TOTAL AUSTRAL

Drilling & Completion Department
Buenos Aires - Argentina

W:\Entity\BUE\GO\OF\-Special\03-Onshore\Campaña AP-2007\AP-225 - 20\Reports\EWR

Neuquen – Aguada Pichana
Onshore Drilling Campaign 2007

AP-225

END OF ACTIVITY REPORT

Rig ODE-39

	Name	Function	Signature	Date
Prepared by	Philippe LAPOINTE	Onshore Drilling Engineer		14/07/08
Revised by	Diego SERVIERES	D/C Fluids Engineer		14/07/08
	Fabián VALENTINI	Head of Wells & Completion		18/07/08
	Pierre PUYO	Head of Onshore Drilling		21/07/08
Approved by	Matthieu NAEGEL	D/C Manager		21-7-8

DISTRIBUTION LIST

TOTAL AUSTRAL		TOTAL FRANCE	
1	Well File	1	DGEP/TDO/FP/MTH Paris
1	GO/OF (PDF Format)	1	DGEP/TDO/FP/MTH Pau
1	GER		(PDF Format)
1	PAN AMERICAN ENERGY LLC		
2	WINTERSHALL ENERGIA SA		
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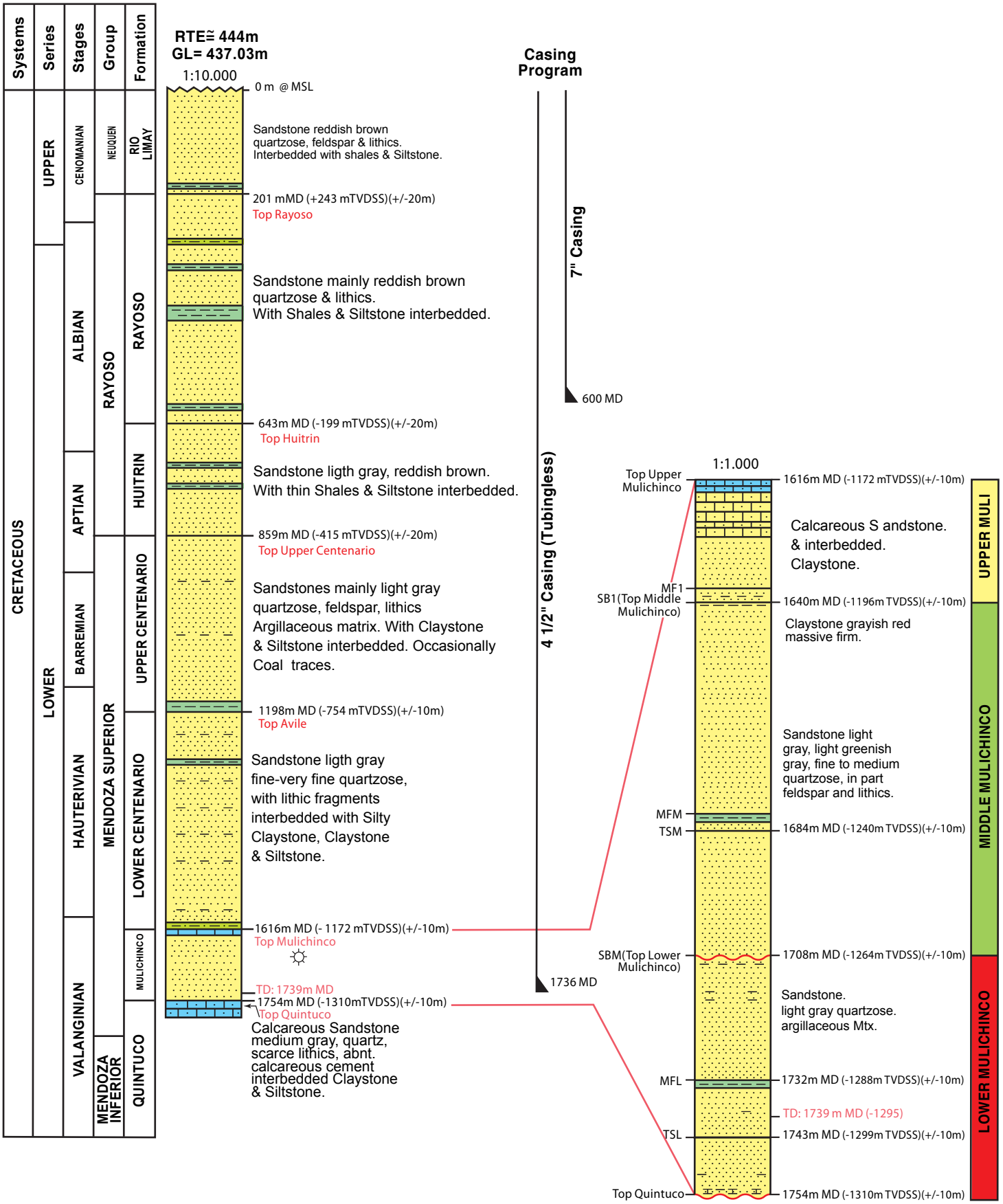
TABLE OF CONTENTS

CONTENT

1) STRATIGRAPHIC COLUMN & WELL OUTLINE

Aguada Pichana Field

AP-225 Well / Expected Stratigraphic Column



Directional Survey

TOTAL Austral

Well Name: AP-225

Country : Argentina	Slot :	Water Depth :	Spud Date : 5/15/2007
Field : AGUADA PICHANA	North :	Location : Onshore	Objective : Flowing Gas
Platform : N/A	East :	Well shape : Vert	Status : Completed

Branches

Branch Name	Branch UWI	Parent Branches	Pilot Hole	Comment
AP-225		AP-225	No	

Start Depth (ftKB)	Kick Off Method	Vertical Section Direction (°)
0.0		

Deviation Surveys

Description	Planned Path?	Final Path?	Azimuth N...	Convergen...	Decl (°)	Note Correction
Teledrift		Yes				

Survey Data (calculation method is minimum radius of curvature)

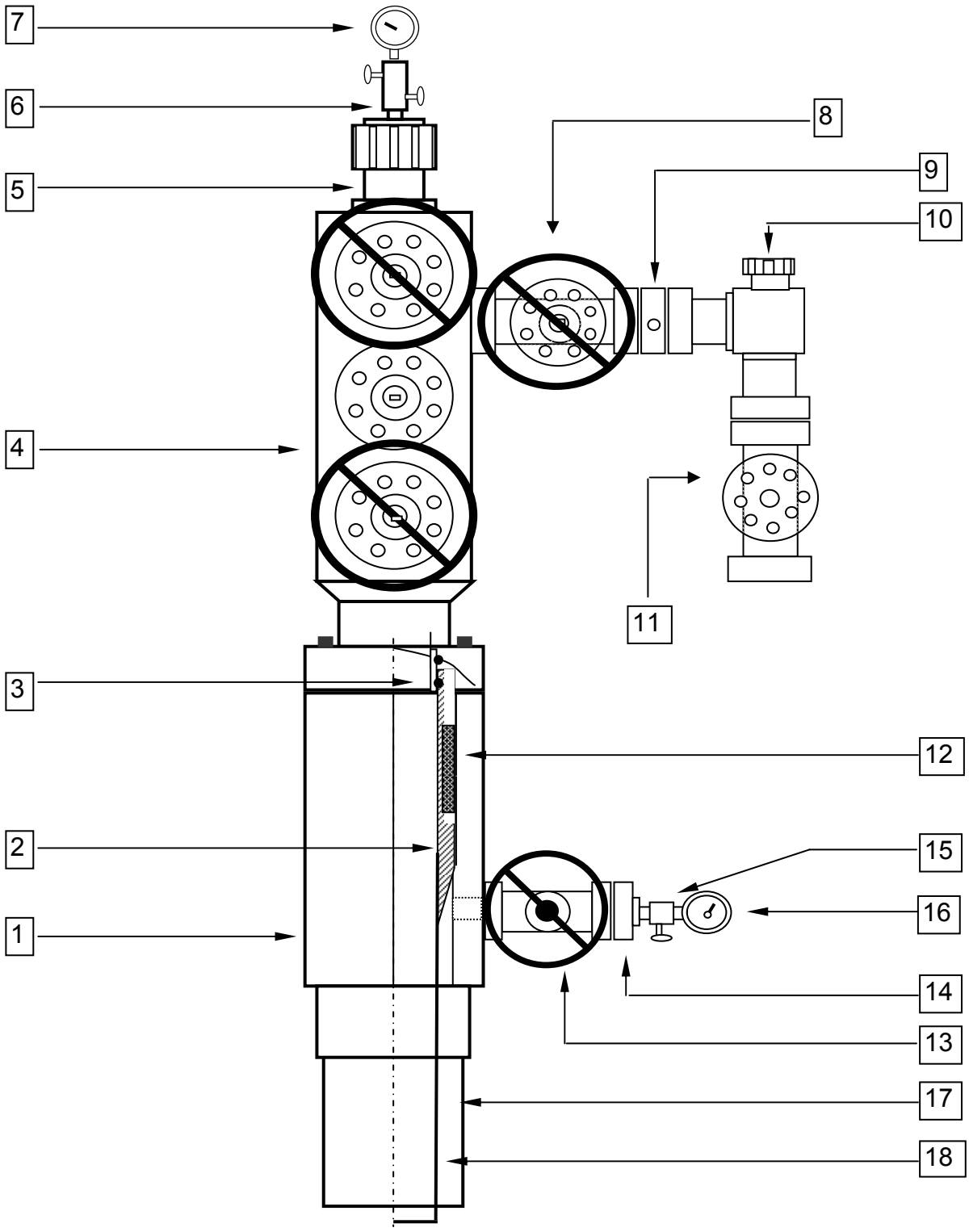
Date	MD (ftKB)	Incl (°)	Azm (°)	Method	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Depart (ft)	Turn (°/100ft)	Build (°/100ft)	Survey Company
5/15/2007	252.62	0.50	0.00	Teledrift	252.62	1.10	1.10	0.00	0.20	1.10	0.00	0.20	
5/16/2007	311.68	0.50	0.00	Teledrift	311.67	1.62	1.62	0.00	0.00	1.62	0.00	0.00	
5/16/2007	488.85	1.00	0.00	Teledrift	488.82	3.94	3.94	0.00	0.28	3.94	0.00	0.28	
5/16/2007	967.85	1.00	0.00	Teledrift	967.75	12.30	12.30	0.00	0.00	12.30	0.00	0.00	
5/16/2007	1,502.62	1.00	0.00	Teledrift	1,502.45	21.63	21.63	0.00	0.00	21.63	0.00	0.00	
5/16/2007	1,971.78	0.50	0.00	Teledrift	1,971.57	27.77	27.77	0.00	0.11	27.77	0.00	-0.11	
5/18/2007	2,299.87	1.00	0.00	Teledrift	2,299.62	32.07	32.07	0.00	0.15	32.07	0.00	0.15	
5/18/2007	2,624.67	1.00	0.00	Teledrift	2,624.38	37.73	37.73	0.00	0.00	37.73	0.00	0.00	
5/19/2007	2,972.44	2.00	0.00	Teledrift	2,972.02	46.84	46.84	0.00	0.29	46.84	0.00	0.29	
5/19/2007	3,126.64	2.50	0.00	Teledrift	3,126.10	52.89	52.89	0.00	0.32	52.89	0.00	0.32	
5/19/2007	3,221.78	3.00	0.00	Teledrift	3,221.14	57.46	57.46	0.00	0.53	57.46	0.00	0.53	
5/19/2007	3,284.12	3.00	0.00	Teledrift	3,283.39	60.72	60.72	0.00	0.00	60.72	0.00	0.00	
5/19/2007	3,333.33	3.00	0.00	EDrift	3,332.53	63.29	63.29	0.00	0.00	63.29	0.00	0.00	
5/19/2007	3,333.33	3.00	0.00	Totco	3,332.53	63.29	63.29	0.00	0.00	63.29	0.00	0.00	
5/19/2007	3,408.79	2.00	0.00	Teledrift	3,407.92	66.59	66.59	0.00	1.33	66.59	0.00	-1.33	
5/20/2007	3,503.94	3.00	0.00	Teledrift	3,502.97	70.74	70.74	0.00	1.05	70.74	0.00	1.05	
5/20/2007	3,595.80	1.00	0.00	Teledrift	3,594.77	73.94	73.94	0.00	2.18	73.94	0.00	-2.18	
5/20/2007	3,687.66	1.00	0.00	Teledrift	3,686.62	75.54	75.54	0.00	0.00	75.54	0.00	0.00	
5/20/2007	3,786.09	2.00	0.00	Teledrift	3,785.01	78.12	78.12	0.00	1.02	78.12	0.00	1.02	
5/20/2007	3,937.01	2.00	0.00	Teledrift	3,935.84	83.39	83.39	0.00	0.00	83.39	0.00	0.00	
5/20/2007	4,091.21	1.00	0.00	Teledrift	4,089.99	87.42	87.42	0.00	0.65	87.42	0.00	-0.65	
5/20/2007	4,402.89	1.00	0.00	Teledrift	4,401.62	92.86	92.86	0.00	0.00	92.86	0.00	0.00	
5/20/2007	4,717.85	1.00	0.00	Teledrift	4,716.53	98.36	98.36	0.00	0.00	98.36	0.00	0.00	
5/21/2007	5,036.09	1.00	0.00	Teledrift	5,034.72	103.91	103.91	0.00	0.00	103.91	0.00	0.00	
5/21/2007	5,347.77	1.00	0.00	Teledrift	5,346.36	109.35	109.35	0.00	0.00	109.35	0.00	0.00	
5/21/2007	5,646.33	1.00	0.00	EDrift	5,644.87	114.56	114.56	0.00	0.00	114.56	0.00	0.00	
5/21/2007	5,688.98	1.00	0.00	Teledrift	5,687.51	115.31	115.31	0.00	0.00	115.31	0.00	0.00	

