	S 17.00 E	218.00	5134.54	3881.26	3329.40 S	2002.32 E	1.71	-0.92	2.29
6864.00	36.75	S 13.50 E	128.00	5236.27	3956.88	3404.33 S	2022.78 E	1.93	-0.98	2.73
7118.00	34.00	S 8.00 E	254.00	5443.41	4096.89	3548.61 S	2050.41 E	1.66	-1.08	2.17
7260.00	35.50	S 5.50 E	142.00	5560.08	4172.06	3628.97 S	2059.89 E	1.46	1.06	1.76
7446.00	38.50	S 1.00 E	186.00	5708.64	4273.19	3740.66 S	2066.08 E	2.17	1.61	2.42

4 AVG 54.9780 °

ACTIVITY LOG

Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **lo6-19st3**

AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s):
Dir'l Driller(s): **Jorge Guerrero**

Date From: **September 28, 1994**
Date To: **October 10, 1994**

Time From: **00:00**
Time To: **24:00**
Total Hours Logged: **293.00**

Start Depth: **0.00 ft**
End Depth: **0.00 ft**
Total Drilled: **2085.00 ft**

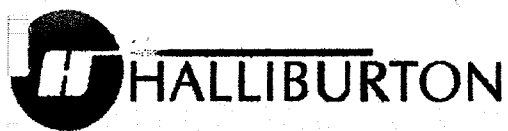
DATE	TIME	FROM ft	TO ft	ROP ft/hr	CODE	COMMENTS
28/09/94	06:00-07:30	0.00	150.00		MAKBHA	BHA # 1- Motor assy.- test DD ok.
28/09/94	07:30-11:00	150.00	5299.00		TRIPIN	Para 2 dp's arriba para conectar Side Entry Sub.
28/09/94	11:00-12:30	5299.00	5299.00		R/UWLR	
28/09/94	12:30-13:00	5299.00	5402.00		TRIPIN	
28/09/94	13:00-13:30	5402.00	5402.00		OTHER	Orienta TF -60, destapa jet tapado, repasa l'
28/09/94	13:30-24:00	5402.00	5425.00	2.19	SLIDE	
29/09/94	00:00-24:00	5425.00	5532.00	4.46	SLIDE	
30/09/94	00:00-04:30	5532.00	5567.00	7.78	SLIDE	
30/09/94	04:30-04:45	5567.00	5567.00		CIRC	
30/09/94	04:45-06:30	5567.00	5567.00		TRIPST	
30/09/94	06:30-11:30	5567.00	0.00		POOH	
30/09/94	11:30-13:30	0.00	0.00		MAKBHA	ARMA BHA # 2 - (0-30-60)
30/09/94	13:30-16:30	0.00	5383.00		TRIPIN	
30/09/94	16:30-17:00	5383.00	5383.00		OTHER	Arma kelly bushing
30/09/94	17:00-20:30	5383.00	5567.00		REAM	
30/09/94	20:30-24:00	5567.00	5628.00	17.43	ROTATE	
01/10/94	00:00-14:30	5628.00	5892.00	18.21	ROTATE	
01/10/94	14:30-16:00	5892.00	5892.00		CIRC	
01/10/94	16:00-17:00	5892.00	5892.00		SURCON	Survey @ 5861-49-S 27 E
01/10/94	17:00-21:30	5892.00	5984.00	20.44	ROTATE	
01/10/94	21:30-23:00	5984.00	5984.00		CIRC	Sacara para cambio de broca
01/10/94	23:00-24:00	5984.00	5984.00		SURCON	Survey @ 5925-49.75-S 26 E (Repitio por golpe, l° corrida Timer paró de funcionar)
02/10/94	00:00-00:45	5984.00	5984.00		SURCON	Termina survey y bombea Tapon
02/10/94	00:45-02:45	5984.00	1475.00		POOH	
02/10/94	02:45-03:00	1475.00	1475.00		OTHER	Pesca Pluma
02/10/94	03:00-04:30	1475.00	0.00		POOH	
02/10/94	04:30-05:30	0.00	0.00		MAKBHA	BHA # 3 (0 - 21 - 51)
02/10/94	05:30-07:45	0.00	5898.00		TRIPIN	
02/10/94	07:45-08:15	5898.00	5984.00		REAM	Por precaución
02/10/94	08:15-24:00	5984.00	6193.00	13.27	ROTATE	
03/10/94	00:00-06:30	6193.00	6282.00	13.69	ROTATE	
03/10/94	06:30-09:15	6282.00	6282.00		CIRC	Levanta peso lodo de 10.5 a 10.8 ppg
03/10/94	09:15-09:45	6282.00	6282.00		SURCON	Lanza R.Gear
03/10/94	09:45-10:45	6282.00	5357.00		POOH	
03/10/94	10:45-11:30	5357.00	5357.00		OTHER	Pescando R.Gear - Survey @ 6202' - 45.5 - S 24.5 E
03/10/94	11:30-12:00	5357.00	6251.00		TRIPIN	
03/10/94	12:00-12:15	6251.00	6282.00		REAM	Repasa por precaución
03/10/94	12:15-20:15	6282.00	6359.00	9.62	ROTATE	
03/10/94	20:15-20:45	6359.00	6359.00		SRVC	
03/10/94	20:45-24:00	6359.00	6390.00	9.54	ROTATE	
04/10/94	00:00-13:45	6390.00	6549.00	11.56	ROTATE	
04/10/94	13:45-14:15	6549.00	6549.00		SRVC	
04/10/94	14:15-14:45	6549.00	6554.00	10.00	ROTATE	
04/10/94	14:45-15:15	6554.00	6554.00		OTHER	Repara mesa rotary
04/10/94	15:15-16:45	6554.00	6561.00	4.67	ROTATE	
04/10/94	16:45-18:15	6561.00	6561.00		CIRC	P/Short trip
04/10/94	18:15-18:45	6561.00	6561.00		SURCON	Lanza R.Gear
04/10/94	18:45-19:45	6561.00	5400.00		POOH	Csg Window
04/10/94	19:45-20:30	5400.00	5400.00		OTHER	Pesca R.Gear-survey @ 6518 - 40° - S 22 E
04/10/94	20:30-24:00	5400.00	0.00		POOH	
05/10/94	00:00-01:00	0.00	0.00		MAKBHA	
05/10/94	01:00-04:15	0.00	6479.00		TRIPIN	
05/10/94	04:15-05:00	6479.00	6561.00		REAM	P/Precaución
05/10/94	05:00-11:00	6561.00	6645.00	14.00	ROTATE	
05/10/94	11:00-12:00	6645.00	6645.00		OTHER	Hta.tensiona hasta 220 KIPS,durante conección,al bajar asienta a 5' del fondo
05/10/94	12:00-22:30	6645.00	6768.00	11.71	ROTATE	Conecciones con drag de 230 Kips
05/10/94	22:30-24:00	6768.00	6768.00		CIRC	
06/10/94	00:00-01:00	6768.00	6768.00		SURCON	

ACTIVITY LOG

Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **106-19st3**

AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s):
Dir'l Driller(s): **Jorge Guerrero**

06/10/94	01:00-09:45	6768.00	6865.00	11.09	ROTATE	
06/10/94	09:45-10:00	6865.00	6865.00		OTHER	Reparando bomba # 1
06/10/94	10:00-12:00	6865.00	6892.00	13.50	ROTATE	
06/10/94	12:00-14:00	6892.00	6892.00		CIRC	
06/10/94	14:00-14:30	6892.00	6892.00		SURCON	Lanza R.Gear
06/10/94	14:30-15:45	6892.00	5400.00		WIPER	
06/10/94	15:45-16:45	5400.00	5400.00		OTHER	Recupera R.Gear- Survey:6864 - 36.75 - S 13.5 E
06/10/94	16:45-17:45	5400.00	5400.00		CUTDRL	
06/10/94	18:45-18:45	5400.00	6861.00		TRIPIN	
06/10/94	18:45-19:00	6861.00	6892.00		REAM	
06/10/94	19:00-24:00	6892.00	6948.00	11.20	ROTATE	
07/10/94	00:00-15:15	6948.00	7098.00	9.84	ROTATE	
07/10/94	15:15-15:45	7098.00	7098.00		OTHER	Repara Mesa Rotary
07/10/94	15:45-16:45	7098.00	7108.00	10.00	ROTATE	
07/10/94	16:45-18:00	7108.00	7108.00		CIRC	
07/10/94	18:00-20:00	7108.00	7108.00		SURCON	Survey,2(voces),1°salto cable de la polea,2°cortó cable
07/10/94	20:00-21:00	7108.00	7108.00		OTHER	Repara cable y saca R.Gear
07/10/94	21:00-24:00	7108.00	7139.00	10.33	ROTATE	
08/10/94	00:00-01:00	7139.00	7151.00	12.00	ROTATE	
08/10/94	01:00-03:00	7151.00	7151.00		CIRC	
08/10/94	03:00-03:30	7151.00	7151.00		SURCON	Lanza R.Gear
08/10/94	03:30-04:00	7151.00	7035.00		POOH	Lev.con bomba
08/10/94	04:00-07:30	7035.00	1463.00		POOH	
08/10/94	07:30-07:45	1463.00	1463.00		OTHER	Pesca R.Gear-Survey @ 7118 - 34 - S 8 E
08/10/94	07:45-09:00	1463.00	0.00		POOH	
08/10/94	09:00-09:00	0.00	0.00		POOH	
08/10/94	09:00-10:30	0.00	1465.00		MAKBHA	
08/10/94	10:30-14:00	1465.00	5400.00		TRIPIN	
08/10/94	14:00-15:15	5400.00	5400.00		CIRC	
08/10/94	15:15-16:15	5400.00	7094.00		TRIPIN	
08/10/94	16:15-17:45	7094.00	7151.00		REAM	
08/10/94	17:45-24:00	7151.00	7229.00	12.48	ROTATE	
09/10/94	00:00-05:00	7229.00	7291.00	12.40	ROTATE	
09/10/94	05:00-06:00	7291.00	7291.00		CIRC	
09/10/94	06:00-07:30	7291.00	7291.00		SURCON	Survey @ 7260 - 35.5 - S 5.5 E
09/10/94	07:30-24:00	7291.00	7477.00	11.27	ROTATE	
10/10/94	00:00-00:30	7477.00	7477.00		CIRC	
10/10/94	00:30-01:30	7477.00	7487.00	10.00	ROTATE	
10/10/94	01:30-03:00	7487.00	7487.00		CIRC	
10/10/94	03:00-04:15	7487.00	7487.00		OTHER	Intenta tomar surv.c/cabeza de circ.Amenaza de prisión,con.kelly y circ.
10/10/94	04:15-04:45	7487.00	7487.00		SURCON	Lanza R.Gear
10/10/94	04:45-08:45	7487.00	5300.00		POOH	Tensionando hasta 260 kips a 6228 c/ amenaza de prisión
10/10/94	08:45-09:30	5300.00	5300.00		OTHER	Pesca R.Gear:surv 7446'- 38.5°- S 01 E
10/10/94	09:30-12:00	5300.00	0.00		POOH	
10/10/94	12:00-12:00	0.00	0.00		POOH	