Report printed: 2/14/2008

2) COMPLETION DIAGRAM

WELLHEAD LAYOUT -- AGUADA PICHANA

WELL: AP- 225 DATA 20/05/07 REV 0



WELLHEAD LAYOUT -- AGUADA PICHANA

WELL: AP-225 DATE: 20/05/07 REV 0

Nº	Description	PIN Nº	Qty
1	Integrated Well head 7 1/16" 5000 psi	37968	1
2	Tubing hanger 7 1/16" x 4 1/2" SEC 10.5 lb/ft	37977	1
3	Metal seal sleeve assy	38026	1
4	Solid block tree 4 1/16" 5000	72322	1
5	Top tree cap 4 1/16" 9 1/2" Otis Quick union	37989	1
6	Needle valve 1/2" NPT 5000	38006	1
7	Pressure gauge 0-5000 1/2" NPT	38025	1
8	Gate Valve "FL" 4 1/8" 5000 Psi.	72323	1
9	Instrument flange 4 1/16" w/two 1/2" NPT	37992	1
10	Choke positive H2 4 1/16" 5000	37993	1
11	Gate Valve "FL" 4 1/8" 5000 Psi.	72323	1
12	Pack off	39214	1
13	Gate valve flanged 2 1/16" x 5000	37968	1
14	Blind flange 2 1/16" 5000 x 1/2" NPT	37968	1
15	Needle valve angle 1/2" NPT 5000	38006	1
16	Pressure gauge 0-5000 1/2" NPT	38025	1
17	Casing 7"		
18	Casing 4 1/2" 11.6 Lb/Ft L80 Sec VC 13	37958	188

TOTAL

TOTAL AUSTRAL

COMPLETION DIAGRAM

TUBINGLESS 4 1/2"

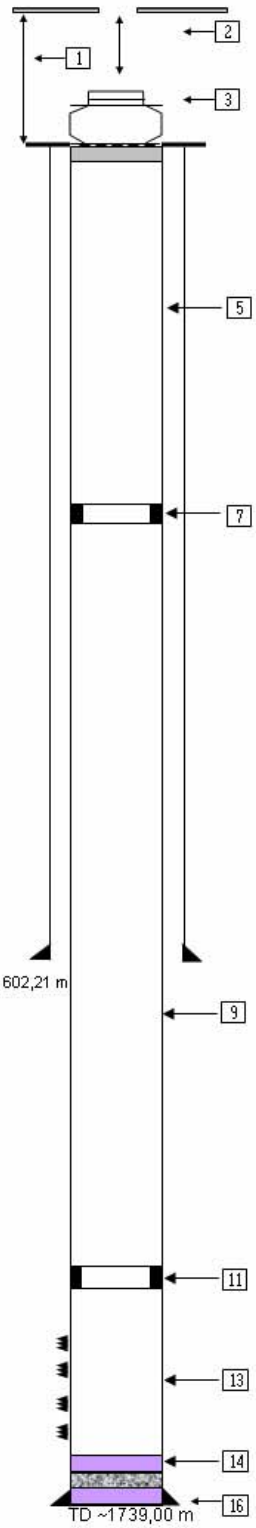
FIELD: A PICHANA
WELL : AP-225
DATE: 20/05/07

WELL TYPE : GAS PRODUCER

COMPLETION DATE: 20/05/07
LAST WORKOVER DATE:

DEVIATION: 0°
KOP: xxx M

PAGE: REV.: 0



IT.	QT	DESCRIPTION	Mini ID in.	Maxi OD in.	Length m.	Bot Depth m.
1		RT / GL			6.73	
2		GL - TOP COMPACT HEAD	0.000	0.000	0.00	
3	1	CIW TBG HANGER MC2 4.1/2" 10.5 LB/FT SEC 7.1/16"-5000	3.984	7.062	0.26	0.00
4	1	PUP JOINT 4,1/2" SEC	4.052		1.33	6.99
5	74	TUBING 4.1/2" SEC 10,5 Lb/Ft - L-80 - CR13	4.052	4.500	690.21	697.20
6	1	PUP JOINT 4,1/2" SEC	4.052	4.500	3.06	700.26
7	1	**HALLIBURTON 3.81" "R" NIPPLE 4.1/2" VAM**	3.813	4.911	0.42	**700.68**
8	1	PUP JOINT 4,1/2" SEC	4.052	4.500	3.09	703.77
9	96	TUBING 4.1/2" SEC 10,5 Lb/Ft - L-80 - CR13	4.052	4.500	896.21	1599.98
10	1	PUP JOINT 4,1/2" SEC	4.052	4.500	2.07	1602.05
11	1	**HALLIBURTON 3.81" "RN" NIPPLE 4.1/2" VAM**	3.725	4.911	0.41	**1602.46**
12	1	PUP JOINT 4,1/2" SEC	4.052	4.500	2.08	1604.54
13	12	TUBING 4.1/2" SEC 10,5 Lb/Ft - L-80 - CR13	4.052	4.500	111.60	1716.14
14	1	**FLOAT COLLAR DOUBLE VALVE N80 NVAN 10.5 LB/FT**	3.958	4.500	0.36	**1716.50**
15	2	TUBING 4.1/2" SEC 10,5 Lb/Ft - L-80 - CR13	4.052	4.500	18.65	**1735.15**
16	1	**FLOAT SHOE 4 1/2" 10.5 LB/FT N80 SEC**	3.958	4.500	**0.46**	**1735.61**
		DHSV calibrada a 23 Bar colocada 12-12-07				

REMARKS

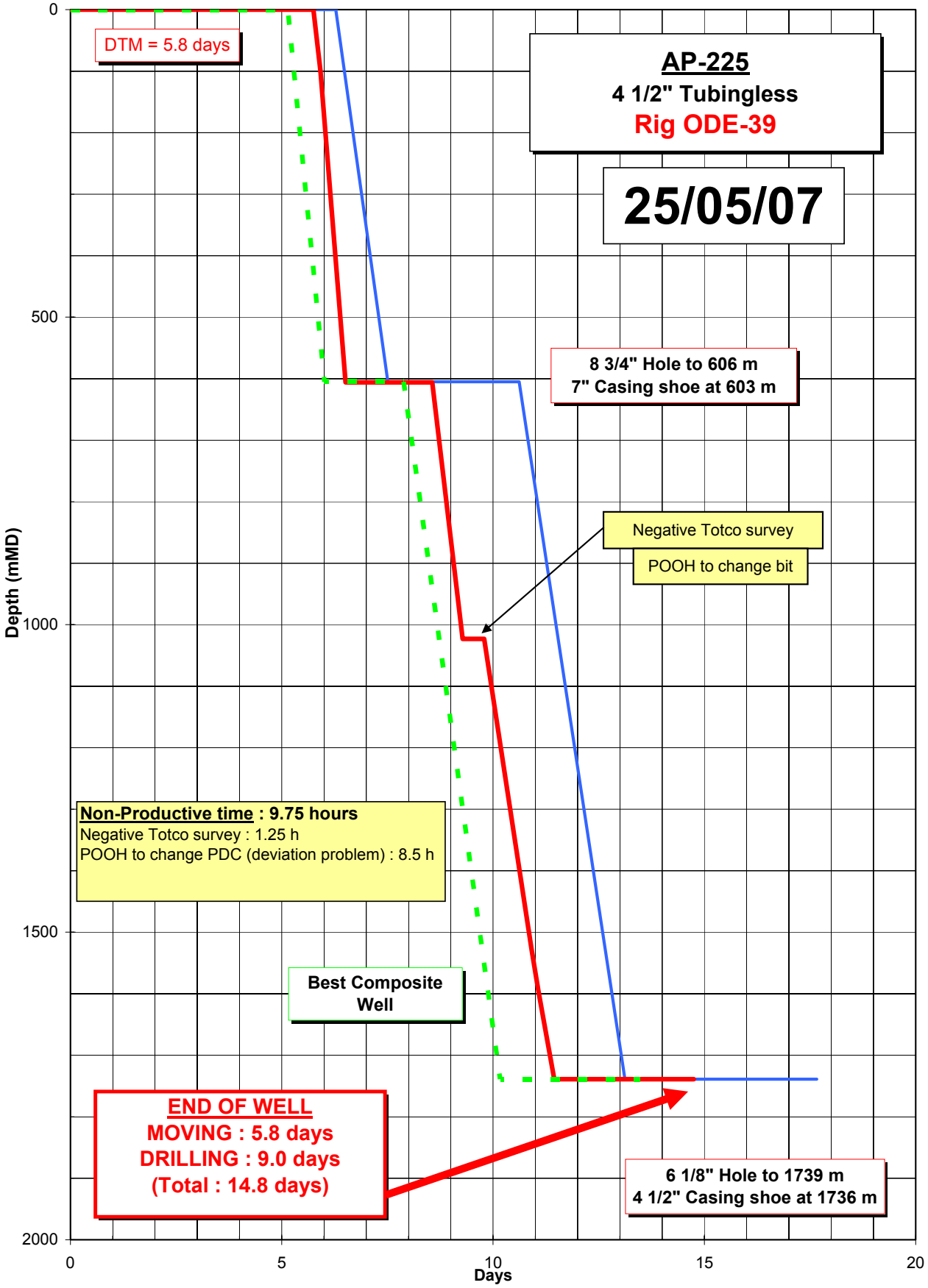
ALL DEPTHS ARE ROTARY TABLE LEVEL REFERENCE
* HALLIBURTON 3,81" R NIPPLE UNDER TOP CEMENT
** HALLIBURTON 3,81" RN NIPPLE OVER TOP UMZ

CASING RECORD	Min ID (inch)	Maxi OD (inch)	Depth (m) Top	Depth (m) Bottom
7" Casing - 23 Lb/ft - L80 SEC	6.366	7.000	0.00	602.21
4.1/2" Tubing - 10,5 Lb/ft - L 80 SEC VC13	3.958	4.500	0.00	1,739.00

PERFORATIONS RECORD

RESERVOIRS	TOP	BOTTOM	H : (m)	GUNS	REMARKS
	1643.00	1650.00	7.00	3.3/8"	DP a 6 TXP
	1675.00	1685.00	10.00	2"	BH a 6 TXP

3) PROGRESSION CHART & TIME ANALYSIS


DTM = 5.8 days
AP-225
4 1/2" Tubingless
Rig ODE-39
25/05/07
8 3/4" Hole to 606 m
7" Casing shoe at 603 m
Negative Totco survey
POOH to change bit
Non-Productive time : 9.75 hours
Negative Totco survey : 1.25 h
POOH to change PDC (deviation problem) : 8.5 h
Best Composite Well
END OF WELL
MOVING : 5.8 days
DRILLING : 9.0 days
(Total : 14.8 days)
6 1/8" Hole to 1739 m
4 1/2" Casing shoe at 1736 m
Depth (mMD)
Days
0
500
1000
1500
2000
0
5
10
15
20

AP tubingless 3 1/2" Operations

Planned Start date	Real Start date	Phase duration [h] Best	Margin	Planned	Real	DDR #	Depth Plan [m]	Depth Real [m]	Operations	Phase starting day [days] Planned	Real	Time difference
Thu 10/May/07 2:00	Thu 10/May/07 2:00											see note below)
Duration:	**Duration:**	**0.00**		**6.28**	**5.75**	**Days**			**Moving**	**5/10/2007**	**5/10/2007**	0d 0hr early
Thu 10/May/07 2:00	Thu 10/May/07 2:00					1	0	0				0d 0hr early
Thu 10/May/07 2:00	Thu 10/May/07 2:00			150.72	138.00	1	0	0				0d 12hr early
Wed 16/May/07 8:43	Tue 15/May/07 20:00					6	0	0				0d 12hr early
Duration:	**Duration:**	**0.00**		**4.34**	**1.35**	**Days**	**0**	**0**	**Drill 8"1/2 Phase**	**5/16/2007**	**5/15/2007**	
Wed 16/May/07 8:43	Tue 15/May/07 20:00			29.52	4.00	6	605	100	M/U BHA and Drill 8 3/4" to 605 m			1d 14hr early
Thu 17/May/07 14:14	Wed 16/May/07 0:00				14.25	6	605	606				0d 23hr early
Thu 17/May/07 14:14	Wed 16/May/07 14:15					7	605	606				0d 23hr early
Thu 17/May/07 14:14	Wed 16/May/07 14:15					7	605	606				0d 23hr early
Thu 17/May/07 14:14	Wed 16/May/07 14:15			74.64	9.25	7	605	606	Circulate - POOH - RIH			3d 17hr early
Sun 20/May/07 16:52	Wed 16/May/07 23:30				5.00	7	605	606	POOH - L/D 6 1/2" DC			3d 12hr early
Duration:	**Duration:**	**0.00**		**0.00**	**1.03**	**Days**	**605**	**606**	**Run 7" Casing**	**5/20/2007**	**5/17/2007**	
Sun 20/May/07 16:52	Thu 17/May/07 4:30				2.50	8	605	606	Clean cellar - Cut & L/D 9 5/8" Riser - R/U Csg. Equipment			3d 9hr early
Sun 20/May/07 16:52	Thu 17/May/07 7:00				5.00	8	605	606	Run 7" csg to 605 m			3d 4hr early
Sun 20/May/07 16:52	Thu 17/May/07 12:00				0.75	8	605	606	M/U Wellhead & Landing joint - Land it onto base plate			3d 4hr early
Sun 20/May/07 16:52	Thu 17/May/07 12:45				3.00	8	605	606	M/U Cementing head & lines - Mud conditioning - Test lines - Cmt job - R/D			3d 1hr early
Sun 20/May/07 16:52	Thu 17/May/07 15:45				13.50	8	605	606	L/D Landing joint - N/U BOP Stack, Ch.Manif. & Vent lines - Pressure Test			2d 11hr early
Sun 20/May/07 16:52	Fri 18/May/07 5:15					9	605	606				2d 11hr early
Sun 20/May/07 16:52	Fri 18/May/07 5:15					9	605	606				2d 11hr early
Duration:	**Duration:**	**0.00**		**7.04**	**5.32**	**Days**	**605**	**606**	**Drill 6"1/8 Phase**	**5/20/2007**	**5/18/2007**	
Sun 20/May/07 16:52	Fri 18/May/07 5:15				8.50	9	605	606	Install wear bushing - M/U 6 1/8" bit + 4 3/4" DC & run to tag cement.			2d 3hr early
Sun 20/May/07 16:52	Fri 18/May/07 13:45				1.75	9	605	606	Safety meeting - Drillout cement - FIT			2d 1hr early
Sun 20/May/07 16:52	Fri 18/May/07 15:30				17.25	9	605	1023	~~Drill to 1200 m~~			1d 8hr early
Sun 20/May/07 16:52	Sat 19/May/07 8:45				12.25	10	605	1023	TRIP TO CHANGE BIT			0d 19hr early
Sun 20/May/07 16:52	Sat 19/May/07 21:00			60.00	27.00	10	1739	1530	Drill to TD			2d 4hr early
Wed 23/May/07 4:52	Mon 21/May/07 0:00				3.75	11	1739	1595				2d 1hr early
Wed 23/May/07 4:52	Mon 21/May/07 3:45				9.00	12	1739	1739				1d 16hr early
Wed 23/May/07 4:52	Mon 21/May/07 12:45					12	1739	1739				1d 16hr early
Wed 23/May/07 4:52	Mon 21/May/07 12:45					12	1739	1739				1d 16hr early
Wed 23/May/07 4:52	Mon 21/May/07 12:45					12	1739	1739				1d 16hr early
Wed 23/May/07 4:52	Mon 21/May/07 12:45					12	1739	1739				1d 16hr early
Wed 23/May/07 4:52	Mon 21/May/07 12:45			108.96	15.25	12	1739	1739	Circulate - Flow Check - Pump slug - Wiper Trip - POOH			5d 13hr early
Sun 27/May/07 17:50	Tue 22/May/07 4:00				17.75	13	1739	1739	Logging 4 runs			4d 20hr early
Sun 27/May/07 17:50	Tue 22/May/07 21:45				15.25	13	1739	1739	RIH with bit - Circulate - POOH and L/D DP & BHA			4d 4hr early
Duration:	**Duration:**	**0.00**		**0.00**	**1.03**	**Days**	**1739**	**1739**	**Run 3 1/2" Casing**	**5/27/2007**	**5/23/2007**	
Sun 27/May/07 17:50	Wed 23/May/07 13:00				2.50	14	1739	1739	Retrieve Wear bushing - Prepare to run casing			4d 2hr early
Sun 27/May/07 17:50	Wed 23/May/07 15:30				12.50	14	1739	1739	Run 3 1/2" casing			3d 13hr early
Sun 27/May/07 17:50	Thu 24/May/07 4:00				7.00	15	1739	1739	M/U Cementing head & lines - Mud conditioning - Test lines - Cmt job - R/D			3d 6hr early
Sun 27/May/07 17:50	Thu 24/May/07 11:00					15	1739	1739				3d 6hr early
Sun 27/May/07 17:50	Thu 24/May/07 11:00				2.00	15	1739	1739	Wash Well Head Pack Off area - Run Pack Off - Test			3d 4hr early
Sun 27/May/07 17:50	Thu 24/May/07 13:00				0.75	15	1739	1739	Set TWCV			3d 4hr early
Duration:	**Duration:**	**0.00**		**0.00**	**0.26**	**Days**	**1739**	**1739**	**Completion**	**5/27/2007**	***5/24/2007***	
Sun 27/May/07 17:50	Thu 24/May/07 13:45				6.25	15	1739	1739	N/D BOP - Active Lock Ring - Pull test - Install X-mas Tree			2d 21hr early
Sun 27/May/07 17:50	Thu 24/May/07 20:00					15	1739	1739	**END OF DRILLING OPERATIONS**			2d 21hr early
Sun 27/May/07 17:50	Thu 24/May/07 20:00					15	1739	1739				2d 21hr early
Sun 27/May/07 17:50	Thu 24/May/07 20:00					15	1739	1739				2d 21hr early
Sun 27/May/07 17:50	Thu 24/May/07 20:00					15	1739	1739				2d 21hr early
Planned hrs (DRY)	Planned hrs (DRY)	0		424	354				**Planned/actual end of well date**	**5/27/2007**	***5/24/2007***	**2d 21hr early**
									Planned/actual total days	**17.66**	**14.7**	