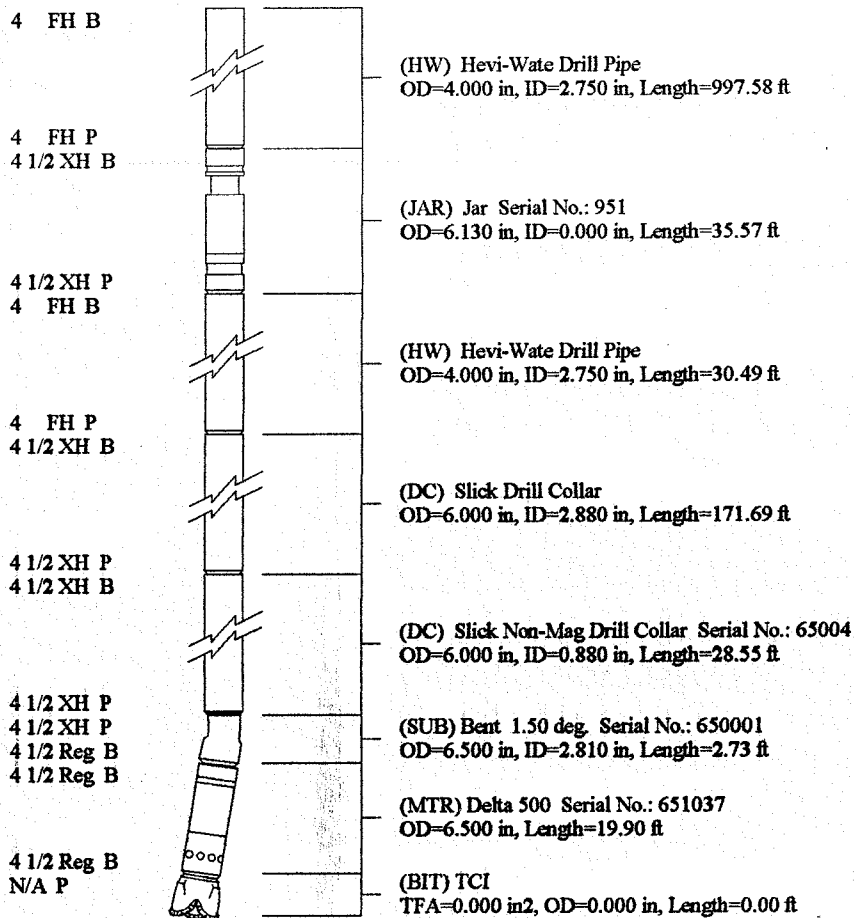


Bottom Hole Assembly #1 8-1/2" Hole Size

Company: Halliburton
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: lo6-19a3
Run No: 1
Operators(s): Fernando Caldas, Edwar Agurto
Directional Driller(s): Jorge Guerrero

Assembly Type: Motor w/ Bent Sub

Total Length = 1286.51 ft



Job No.:
 Operator: **PETROTECH S.A.**
 Field: **LOBITOS MAR LAST**
 Well: **lo6-19st3**
 Run No.: **1**

 AFE No.:
 Location: **TALARA, PIURA, PERU**
 MWD Operator(s): **Fernando Caldas, Edwar Agurto**
 Dir'l Driller(s): **Jorge Guerrero**
 BHA No.: **1**

 Hole Size: **8-1/2"**
BOTTOM HOLE ASSEMBLY

Assembly Type: Motor w/ Bent Sub	Reason Pulled: HR - Hours on bit
Objective: Side track from 9 5/8" window @ 5400'	
Motor Size / Type: 6.500 in / Delta 500	Serial No.: 651037
Sliding(100.0%): 165.00 ft @ 39.00 hrs ==> 4.23 ft/hr	Circulating: 0.25 hrs
Rotating(0.0%): 0.00 ft @ 0.00 hrs ==> 0.00 ft/hr	Flow Rate: 335.00 gpm
Total Drilled: 165.00 ft @ 39.00 hrs ==> 4.23 ft/hr	SPM: 96.00

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1		(BIT) TCI	0.000		0.00	0.00	N/A		P
2	651037	(MTR) Halliburton, Delta 500	6.500	4.649	19.90	19.90	4 1/2 Reg	4 1/2 Reg	B/B
3	650001	(SUB) 1.500° Bend Sub	6.500	2.810	2.73	22.63	4 1/2 XH	4 1/2 Reg	P/B
4	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	51.18	4 1/2 XH	4 1/2 XH	B/P
5		(DC) 6 jts, Slick Drill Collar	6.000	2.880	171.69	222.87	4 1/2 XH	4 1/2 XH	B/P
6		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	253.36	4 FH	4 FH	B/P
7	951	(JAR) bowen Jar	6.130		35.57	288.93	4 1/2 XH	4 1/2 XH	B/P
8		(HW) 33 jts, Hevi-Wate Drill Pipe	4.000	2.750	997.58	1286.51	4 FH	4 FH	B/P

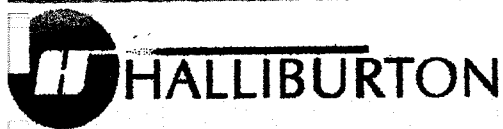
MUD/PUMP DATA

Mud Type: KLM	Wt: 10.50 lb/gal	PV: 25.00 cp	YP: 17.00 lb/100ft²	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc.: 50.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.10%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 13.00%
Diesel Grade: 0	Aniline Pt.: 0.00 °F		Chlorides: 21000 PPM	H2S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