the planned date. Late : the we

Early : the well will be completed before the planned date. Late : the well will be completed after the planned date.

Well Activity History

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Date	Event
5/10/2007	Report Number: 1; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Condition rig for moving to AP-225. R/D Weatherford Stab Master and Cat Walk.
5/11/2007	Report Number: 2; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Condition rig for moving. Rig Move to AP-225.
5/12/2007	Report Number: 3; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Rig Move to AP-225.
5/13/2007	Report Number: 4; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Rig Move to AP-225.
5/14/2007	Report Number: 5; Depth Start: <Depth Start?>; Depth progress : <Drilled Length?>; Phase: MOVING, MOVING; Complete Rig Up. Rise Mast and Draworks. Condition rig prior to spud well.
5/15/2007	Report Number: 6; Depth Start: 0.0 ftKB; Depth progress : 328.08 ft; Phase: 8"3/4, DRILLING; Condition rig prior spud well. Perform pre spud test.
5/16/2007	Report Number: 7; Depth Start: 328.1 ftKB; Depth progress : 1,660.11 ft; Phase: 8"3/4, DRILLING; Drill 8 3/4" hole sectionto 606 m. Control trip to 80 m. RIH to 518 m. Tight spot 15 kips. Ream down to 549 m. RIH to 606 m. Circulate hole clean.
5/17/2007	Report Number: 8; Depth Start: 1,988.2 ftKB; Depth progress : 0.00 ft; Phase: 8"3/4, CASING & CEMENT; POOH to surface. Prepare to run casing. RIH 7" casing as per program. Circulate hole clean. Cement 7" as per program. N/U 7 1/16" BOP Stack.
5/18/2007	Report Number: 9; Depth Start: 1,988.2 ftKB; Depth progress : 918.64 ft; Phase: 6"1/8, DRILLING; N/U 7 1/16" BOP Stack. Perform function and pressure test. RIH 6 1/8" PDC Bit. Drill out cement and float elements. Displace hole with polinox mud. Take SCR. Drill 6 1/8" hole section to 886 m.
5/19/2007	Report Number: 10; Depth Start: 2,906.8 ftKB; Depth progress : 590.55 ft; Phase: 6"1/8, DRILLING; Drill 6 1/8" hole to 1023 m. Take Totco survey with slick line winch. POOH to surface. Change out PDC Bit. RIH to bottom. Take EDrift survey with slick line winch. Drill 6 1/8" hole to 1066 m.
5/20/2007	Report Number: 11; Depth Start: 3,497.4 ftKB; Depth progress : 1,522.31 ft; Phase: 6"1/8, DRILLING; Drill 6 1/8" to 1530 m. Take Teledrift survey.
5/21/2007	Report Number: 12; Depth Start: 5,019.7 ftKB; Depth progress : 685.70 ft; Phase: 6"1/8, DRILLING; Dill 6 1/8" hole to 1739 m. Wiper trip to casing shoe. RIH to bottom. Circulate hole clean. POOH to 1500 m.
5/22/2007	Report Number: 13; Depth Start: 5,705.4 ftKB; Depth progress : 0.00 ft; Phase: 6"1/8, DRILLING; POOH to surface. Schlumberger perform electrical logging. RIH used PDC Bit to 925 m.
5/23/2007	Report Number: 14; Depth Start: 5,705.4 ftKB; Depth progress : 0.00 ft; Phase: 6"1/8, CASING & CEMENT; RIH 6 1/8" PDC Bit to bottom. Circulate hole clean. POOH L/D drill string. Wash and flush BOP + WH. RIH 4 1/2" tubing to 1095 m.
5/24/2007	Report Number: 15; Depth Start: 5,705.4 ftKB; Depth progress : 0.00 ft; Phase: 6"1/8, CASING & CEMENT; RIH 4 1/2" Tubing as per program. Set Tbg Hanger onto WellHead. Circulate hole condition mud. Cement 4 1/2" Tbg as per program. Wash and flush BOP + WH. Install Pack off bushing on tubing hanger. Set TWCV onto tubing hanger. N/D 7 1/16" BOP. N/U X-Mass Tree.

Report printed: 2/14/2008

Time Analysis Summary per Phase

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

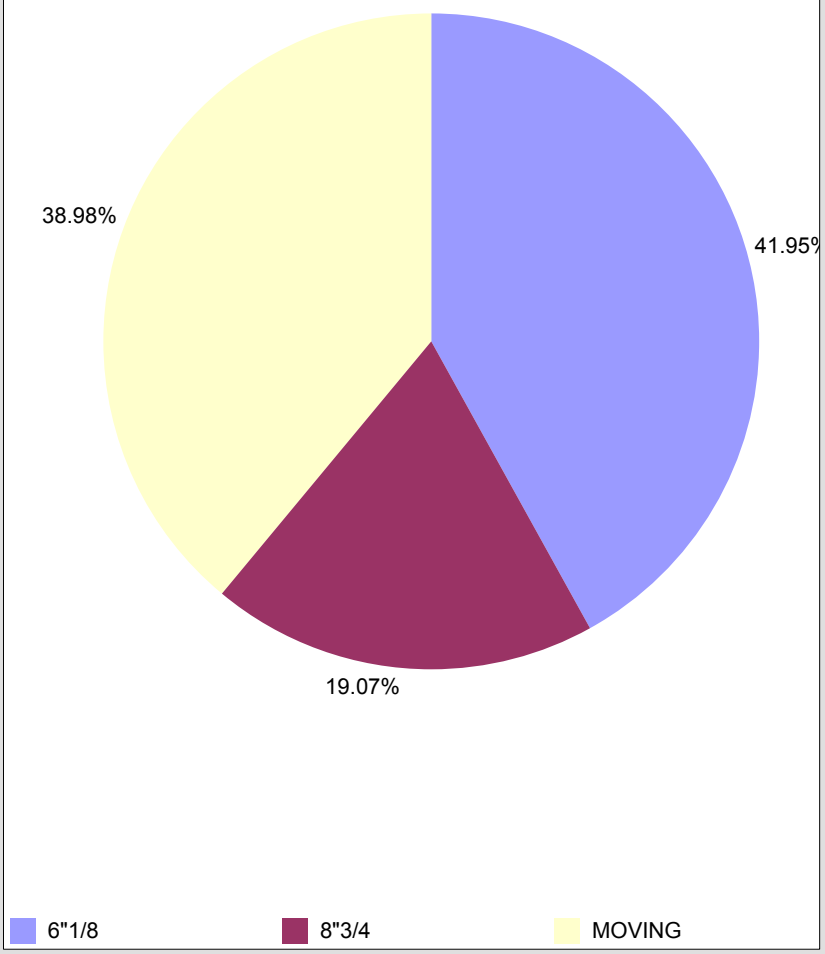
Duration per phase

Phase	Time Log Hrs (hrs)
MOVING	138.00
8"3/4	67.50
6"1/8	148.50

Time Summary by Ops Code

Code	% Total Time (%)	Dur (hrs)
ASSY	24.93	88.25
BOPASSY	3.67	13.00
BOPTEST	0.99	3.50
CAS	7.34	26.00
CEM	1.69	6.00
CEMDRL	0.21	0.75
CIRC1	1.84	6.50
DAY	13.56	48.00
DEVI	2.40	8.50
DRL	19.00	67.25
ELOG	4.94	17.50
HSE	1.27	4.50
KCK	0.14	0.50
NODEVI	2.40	8.50
NSMISC	0.35	1.25
REAM	0.28	1.00
RIGMTN	0.35	1.25
SLICK	0.21	0.75
TRIP	12.99	46.00
WHASSY	0.85	3.00
XTASSY	0.56	2.00

Time Summary by Phase



Report printed: 2/14/2008

Service Companies Downtime Analysis

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Downtime Summary

Code	% Total Time (%)	Dur (hrs)
NSMISC	0.35	1.25

Time Log - Service Companies Downtime Details

Start Date	Phase	Code	Comment	Dur (hrs)
5/19/2007 10:15	6"1/8, DRILLING	NSMISC	Take Totco survey at 1016 m with negative result, instrument failure.	0.75
5/19/2007 11:00	6"1/8, DRILLING	NSMISC	Circulate hole clean. FR= 1067 lts/min - SPP= 1685 psi. Meanwhile prepare to take Totco survey with slick line winch.	0.50

Report printed: 2/14/2008

PT - NPT

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Time Log Sum by Unsched Typ

Unschd Type	Dur (hrs)	% Total Time (%)
PT	290.50	82.06
Others	53.75	15.18
NPT	9.75	2.75

Reminder : Codes starting with
NC : Downtime due to Operator or various waiting
NR : Downtime due to Rig Contractor
NS : Downtime due to Service Companies