Pump Type: Triplex - T-1000	Volume: 0.00 gpm	SPM: 0	Stroke: 10.00 in	Liner: 6.00 in
Triplex - PZ-8	0.00 gpm	0	8.00 in	6.00 in

BIT DATA

Manufacturer:	IADC:	Length: 0.00 ft
Bit Type: TCI	Depth In: 5402.00 - 5567.00 (165.00) ft	Gage Length: 0.00 in
Serial No.:		TFA: 0.000 in²
Hours On Bit: 39.00	FTG On Bit: 165.00	

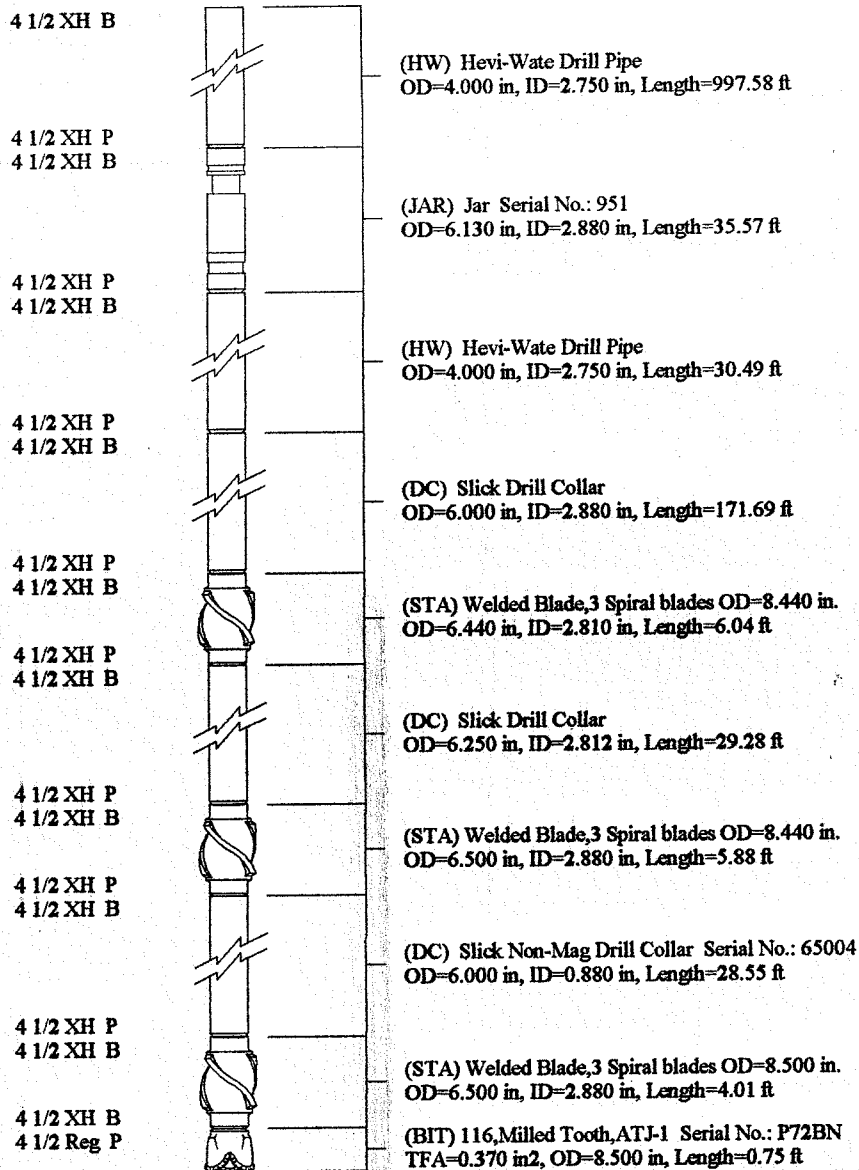


Bottom Hole Assembly #2 8-1/2" Hole Size

Company: HALLIBURTON
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: 1o6-19st3
Run No: 1
Operators(s):
Directional Driller(s): JORGE GUERRERO

Assembly Type: Building Assembly

Total Length = 1309.84 ft



Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **lo6-19st3**
Run No.: **1**

AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s):
Dir'l Driller(s): **JORGE GUERRERO**
BHA No.: **2**

Hole Size: **8-1/2"**
BOTTOM HOLE ASSEMBLY

Assembly Type: **Building Assembly**

Reason Pulled: **HR - Hours on bit**

Objective: **Mantener inclinación o levantar suavemente**

Sliding(0.0%):	0.00 ft @	0.00 hrs ==>	0.00 ft/hr	Bit Pressure :	1041.59 psi	Flow Rate :	384.00 gpm
Rotating(100.0%):	417.00 ft @	22.50 hrs ==>	18.53 ft/hr			SPM :	110.00
Total Drilled:	417.00 ft @	22.50 hrs ==>	18.53 ft/hr				