NH : Downtime due to Equipment purchased by TOTAL
NO : Downtime due to Operational Problems

Productive Time Summary

Code	Dur (hrs)	% Total Time (%)
ASSY	88.25	24.93
BOPASSY	13.00	3.67
BOPTEST	3.50	0.99
CAS	26.00	7.34
CEM	6.00	1.69
CEMDRL	0.75	0.21
CIRC1	6.50	1.84
DAY	48.00	13.56
DEVI	8.50	2.40
DRL	67.25	19.00
ELOG	17.50	4.94
HSE	4.50	1.27
KCK	0.50	0.14
REAM	1.00	0.28
RIGMTN	1.25	0.35
SLICK	0.75	0.21
TRIP	46.00	12.99
WHASSY	3.00	0.85
XTASSY	2.00	0.56

DownTime Summary

Code	Dur (hrs)	% Total Time (%)
NODEVI	8.50	2.40
NSMISC	1.25	0.35

Report printed: 2/14/2008

Phase Time Log Summary

TOTAL Austral

Phase: 8"3/4

Well Name: AP-225

Country : Argentina	Slot :	Water Depth :	Spud Date : 5/15/2007
Field : AGUADA PICHANA	North :	Location : Onshore	Objective : Flowing Gas
Platform : N/A	East :	Well shape : Vert	Status : Completed

Phases

8"3/4, DRILLING

Phase	Sub-Phase	Planned Start Depth ...	Planned End Depth (...	Actual Start Depth (ft...	Actual End Depth (ft...
8"3/4	DRILLING	0.0	1,984.9	0.0	1,988.2

P50 Dur (days)	P90 Dur (days)	P90 Cum Days (d...	P10 Dur (days)	P10 Cum Days (d...	Actual Start Date	Actual End Date
1.79			1.27	6.42	5/15/2007	5/17/2007

P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc)	Cum Cost Var ML	Mud Cost(Loc)
			421,558	-421,558	

Summary

8"3/4, CASING & CEMENT

Phase	Sub-Phase	Planned Start Depth ...	Planned End Depth (...	Actual Start Depth (ft...	Actual End Depth (ft...
8"3/4	CASING & CEMENT	1,984.9	1,984.9	1,988.2	1,988.2

P50 Dur (days)	P90 Dur (days)	P90 Cum Days (d...	P10 Dur (days)	P10 Cum Days (d...	Actual Start Date	Actual End Date
2.55			1.47	7.89	5/17/2007	5/18/2007

P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc)	Cum Cost Var ML	Mud Cost(Loc)
			578,511	-578,511	

Summary

Time Log Summary grouped by Phase

Code	User Code	Unschd Type	Dur (hrs)
BOPASSY	4	PT	9.00
BOPTEST	4	PT	3.50
CAS	4	PT	9.75
CEM	4	PT	1.50
CEMDRL	4	PT	0.75
CIRC1	2	PT	0.25
CIRC1	3	PT	1.00
CIRC1	4	PT	1.50
DEVI	2	PT	1.50
DEVI	3	PT	0.25
DEVI	4	PT	0.25
DRL	2	PT	16.00
DRL	5	PT	0.00
HSE	4	Others	1.25
KCK	4	PT	0.25
REAM	3	PT	1.00
RIGMTN	2	Others	0.50
RIGMTN	3	Others	0.75
TRIP	3	PT	11.25
TRIP	4	PT	7.00
WHASSY	4	PT	0.25

Time Log Unsched Typ grouped by Phase

Unschd Type	Dur (hrs)	% Total Time (%)
Others	2.50	4
PT	65.00	96

Report printed: 2/14/2008

Phase Time Log Summary

TOTAL Austral

Phase: 6"1/8

Well Name: AP-225

Country : Argentina	Slot :	Water Depth :	Spud Date : 5/15/2007
Field : AGUADA PICHANA	North :	Location : Onshore	Objective : Flowing Gas
Platform : N/A	East :	Well shape : Vert	Status : Completed

Phases

6"1/8, DRILLING

Phase	Sub-Phase	Planned Start Depth ...	Planned End Depth (...	Actual Start Depth (ft...	Actual End Depth (ft...
6"1/8	DRILLING	1,984.9	5,705.4	1,988.2	5,705.4

P50 Dur (days)	P90 Dur (days)	P90 Cum Days (d...	P10 Dur (days)	P10 Cum Days (d...	Actual Start Date	Actual End Date
5.63			4.80	12.69	5/18/2007	5/23/2007

P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc)	Cum Cost Var ML	Mud Cost(Loc)
			991,197	-991,197	

Summary

6"1/8, CASING & CEMENT

Phase	Sub-Phase	Planned Start Depth ...	Planned End Depth (...	Actual Start Depth (ft...	Actual End Depth (ft...
6"1/8	CASING & CEMENT	5,705.4	5,705.4	5,705.4	5,705.4

P50 Dur (days)	P90 Dur (days)	P90 Cum Days (d...	P10 Dur (days)	P10 Cum Days (d...	Actual Start Date	Actual End Date
1.41			1.34	14.03	5/23/2007	5/25/2007

P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc)	Cum Cost Var ML	Mud Cost(Loc)
			1,178,873	-1,178,873	

Summary

Time Log Summary grouped by Phase

Code	User Code	Unschd Type	Dur (hrs)
BOPASSY	7	PT	4.00
CAS	7	PT	16.25
CEM	7	PT	4.50
CIRC1	5	PT	1.50
CIRC1	6	PT	2.25
DEVI	5	PT	6.50
DRL	5	PT	51.25
ELOG	6	PT	17.50
HSE	6	Others	0.75
HSE	7	Others	0.75
KCK	5	PT	0.25
NODEVI	5	NPT	8.50
NSMISC	5	NPT	1.25
SLICK	7	PT	0.75
TRIP	6	PT	27.75
WHASSY	7	PT	2.75
XTASSY	7	PT	2.00

Time Log Unsched Typ grouped by Phase

Unschd Type	Dur (hrs)	% Total Time (%)
NPT	9.75	7
Others	1.50	1
PT	137.25	92

Report printed: 2/14/2008

Phase Time Log Summary

TOTAL Austral

Phase: MOVING

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Spud Date : 5/15/2007 Objective : Flowing Gas Status : Completed

Phases

MOVING, MOVING

Phase	Sub-Phase	Planned Start Depth ...	Planned End Depth (...	Actual Start Depth (ft...	Actual End Depth (ft...
MOVING	MOVING	0.0	0.0		

P50 Dur (days)	P90 Dur (days)	P90 Cum Days (d...	P10 Dur (days)	P10 Cum Days (d...	Actual Start Date	Actual End Date
6.28			5.15	5.15	5/10/2007	5/15/2007

P50 Cost	P90 Cost	P10 Cost	Cum Cost(Loc)	Cum Cost Var ML	Mud Cost(Loc)
			326,245	-326,245	

Summary

Time Log Summary grouped by Phase

Code	User Code	Unschd Type	Dur (hrs)
ASSY	1	PT	88.25
DAY	1	Others	48.00
DRL	2	PT	0.00
HSE	1	Others	1.75

Time Log Unsched Typ grouped by Phase

Unschd Type	Dur (hrs)	% Total Time (%)
Others	49.75	36
PT	88.25	64

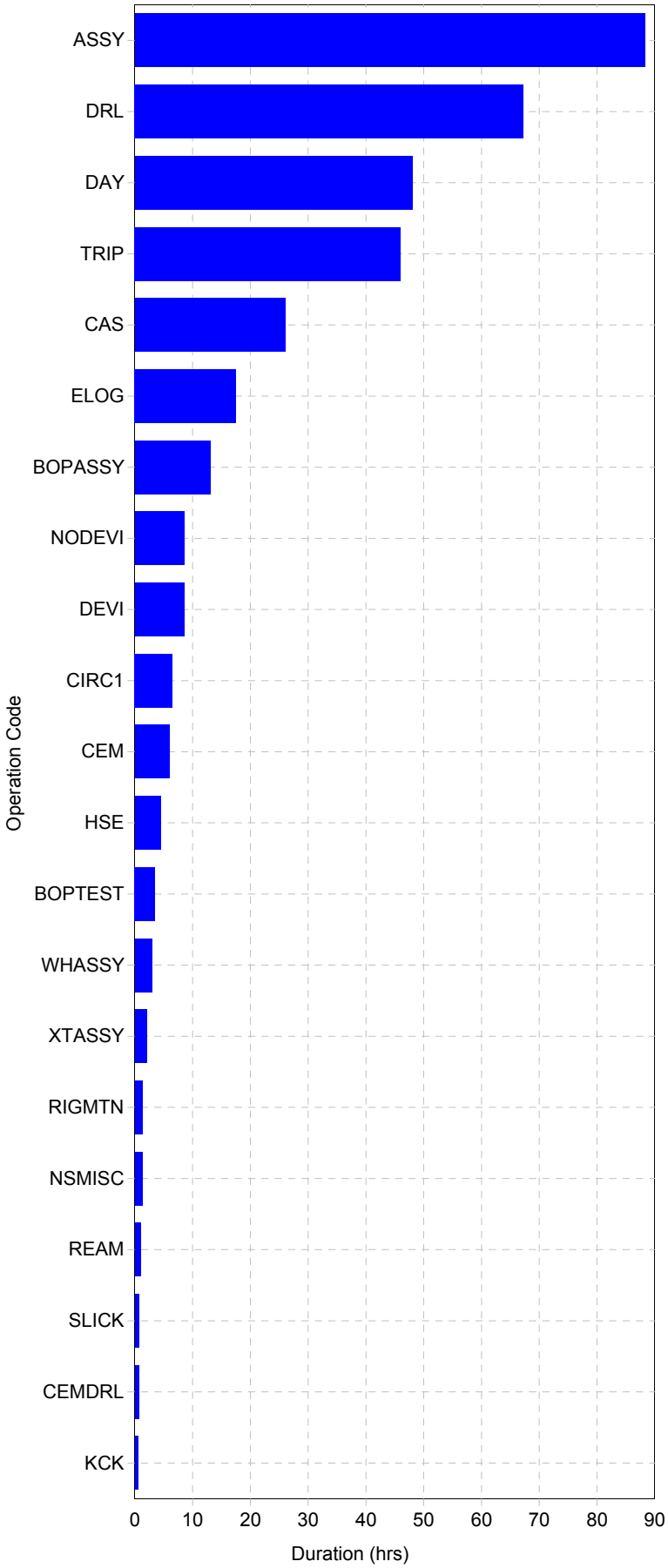
Report printed: 2/14/2008

Time Log Summary - Bar Graph

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4



Time Summary by Ops Code

Code	% Total Time (%)	Dur (hrs)
ASSY	24.93	88.25
DRL	19.00	67.25
DAY	13.56	48.00
TRIP	12.99	46.00
CAS	7.34	26.00
ELOG	4.94	17.50
BOPASSY	3.67	13.00
DEVI	2.40	8.50
NODEVI	2.40	8.50
CIRC1	1.84	6.50
CEM	1.69	6.00
HSE	1.27	4.50
BOPTEST	0.99	3.50
WHASSY	0.85	3.00
XTASSY	0.56	2.00
NSMISC	0.35	1.25
RIGMTN	0.35	1.25
REAM	0.28	1.00
CEMDRL	0.21	0.75
SLICK	0.21	0.75
KCK	0.14	0.50

Report printed: 2/14/2008

4) WELL COST

ITEM	DESCRIPTION	TOTAL AFE	TOTAL Estimated
	Number of unit(s)		
	DTM	**5.0 d**	**5.8 d**
	Duration	**13.0 d**	**9.3 d**
	TVD	**1700 m**	**0 m**
1	**RIG MOB & PRE CAMP EXP**	**70**	**174**
1.1	Mobilisation expenses of Rig	70	174
1.2	Precampaign expenses	0	0
2	**RIG DEMOB & POST EXP**	**0**	**0**
2.1	Demob expenses	0	0
2.2	Post campaign expenses	0	0
3	**INSURANCES/TAXES**	**11**	**8**
3.1	Insurance/taxes	11	8
4	**WELL CONSUMABLES**	**499**	**478**
4.1	Well head & X tree	82	62
4.2	Casings	230	93
4.3	Tubings & down hole equipmt	44	227
4.4	Drilling bits & mills	25	21
4.5	Core heads & spare parts	0	0
4.6	Mud products & brine	58	41
4.7	Cement & additives	40	48
4.8	Fuel, water etc..	20	0
4.9	Other consumables	0	-14
5	**DRILLING / COMPLETION / Wover SERVICES**	**835**	**780**
5.1	Location preparation	80	71
5.2	Drilling rig contract	245	163
5.3	Completion rig contract	0	0
5.4	Mud contract	18	18
5.5	Cementing contract	30	20
5.6	Waste Management	10	10
5.7	Directional drilling	0	0
5.8	Deviation surveys	6	6
5.9	Coring services	0	0
6	Casing services	30	32
6.1	Well testing	65	46
6.2	Slickline sces	16	2
6.3	Electric line services (perfos, CBL..)	50	24
6.4	Stimulation, acid wash	145	265
6.5	Coiled tubing services	49	38
6.6	Miscellaneous drill sces (Rental Equipment, waste serv, general services))	60	78
6.7	Logistic services (cars & ...)	28	7
6.8	Communications	3	0
7	**GEOLOGICAL CONTRACTS**	**148**	**102**
7.1	Mud logging	30	31
7.2	Electrical logging open hole	90	71
7.3	Electrical logging cased hole	0	0
7.4	Velocity survey	0	0
7.5	Geological studies, PVT, Core Analysis (non TEP)	17	0
7.6	Reservoir studies (non TEP)	11	0
8	**TRANSPORT**	**14**	**4**
8.1	Rig move transport	0	0
8.2	Aircrafts	0	0
8.3	Trucks (material transport)	14	4
8.4	Boats	0	0
9	**TOTAL AUSTRAL & TEP ASSISTANCE**	**23**	**15**
9.1	Local rig supervision (drlg+Wover+geol)	0	0
9.2	Drilling/Well assistance & studies (TEP)	16	10
9.3	Geological studies (TEP)	7	5
9.4	Reservoir studies (TEP)	0	0
	TOTAL for the project	**1600**	**1561**

5) BIT RECORD & BHA SUMMARY

Bit Summary

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Drill String Runs

Bit Run	Type	Bit OD (in)	Make	Model	IADC Codes	SN	TFA (incl Noz) (in²)	Depth In (ftKB)	Depth Out (ftKB)	Drilled (ft)	Drill Time (hrs)	Bit Drilled Out (ft)	Bit Hrs Out (hrs)	BHA ROP (ft/hr)	WOB (max) (kips)	RPM (max) (rpm)	Q (max) (gpm)	SPP (max) (psi)	Bit Dull
1	PDC	8 3/4	Smith	Mi 516 PX	---	JX-2895	0.65	0.0	1,988.2	1,988.19	16.00	1,988.19	16.00	124.3	19.8	150	528	2,248.1	1-1-WT-A-X-1-NO-TD
2	PDC	6 1/8	Smith	Mi 516	---	JX-2711	0.38	1,988.2	3,356.3	1,368.11	15.25	1,368.11	15.25	89.7	15.4	150	277	1,631.7	1-1-WT-A-X-1-NO-BHA
3	PDC	6 1/8	Hughes	HC-505	---	7302760	0.38	3,356.3	5,705.4	2,349.08	36.00	2,349.08	36.00	65.3	17.9	150	277	2,146.6	1-2-WT-N-X-1-ER-TD

Report printed: 2/14/2008

Bit Record

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Drill String Runs

Bit R...	Type	Bit OD (in)	Make	Model	IADC Codes	SN	TFA (incl Noz) (in²)	Depth In (ftKB)	Depth Out (ftKB)	Drilled (ft)	Drill Time (hrs)	Bit Drilled Out (ft)	Bit Hrs Out (hrs)	BHA ROP (ft/hr)	WOB (max) (kips)	RPM (max) (rpm)	Q (max) (gpm)	SPP (max) (psi)	Bit Dull	Depth Drilled on Other Well (ft)	Drilling Hours on Other Well (hrs)
1	PDC	8 3/4	Smith	Mi 516 PX	---	JX-2895	0.65	0.0	1,988.2	1,988.19	16.00	1,988.19	16.00	124.3	19.8	150	528	2,248.1	1-1-WT-A-X-1-NO-TD		
2	PDC	6 1/8	Smith	Mi 516	---	JX-2711	0.38	1,988.2	3,356.3	1,368.11	15.25	1,368.11	15.25	89.7	15.4	150	277	1,631.7	1-1-WT-A-X-1-NO-BHA		
3	PDC	6 1/8	Hughes	HC-505	---	7302760	0.38	3,356.3	5,705.4	2,349.08	36.00	2,349.08	36.00	65.3	17.9	150	277	2,146.6	1-2-WT-N-X-1-ER-TD		

Report printed: 2/14/2008

BHA Details

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Well Shape: Vert - AP-225, 5/16/...
Schematic - Actual

BHA #1, 8 3/4" BHA

Bit Type	Bit OD (in)	Len (ft)	Make	Model	Serial Number
PDC	8 3/4	0.98	Smith	Mi 516 PX	JX-2895

Bit Run	IADC Codes	IADC Bit Dull Out
1	---	1-1-WT-A-X-1-NO-TD

Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled (ft)	Drilling Time (hrs)	BHA ROP (ft/hr)
0.0	1,988.2	1,988.19	16.00	124.3

WOB (max) (kips)	WOB (min) (kips)	RPM (max) (rpm)	RPM (min) (rpm)	Q (max) (gpm)	Q (min) (gpm)
19.8	11.9	150	130	528	476

BHA Objective	BHA Result

Comment

Drill String Components

Jts	Item Description	OD (in)	ID (in)	Mass... (lbs/ft)	Grade	Drift (in)	Gauge (in)	Connections	Len (ft)	Cum Len (ft)
	12 x 3-1/2" HWDP	3 1/2								0.98
	3 x 4-3/4" Drill collar	4 3/4								0.98
	4-3/4" Hydraulic Jar (#1400-1359)	4 3/4								0.98
	8 x 4-3/4" Drill collar	4 3/4								0.98
	XO	4 3/4								0.98
	8 x 6-1/2" Drill collar	6 1/2								0.98
	8-1/8" Stabilizer (#374)	8 1/8								0.98
	1 x 6-1/2" Drill collar	6 1/2								0.98
	6-1/2" Teledrift (1890)	6 1/2								0.98
	Bit Sub w/ Float Valve	6 1/2								0.98

Parameters

Branch	Type	Start (ftKB)	End (ftKB)	Drill Time (hrs)	Int ROP (ft/hr)	WOB (kips)	RPM (rpm)	Flow Rate (gpm)	SPP (psi)
AP-225	Drill Formation	0.0	328.1	3.00	109.4	11.9	130	476	768.7
AP-225	Drill Formation	328.1	1,988.2	13.00	127.7	19.8	150	528	2,248.1

Mud Checks

Date	Depth (ftKB)	Mud Type	Density (lb/gal)	PV Calc (cp)	YP Calc (lbf/100f...)	pH	Sand	Solids (%)	OW Ratio
5/16/2007		Lime mud	9.18	15.0	14.0	12.5	0.1	6.6	

Report printed: 2/14/2008

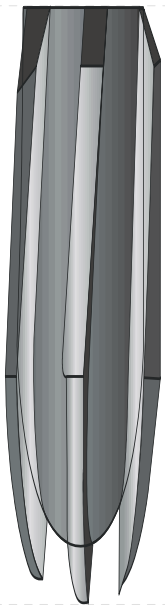
BHA Details

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Well Shape: Vert - AP-225, 5/19/...
Schematic - Actual



BHA #2, 6 1/8" BHA

Bit Type	Bit OD (in)	Len (ft)	Make	Model	Serial Number
PDC	6 1/8	0.79	Smith	Mi 516	JX-2711

Bit Run	IADC Codes	IADC Bit Dull Out
2	---	1-1-WT-A-X-1-NO-BHA

Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled (ft)	Drilling Time (hrs)	BHA ROP (ft/hr)
1,988.2	3,356.3	1,368.11	15.25	89.7

WOB (max) (kips)	WOB (min) (kips)	RPM (max) (rpm)	RPM (min) (rpm)	Q (max) (gpm)	Q (min) (gpm)
15.4	6.6	150	150	277	277