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1	P72BN	(BIT) HTC,ATJ-1,Milled Tooth	8.500		0.75	0.75	4 1/2 Reg		P
2		(STA) Welded Blade,3 Spiral blades, blade OD=8.500	6.500	2.880	4.01	4.76	4 1/2 XH	4 1/2 XH	B/B
3	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	33.31	4 1/2 XH	4 1/2 XH	B/P
4		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.500	2.880	5.88	39.19	4 1/2 XH	4 1/2 XH	B/P
5		(DC) Slick Drill Collar	6.250	2.812	29.28	68.47	4 1/2 XH	4 1/2 XH	B/P
6		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.440	2.810	6.04	74.51	4 1/2 XH	4 1/2 XH	B/P
7		(DC) 6 jts, Slick Drill Collar	6.000	2.880	171.69	246.20	4 1/2 XH	4 1/2 XH	B/P
8		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	276.69	4 1/2 XH	4 1/2 XH	B/P
9	951	(JAR) bowen Jar	6.130	2.880	35.57	312.26	4 1/2 XH	4 1/2 XH	B/P
10		(HW) 33 jts, Hevi-Wate Drill Pipe	4.000	2.750	997.58	1309.84	4 1/2 XH	4 1/2 XH	B/P

MUD/PUMP DATA

Mud Type: KLM	Wt: 10.50 lb/gal	PV: 22.00 cp	YP: 18.00 lb/100ft2	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc.: 50.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.10%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 13.00%
Diesel Grade: 0	Aniline Pt.: 0.00 °F		Chlorides: 21000 PPM	H2S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

BIT DATA

Manufacturer: HTC	IADC: 116	Length: 0.75 ft
Bit Type: Milled Tooth	Depth In: 5567.00 - 5984.00 (417.00) ft	Gage Length: 0.00 in
Serial No.: P72BN	Nozzles: 13 13 12 /32nd	TFA: 0.370 in2
Hours On Bit : 22.50	FTG On Bit : 417.00	



Bottom Hole Assembly #3 8-1/2" Hole Size

Company: HALLIBURTON
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: lo6-19st3
Run No: 1
Operators(s):
Directional Driller(s): JORGE GUERRERO

Assembly Type: Drop Assembly

Total Length = 1326.11 ft

4 FH B		(HW) Hevi-Wate Drill Pipe OD=4.000 in, ID=2.750 in, Length=997.58 ft
4 FH P		
4 1/2 XH B		(JAR) Jar Serial No.: 951 OD=6.130 in, ID=0.000 in, Length=35.57 ft
4 1/2 XH P		
4 FH B		(HW) Hevi-Wate Drill Pipe OD=4.000 in, ID=2.750 in, Length=30.49 ft
4 FH P		
4 1/2 XH B		(DC) Slick Drill Collar OD=6.000 in, ID=2.880 in, Length=200.03 ft
4 1/2 XH P		
4 1/2 XH B		(STA) Welded Blade, 3 Spiral blades OD=8.440 in. OD=6.440 in, ID=2.880 in, Length=6.04 ft
4 1/2 XH P		
4 1/2 XH B		(DC) Slick Non-Mag Drill Collar Serial No.: 65004 OD=6.000 in, ID=0.880 in, Length=28.55 ft
4 1/2 XH P		
4 1/2 XH B		(STA) Welded Blade, 3 Spiral blades OD=8.440 in. OD=6.500 in, ID=2.810 in, Length=5.88 ft
4 1/2 XH P		
4 1/2 XH B		(DC) Slick Drill Collar OD=6.000 in, ID=2.810 in, Length=17.21 ft
4 1/2 Reg P		
4 1/2 XH B		(STA) Welded Blade, 3 Spiral blades OD=8.500 in. OD=6.500 in, ID=2.880 in, Length=4.01 ft
4 1/2 XH B		
4 1/2 Reg P		(BIT) TCLATJ-05 Serial No.: N76BV TFA=0.370 in2, OD=8.500 in, Length=0.75 ft

Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **1o6-19st3**
Run No.: **1**

AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s):
Dir'l Driller(s): **JORGE GUERRERO**
BHA No.: **3**

Hole Size: **8-1/2"**
BOTTOM HOLE ASSEMBLY

Assembly Type: **Drop Assembly**

Reason Pulled: **<undefined>**

Sliding(0.0%):	0.00 ft @	0.00 hrs ==>	0.00 ft/hr	Bit Pressure :	1071.35 psi	Flow Rate :	384.00 gpm
Rotating(100.0%):	577.00 ft @	49.25 hrs ==>	11.72 ft/hr			SPM :	110.00
Total Drilled:	577.00 ft @	49.25 hrs ==>	11.72 ft/hr				

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1	N76BV	(BIT) HTC,ATJ-05,TCI	8.500		0.75	0.75	4 1/2 Reg		P
2		(STA) Welded Blade,3 Spiral blades, blade OD=8.500	6.500	2.880	4.01	4.76	4 1/2 XH	4 1/2 XH	B/B
3		(DC) 3 jts, Slick Drill Collar	6.000	2.810	17.21	21.97	4 1/2 XH	4 1/2 Reg	B/P
4		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.500	2.810	5.88	27.85	4 1/2 XH	4 1/2 XH	B/P
5	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	56.40	4 1/2 XH	4 1/2 XH	B/P
6		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.440	2.880	6.04	62.44	4 1/2 XH	4 1/2 XH	B/P
7		(DC) 7 jts, Slick Drill Collar	6.000	2.880	200.03	262.47	4 1/2 XH	4 1/2 XH	B/P
8		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	292.96	4 FH	4 FH	B/P
9	951	(JAR) bowen Jar	6.130		35.57	328.53	4 1/2 XH	4 1/2 XH	B/P
10		(HW) 33 jts, Hevi-Wate Drill Pipe	4.000	2.750	997.58	1326.11	4 FH	4 FH	B/P

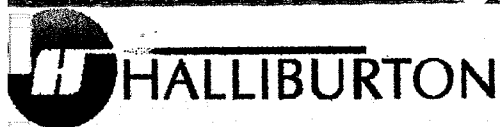
MUD/PUMP DATA

Mud Type: KLM	Wt: 10.80 lb/gal	PV: 30.00 cp	YP: 16.00 lb/100ft²	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc.: 49.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.25%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 16.00%
Diesel Grade: 0	Aniline Pt: 0.00 °F		Chlorides: 21000 PPM	H2S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

Pump Type: Triplex - T-1000	Volume: 0.00 gpm	SPM: 0	Stroke: 10.00 in	Liner: 6.00 in
Triplex - PZ-8	0.00 gpm	0	8.00 in	6.00 in

BIT DATA

Manufacturer: HTC	IADC:	Length: 0.75 ft
Bit Type: TCI	Depth In: 5984.00 - 6561.00 (577.00) ft	Gage Length: 0.00 in
Serial No.: N76BV	Nozzles: 13 13 12 /32nd	TFA: 0.370 in2
Hours On Bit : 49.25	FTG On Bit : 577.00	

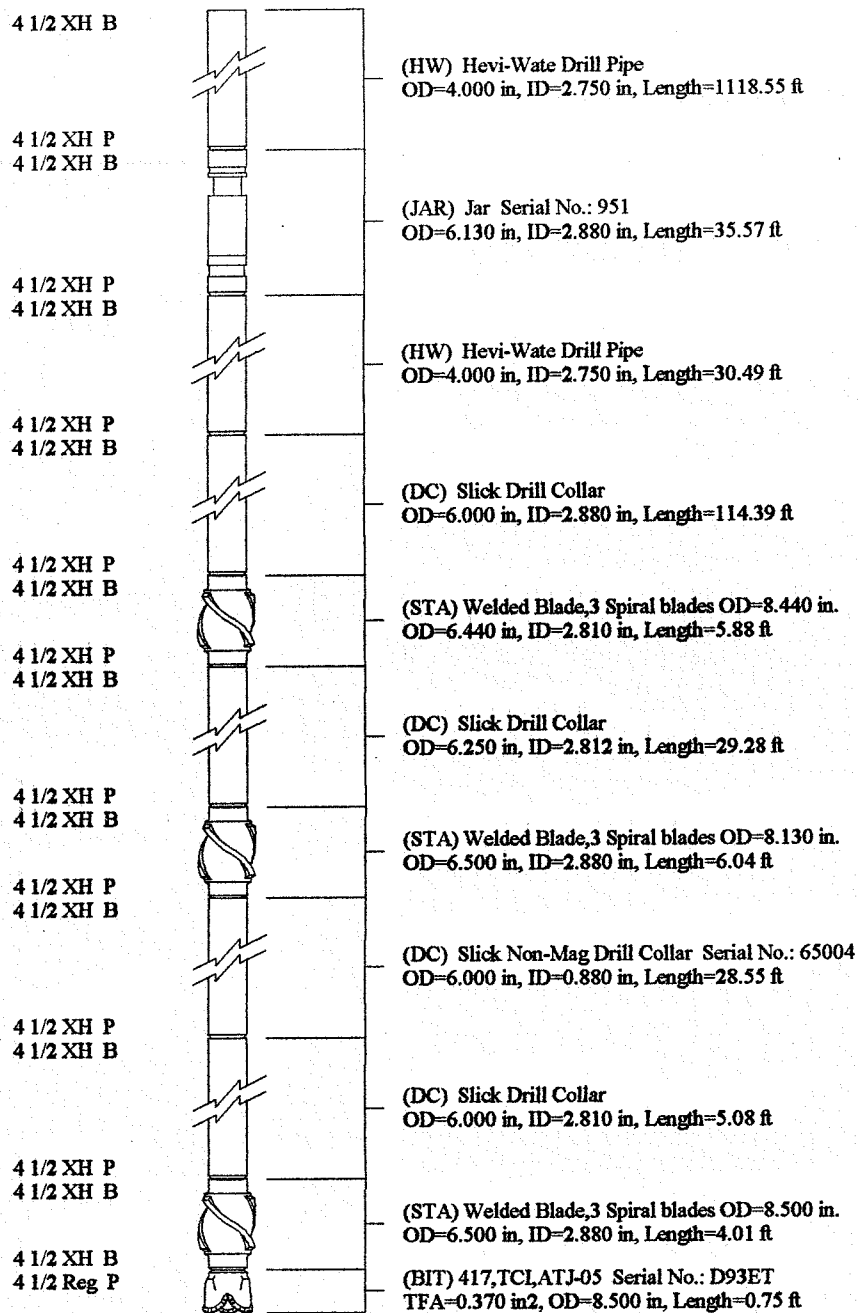


Bottom Hole Assembly #4 8-1/2" Hole Size

Company: PETROTECH
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: lo6-19st3
Run No: 1
Operators(s):
Directional Driller(s): Jorge Guerrero

Assembly Type: Building Assembly

Total Length = 1378.59 ft




HALLIBURTON
BHA REPORT

From October 5, 1994 To October 8, 1994

 Page 1
 Date: 9/10/94
 Time: 2:15 pm

 Job No.:
 Operator: **PETROTECH S.A.**
 Field: **LOBITOS MAR LAST**
 Well: **lo6-19st3**
 Run No.: **1**

 AFE No.:
 Location: **TALARA, PIURA, PERU**
 MWD Operator(s):
 Dir'l Driller(s): **Jorge Guerrero**
 BHA No.: **4**