BHA Objective	BHA Result

Comment

Drill String Components

Jts	Item Description	OD (in)	ID (in)	Mass... (lbs/ft)	Grade	Drift (in)	Gauge (in)	Connections	Len (ft)	Cum Len (ft)
	3-1/2" DP	3 1/2								0.79
	DICV	3 1/2								0.79
	1 x 3-1/2" DP	3 1/2								0.79
	12 x 3-1/2" HWDP	3 1/2								0.79
	3 x 4-3/4" DC	4 3/4								0.79
	4-3/4" Hydraulic Jar (#1420-1359)	4 3/4								0.79
	17 x 4-3/4" DC	4 3/4								0.79
	5-15/16" Stab (#466)	5 15/16								0.79
	1 x 4-3/4" DC	4 3/4								0.79
	5-15/16" Stab (#426)	5 15/16								0.79
	4-3/4" SDC	4 3/4								0.79
	4-3/4" Teledrift (# 2021)	4 3/4								0.79
	Bit Sub w/ FV	4 3/4								0.79

Parameters

Branch	Type	Start (ftKB)	End (ftKB)	Drill Time (hrs)	Int ROP (ft/hr)	WOB (kips)	RPM (rpm)	Flow Rate (gpm)	SPP (psi)
AP-225	Drill Formation	1,988.2	2,906.8	8.00	114.8	15.4	150	277	1,479.4
AP-225	Drill Formation	2,906.8	3,356.3	7.25	62.0	6.6	150	277	1,631.7

Mud Checks

Date	Depth (ftKB)	Mud Type	Density (lb/gal)	PV Calc (cp)	YP Calc (lbf/100f...	pH	Sand	Solids (%)	OW Ratio
5/19/2007		Lime mud	9.10	16.0	14.0	12.5	0.1	5.9	

Report printed: 2/14/2008

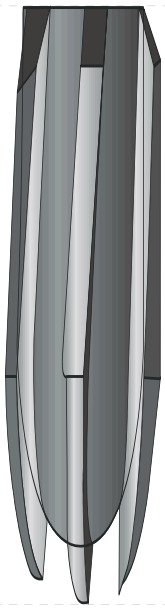
BHA Details

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Well Shape: Vert - AP-225, 5/23/...
Schematic - Actual



BHA #3, 6 1/8" BHA

Bit Type	Bit OD (in)	Len (ft)	Make	Model	Serial Number
PDC	6 1/8	0.79	Hughes	HC-505	7302760

Bit Run	IADC Codes	IADC Bit Dull Out
3	---	1-2-WT-N-X-1-ER-TD

Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled (ft)	Drilling Time (hrs)	BHA ROP (ft/hr)
3,356.3	5,705.4	2,349.08	36.00	65.3

WOB (max) (kips)	WOB (min) (kips)	RPM (max) (rpm)	RPM (min) (rpm)	Q (max) (gpm)	Q (min) (gpm)
17.9	7.9	150	150	277	277

BHA Objective	BHA Result

Comment

Drill String Components

Jts	Item Description	OD (in)	ID (in)	Mass... (lbs/ft)	Grade	Drift (in)	Gauge (in)	Connections	Len (ft)	Cum Len (ft)
	3-1/2" DP	3 1/2								0.79
	DICV	3 1/2								0.79
	1 x 3-1/2" DP	3 1/2								0.79
	12 x 3-1/2" HWDP	3 1/2								0.79
	3 x 4-3/4" DC	4 3/4								0.79
	4-3/4" Hydraulic Jar (#1420-1359)	4 3/4								0.79
	17 x 4-3/4" DC	4 3/4								0.79
	5-15/16" Stab (#466)	5 15/16								0.79
	1 x 4-3/4" DC	4 3/4								0.79
	5-15/16" Stab (#426)	5 15/16								0.79
	4-3/4" SDC	4 3/4								0.79
	4-3/4" Teledrift (# 2021)	4 3/4								0.79
	Bit Sub w/ FV	4 3/4								0.79

Parameters

Branch	Type	Start (ftKB)	End (ftKB)	Drill Time (hrs)	Int ROP (ft/hr)	WOB (kips)	RPM (rpm)	Flow Rate (gpm)	SPP (psi)
AP-225	Drill Formation	3,356.3	3,497.4	2.75	51.3	7.9	150	277	1,537.4
AP-225	Drill Formation	3,497.4	5,019.7	21.75	70.0	17.9	150	277	2,146.6
AP-225	Drill Formation	5,019.7	5,705.4	11.50	59.6	17.9	150	277	2,146.6
AP-225	Drill Formation	5,705.4	5,705.4						
AP-225		5,705.4	5,705.4						

Mud Checks

Date	Depth (ftKB)	Mud Type	Density (lb/gal)	PV Calc (cp)	YP Calc (lbf/100f...	pH	Sand	Solids (%)	OW Ratio
5/20/2007		Lime mud	9.35	17.0	13.0	12.5	0.1	7.6	
5/21/2007		Lime mud	9.35	17.0	14.0	12.5	0.1	7.7	
5/22/2007		Lime mud	9.35	17.0	14.0	12.5	0.1	7.8	
5/23/2007		Lime mud	9.35	17.0	13.0	12.5	0.1	7.7	

Report printed: 2/14/2008

6) MUD REPORT

MUD
PHASE REPORT: 8"3/4

WELL: AP - 225
Rig: ODE-39

Last csg. Diametre: | **Shoe:** m | **Phase duration:** 3 days (from 15-May-07 to 17-May-07)
Depth: 606 m | **TVD:** 606 m | **Angle:** 0.5 ° | **Metres drilled :** 606 m | **Volume drilled:** 24 m³
End phase status: [*] | **Csg. diametre:** 7 | **Shoe:** 602.6 m
[ ] Completion [ ] Abandonment [ ] Suspension

FLUID TYPE		POLYNOX			
Depth	m	100	190	454	606
Temp. In	°C	27	28	30	31
Temp. out	°C	30	32	35	35
Mud weight in	sg	1.08	1.08	1.10	1.10
Mud Weight out	sg	1.08	1.08	1.10	1.10
Solids	%	5.3	5.3	6.6	6.6
Oil	%	0	0	0	0
Water	%	94.7	94.7	93.4	93.4
O/W ratio					
Sand out	%				
Sand in	%	0.1	0.1	0.1	0.1
Flow rate	l/mn	1800	2000	2000	2000
Marsh Viscosity	s	60	58	50	57
Fann 600 rpm		47	44	46	44
Fann 300 rpm		31	29	30	29
Fann 200 rpm		23	19	20	20
Fann 100 rpm		17	17	17	16
Fann 60 rpm					
Fann 30 rpm					
Fann 6 rpm		4	4	4	4
Fann 3 rpm		3	3	3	3
Gel 0	lbf/100 ft²	3	3	3	3
Gel 10	lbf/100 ft²	5	6	7	7
Gel 30	lbf/100 ft²	8	8	10	9
Ap. Visc.	cP	23.5	22	23	22
P.V.	cP	16	15	16	15
Y.P.	lbf/100 ft²	15	14	14	14
YS	lbf/100 ft²				
tau	lbf/100 ft²				
n.		0.64	0.73	0.62	0.60
K.	lbf/s^n/100 ft²	0.56	0.28	0.64	0.68
Filtrate API 30		6	6	6	6
Filtrate 500psi 121°C					
HP/HT cake mm					
Sagging Factor					
WBM					
pH		12.5	12.5	12.5	12.5
Pm	cm³	11.7	11.7	11.3	11.5
Pf	cm³	2.0	1.9	2.0	1.8
Mf	cm³	2.5	2.5	2.4	2.6
Mf/Pf		1.25	1.32	1.20	1.44
Cl -	g/l	2000	1900	1900	1900
Ca++	g/l	200	200	200	200
Mg++	g/l				
K+	g/l	0	0	0	0
NaCl	g/l				
CaCl2	g/l				
MgCl2	g/l				
KCl	g/l				
CEC	kg/m³	38	38	38	38
Glycol	%				
Total CaSO4	g/l				
XS CaSO4	g/l				
Silicate	%				
NABM					
Pm	cm³				
Excess Lime	g/l	7.27	7.34	7.00	7.14
E.S.	Volts				
Cl- in mud	g/l				
CaCl2 in WP	g/l				
Solids					
LGS	%	5.00	5.00	6.30	6.30
HGS	%	0.00	0.00	0.00	0.00
Solids (correct.)	%	5.00	5.00	6.30	6.30
OOC				.	
Shaker	g/kg				
HG Dryer	g/kg				
Cutting dryer	g/kg				
Centrifuges out					
centrif 1	g/kg				
centrif 2	g/kg				
centrif 3	g/kg				

Solids treatment

Shaker screens:	145-145-145-145	mesh
Shaker screens:	145-145-145-145	mesh
Shaker screens:	2x180	mesh
		mesh
		mesh
centrifuges 414	16.00	h
3 en 1	16.00	h
		h

Drilling data

Bit:			h
PDC	HC 605	16 1/4	h
PDC			h
Hole opening:			h
Average ROP:		37.29	m/h
Circulating		5	h
Reaming:		0	h

LOT@ last csg shoe EMW: sg @
Max. temperature at TD Measured °C Calc. °C

Initial hole vol. :	0.00	m³	Format. losses:	6.5	m³
initial tank vol. :	0.00	m³	Surface losses:	68.50	m³
Received vol. :	0.00	m³	Dumped:		m³
Made up vol. :	130.00	m³	Left behind csg:	0.00	m³
			Evaporation	0.00	m³
Water		m³	Abandonment:	0.00	m³
Total handled vol. :	130.00	m³	Total lost vol. :	75.00	m³

Transferred volume (out of rig): m³ | Dilution Ratio l/m
Reusable volume (well+tanks): 55.0 m³ | 113