 Hole Size: **8-1/2"**
BOTTOM HOLE ASSEMBLY

 Assembly Type: **Building Assembly**

 Reason Pulled: **<undefined>**

Sliding(0.0%):	0.00 ft @	0.00 hrs ==>	0.00 ft/hr	Bit Pressure :	1071.35 psi	Flow Rate :	384.00 gpm
Rotating(100.0%):	590.00 ft @	52.50 hrs ==>	11.24 ft/hr			SPM :	110.00
Total Drilled:	590.00 ft @	52.50 hrs ==>	11.24 ft/hr				

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1	D93ET	(BIT) HTC,ATJ-05,TCI	8.500		0.75	0.75	4 1/2 Reg		P
2		(STA) Welded Blade,3 Spiral blades, blade OD=8.500	6.500	2.880	4.01	4.76	4 1/2 XH	4 1/2 XH	B/B
3		(DC) Slick Drill Collar	6.000	2.810	5.08	9.84	4 1/2 XH	4 1/2 XH	B/P
4	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	38.39	4 1/2 XH	4 1/2 XH	B/P
5		(STA) Welded Blade,3 Spiral blades, blade OD=8.130	6.500	2.880	6.04	44.43	4 1/2 XH	4 1/2 XH	B/P
6		(DC) Slick Drill Collar	6.250	2.812	29.28	73.71	4 1/2 XH	4 1/2 XH	B/P
7		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.440	2.810	5.88	79.59	4 1/2 XH	4 1/2 XH	B/P
8		(DC) 4 jts, Slick Drill Collar	6.000	2.880	114.39	193.98	4 1/2 XH	4 1/2 XH	B/P
9		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	224.47	4 1/2 XH	4 1/2 XH	B/P
10	951	(JAR) bowen Jar	6.130	2.880	35.57	260.04	4 1/2 XH	4 1/2 XH	B/P
11		(HW) 37 jts, Hevi-Wate Drill Pipe	4.000	2.750	1118.55	1378.59	4 1/2 XH	4 1/2 XH	B/P

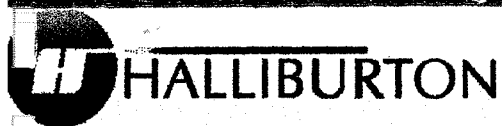
MUD/PUMP DATA

Mud Type: KLM	Wt: 10.80 lb/gal	PV: 30.00 cp	YP: 16.00 lb/100ft²	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc: 49.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.25%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 16.00%
Diesel Grade: 0	Aniline Pt: 0.00 °F		Chlorides: 21000 PPM	H ₂ S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

Pump Type: Triplex - T-1000	Volume: 0.00 gpm	SPM: 0	Stroke: 10.00 in	Liner: 6.00 in
Triplex - PZ-8	0.00 gpm	0	8.00 in	6.00 in

BIT DATA

Manufacturer: HTC	IADC: 417	Length: 0.75 ft
Bit Type: TCI	Depth In: 6561.00 - 7151.00 (590.00) ft	Gage Length: 0.00 in
Serial No.: D93ET	Nozzles: 13 13 12 /32nd	TFA: 0.370 in²
Hours On Bit: 52.50	FTG On Bit: 590.00	

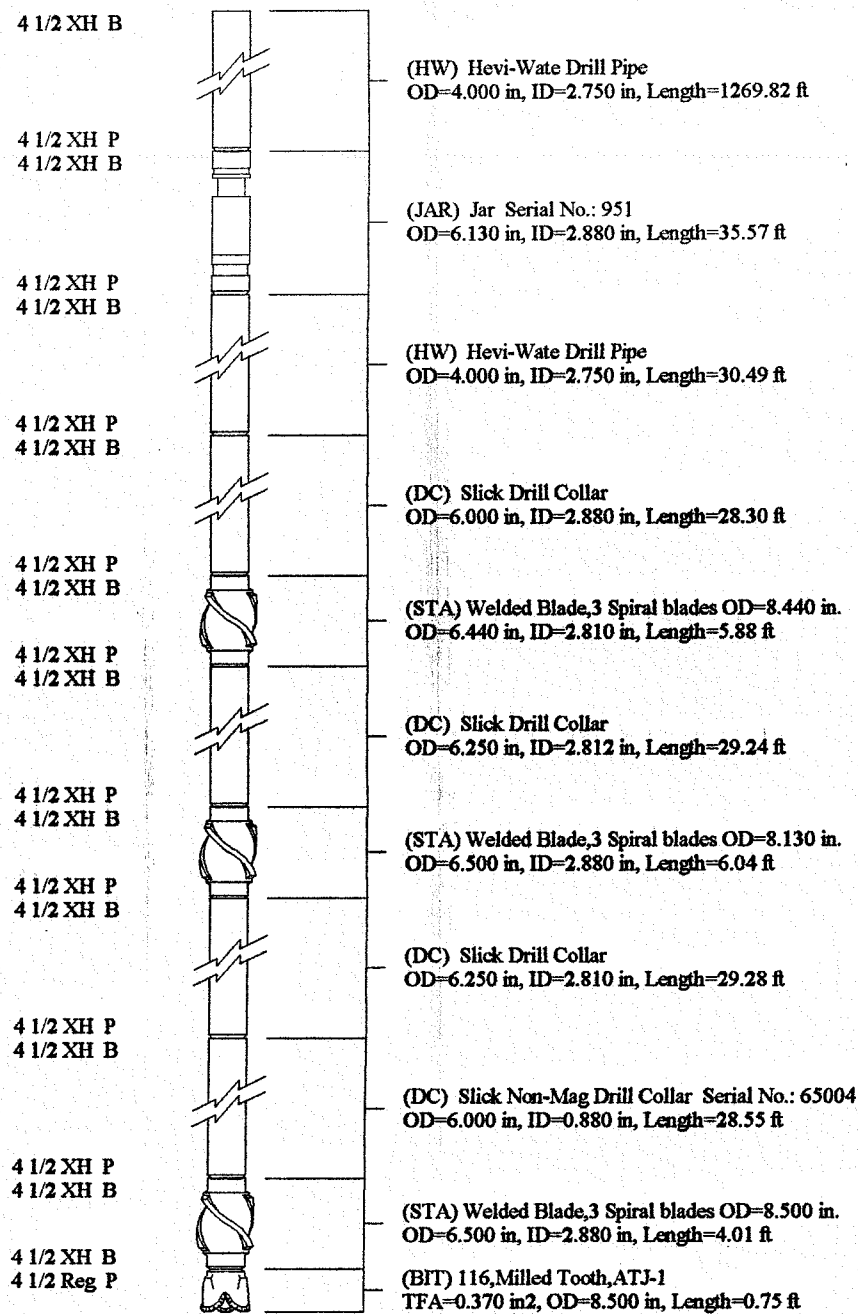


Bottom Hole Assembly #5 8-1/2" Hole Size

Company: PETROTECH
Field: LOBITOS MAR LAST
Location: TALARA, PIURA, PERU
Well: lo6-19st3
Run No: 1
Operators(s):
Directional Driller(s): Jorge Guerrero

Assembly Type: Building Assembly

Total Length = 1467.93 ft




HALLIBURTON

BHA REPORT

From October 8, 1994 To October 10, 1994

Page 1
Date: 9/10/94
Time: 2:13 pm

Job No.:
Operator: **PETROTECH S.A.**
Field: **LOBITOS MAR LAST**
Well: **lo6-19st3**
Run No.: **1**

AFE No.:
Location: **TALARA, PIURA, PERU**
MWD Operator(s):
Dir'l Driller(s): **Jorge Guerrero**
BHA No.: **5**

Hole Size: **8-1/2"**

BOTTOM HOLE ASSEMBLY

Assembly Type: **Building Assembly**

Reason Pulled: **<undefined>**

Sliding(0.0%):	0.00 ft @	0.00 hrs ==>	0.00 ft/hr	Bit Pressure :	1071.35 psi	Flow Rate :	384.00 gpm
Rotating(100.0%):	336.00 ft @	28.75 hrs ==>	11.69 ft/hr			SPM :	110.00
Total Drilled:	336.00 ft @	28.75 hrs ==>	11.69 ft/hr				

No.	Serial No.	Tool Description	OD (in)	ID (in)	Length (ft)	Total Length (ft)	Connections Up	Down	Conn
1		(BIT) HTC,ATJ-1,Milled Tooth	8.500		0.75	0.75	4 1/2 Reg		P
2		(STA) Welded Blade,3 Spiral blades, blade OD=8.500	6.500	2.880	4.01	4.76	4 1/2 XH	4 1/2 XH	B/B
3	65004	(DC) Slick Non-Mag Drill Collar	6.000	0.880	28.55	33.31	4 1/2 XH	4 1/2 XH	B/P
4		(DC) Slick Drill Collar	6.250	2.810	29.28	62.59	4 1/2 XH	4 1/2 XH	B/P
5		(STA) Welded Blade,3 Spiral blades, blade OD=8.130	6.500	2.880	6.04	68.63	4 1/2 XH	4 1/2 XH	B/P
6		(DC) Slick Drill Collar	6.250	2.812	29.24	97.87	4 1/2 XH	4 1/2 XH	B/P
7		(STA) Welded Blade,3 Spiral blades, blade OD=8.440	6.440	2.810	5.88	103.75	4 1/2 XH	4 1/2 XH	B/P
8		(DC) Slick Drill Collar	6.000	2.880	28.30	132.05	4 1/2 XH	4 1/2 XH	B/P
9		(HW) Hevi-Wate Drill Pipe	4.000	2.750	30.49	162.54	4 1/2 XH	4 1/2 XH	B/P
10	951	(JAR) bowen Jar	6.130	2.880	35.57	198.11	4 1/2 XH	4 1/2 XH	B/P
11		(HW) 42 jts, Hevi-Wate Drill Pipe	4.000	2.750	1269.82	1467.93	4 1/2 XH	4 1/2 XH	B/P

MUD/PUMP DATA

Mud Type: KLM	Wt: 10.80 lb/gal	PV: 30.00 cp	YP: 16.00 lb/100ft2	Oil: 0.00%
Water Loss: 4.00 cc	Funnel Visc.: 49.00 sec	pH: 12.0	Total Gas: 0 PPM	Sand: 0.25%
LCM Type: Type A	LCM Size: 0.00 in		LCM Volume: 0.00 lb/bbl	Solids: 16.00%
Diesel Grade: 0	Aniline Pt.: 0.00 °F		Chlorides: 21000 PPM	H2S: 0 PPM
BH(max): 0.00 °F	Flow Line(max): 0.00 °F		Temperature Gradient: 0.00 °F/100ft	

Pump Type: Triplex - T-1000	Volume: 0.00 gpm	SPM: 0	Stroke: 10.00 in	Liner: 6.00 in
Triplex - PZ-8	0.00 gpm	0	8.00 in	6.00 in

BIT DATA

Manufacturer: HTC	IADC: 116	Length: 0.75 ft
Bit Type: Milled Tooth	Depth In: 7151.00 - 7487.00 (336.00) ft	Gage Length: 0.00 in
Serial No.:	Nozzles: 13 13 12 /32nd	TFA: 0.370 in2
Hours On Bit : 28.75	FTG On Bit : 336.00	