Cost and consumption

Products	Amount	Unit	Unit Price	TOTAL COST	kg-l/m3
ALDACIDE			USD 5.46	0.00	0.00
BARACARB 150			USD 0.80	0.00	0.00
BARACARB 5			USD 0.80	0.00	0.00
BARACARB 25			USD 0.80	0.00	0.00
BARACOR 100			USD 2.93	0.00	0.00
BARA-DEFOAM W300			USD 3.31	0.00	0.00
BARAFILM			USD 3.18	0.00	0.00
BARASCAV-L			USD 1.61	0.00	0.00
BARAZAN D PLUS	45.20		USD 13.42	us$ 606.58	0.35
Baritina			USD 0.390	0.00	0.00
BAROLUBE GOLD SEAL	208.00		USD 4.98	us$ 1035.84	1.60
Bentonita	6,175.00		USD 0.12	us$ 741.00	47.50
Cal	1,775.00		USD 0.20	us$ 355.00	13.65
Carbonato de Calcio 200			USD 0.12	0.00	0.00
Cloruro de Potasio			USD 0.82	0.00	0.00
CMC LoVis	350.00		USD 4.95	us$ 1732.50	2.69
FILTER CHEK	930.70		USD 3.20	us$ 2978.24	7.16
EP-MUD LUBE			USD 2.49	0.00	0.00
Estearato de Alumino			USD 5.97	0.00	0.00
EZ-SPOT			USD 3.94	0.00	0.00
LIGNOX PLUS	363.20		USD 2.10	us$ 762.72	2.79
Mica			USD 0.40	0.00	0.00
Mixcel Fino			USD 1.29	0.00	0.00
PAC-L	158.90		USD 6.14	us$ 975.65	1.22
PAC-R	68.10		USD 6.14	us$ 418.13	0.52
Soda Caustica	175.00		USD 1.38	us$ 241.50	1.35
Su Carb 150	1,250.00		USD 0.37	us$ 462.50	9.62
Su Carb 5	1,250.00		USD 0.37	us$ 462.50	9.62
Su Carb 50	1,250.00		USD 0.37	us$ 462.50	9.62
THERMA THIN			USD 4.35	0.00	0.00
XCD POLYMER			USD 19.91	0.00	0.00
XLR-RATE	832.00		USD 2.94	us$ 2446.08	6.40
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
Total products				us$	13,680.74
Transporte de Material	0.00		us$ 23.80		0.00
Lead engineer	7		us$ 382.50	us$	2,677.50
second engineer	3		us$ 348.50	us$	1,045.50
Costo Cementacion					
Cost for phase				us$	17,403.74

COST: m³ mud us$ 134 | Drilled/m: us$ 29 | m³/drilled: us$ 740

Problems

Solutions

Comments:

conditions team. accumulates water in pits and prepares Spud Mud, POLYNOX. drill sheaths and central well up to 80 m with Spud Mud, displaces mud of the well by polynox adds XLR RATE and BARO LUBE.

ECS works in normal form. Attaché of carbonates marmolados .DRILL to 606 m. with partial losses, circulates, displaces viscous pill.

POOH from 606 m to surface, cuts conductive pipe. conditions and RIH 7" SEC 23 # TO 602 m

M/U Halliburton Operates, & cement JOB.

Mud contractor: HALLIBURTON - BAROID **Made on:** 17-May-07 **By:** Sosa - Schamber

MUD PHASE REPORT: 6"1/8

WELL: AP - 225
Rig: ODE-39

Last csg. Diametre: 7" Shoe: 602.6 m Phase duration: 7 days (from 18-May-07 to 24-May-07)
Depth: 1739 m TVD: 1739 m Angle: 1 ° Metres drilled : 1136 m Volume drilled: 22 m³
End phase status: ☒ Csg. diametre: 4"1/2 Shoe: 1736 m
☐ Completion ☐ Abandonment ☐ Suspension

FLUID TYPE		POLYNOX				
Depth	m	850	1023	1320	1660	1739
Temp. In	°C	25	30	32	36	36
Temp. out	°C	30	35	35	40	40
Mud weight in	sg	1.08	1.10	1.10	1.12	1.12
Mud Weight out	sg	1.08	1.10	1.10	1.12	1.12
Solids	%	5.3	6.6	6.6	7.7	7.8
Oil	%	0				
Water	%	94.7	93.4	93.4	92.3	92.2
O/W ratio						
Sand out	%					
Sand in	%	0.1	0.1	0.1	0.1	0.1
Flow rate	l/mn	1050	1050	1050	1050	1050
Marsh Viscosity	s	50	51	60	55	53
Fann 600 rpm		41	43	48	50	48
Fann 300 rpm		27	28	31	32	31
Fann 200 rpm		18	22	23	22	21
Fann 100 rpm		15	17	18	16	15
Fann 60 rpm						
Fann 30 rpm						
Fann 6 rpm		4	4	4	4	4
Fann 3 rpm		3	3	3	3	3
Gel 0	lbf/100 ft²	3	3	3	3	3
Gel 10	lbf/100 ft²	6	8	10	9	9
Gel 30	lbf/100 ft²	8	10	13	11	11
Ap. Visc.	cP	20.5	21.5	24	25	24
P.V.	cP	14	15	17	18	17
Y.P.	lbf/100 ft²	13	13	14	14	14
YS	lbf/100 ft²					
tau	lbf/100 ft²					
n.		0.60	0.62	0.63	0.64	0.63
K.	lbf/s^n/100 ft²	0.63	0.59	0.61	0.58	0.61
Filtrate API 30		4.0	4.0	3.8	3.8	3.8
Filtrate 500psi 121°C						
HP/HT cake mm						
Sagging Factor						
WBM						
pH		12.5	12.5	12.5	12.5	12.5
Pm	cm³	11.3	11.5	11.4	11.5	11.3
Pf	cm³	1.9	1.9	1.9	2.0	1.9
Mf	cm³	2.5	2.5	2.5	2.5	2.5
Mf/Pf		1.32	1.32	1.32	1.25	1.32
Cl -	g/l	2200	2200	2200	2300	2200
Ca++	g/l	200	200	200	200	220
Mg++	g/l					
K+	g/l					
NaCl	g/l					
CaCl2	g/l					
MgCl2	g/l					
KCl	g/l					
CEC	kg/m³	36	36	36	36	36
Glycol	%					
Total CaSO4	g/l					
XS CaSO4	g/l					
Silicate	%					
NABM						
Excess Lime	g/l	7.05	7.21	7.14	7.16	7.08
E.S.	Volts					
Cl- in mud	g/l					
CaCl2 in WP	g/l					
Solids						
LGS	%	5	6.3	6.3	7.3	7.5
HGS	%					
Solids (correct.)	%	5	6.3	6.3	7.4	7.5
OOC						
Shaker	g/kg					
HG Dryer	g/kg					
Cutting dryer	g/kg					
Centrifuges out						
centrif 1	g/kg					
centrif 2	g/kg					
centrif 3	g/kg					

Solids treatment			Drilling data		
Shaker screens:	215-215-180-180	mesh	Bit:		h
Shaker screens:	215-215-180-180	mesh	PDC M516 / HC- 505	51.25	h
Shaker screens:	2 x 180	mesh	Coring:		h
		mesh	Hole opening:		h
		mesh	Average ROP:	27.3 / 19.9	m/h
centrifuges 414	60	h	Circulating	7	h
3 en 1	59	h	Reaming:		h
		h			h

LOT@ last csg shoe EMW: 1.75 SG @ 602.6 m
Max. temperature at TD 1739 Measured 40 °C Calc. 47 °C

Initial hole vol. :	0.00	m³	Format. losses:		m³
Initial tank vol. :	0.00	m³	Surface losses:	72.0	m³
Received vol. :	55.00	m³	Dumped:		m³
Made up vol. :	88.00	m³	Left behind csg:		m³
			Evaporation		m³
Water	0.00	m³	Abandonment:	71.0	m³
Total handled vol. :	143.0	m³	Total lost vol. :	143	m³

Transferred volume (out of rig): 0 m³ Dilution Ratio l/m
Reusable volume (well+tanks): 0 m³ 63

Cost and consumption

Products	Amount	Unit	Unit Price	TOTAL COST	kg-l/m3
ALDACIDE			USD 5.46	0.00	0.00
BARACARB 150			USD 0.80	0.00	0.00
BARACARB 5	1362.0		USD 0.80	1089.60	9524.48
BARACARB 25	2724		USD 0.80	2179.20	19048.95
BARACOR 100			USD 2.93	0.00	0.00
BARA-DEFOAM W300			USD 3.31	0.00	0.00
BARAFILM	104		USD 3.18	330.72	727.27
BARASCAV-L	208		USD 1.61	334.88	1454.55
BARAZAN D PLUS	101.7		USD 13.42	1364.81	711.19
Baritina			USD 0.39	0.00	0.00
BAROLUBE GOLD SEAL	416		USD 4.98	2071.68	2909.09
Bentonita	4125		USD 0.12	495.00	26846.15
Cal	1800		USD 0.20	360.00	12587.41
Carbonato de Calcio 200			USD 0.12	0.00	0.00
Cloruro de Potasio	500		USD 0.82	410.00	3496.50
CMC LoVis			USD 4.95	0.00	0.00
FILTER CHEK	1384.7		USD 3.20	4431.04	9683.22
EP-MUD LUBE			USD 2.49	0.00	0.00
Estearato de Alumino			USD 5.97	0.00	0.00
EZ-SPOT			USD 3.94	0.00	0.00
LIGNOX PLUS	317.8		USD 2.10	667.38	2222.38
Mica			USD 0.40	0.00	0.00
Mixcel Fino			USD 1.29	0.00	0.00
PAC-L	454		USD 6.14	2787.56	3174.83
PAC-R	136.2		USD 6.14	836.27	952.45
Soda Caustica	125		USD 1.38	172.50	874.13
Su Carb 150			USD 0.37	0.00	0.00
Su Carb 5			USD 0.37	0.00	0.00
Su Carb 50	1250		USD 0.37	462.50	8741.26
THERMA THIN			USD 4.35	0.00	0.00
XCD POLYMER			USD 19.91	0.00	0.00
XLR-RATE	3328		USD 2.94	9784.32	23272.73
Poly Anionic cell LV			USD 6.92	0.00	0.00
Su Carb - 50			USD 0.37	0.00	0.00

Total products				us$	27,777.46
Transporte de Material	50.80		us$ 23.80	us$	1,209.04
Lead engineer	7		us$ 382.50	us$	2,677.50
second engineer	7		us$ 348.50	us$	2,439.50
Costo cementacion					0.00
Completion Fluids			us$ 1028.10	us$	1,028.10
Cost for phase				us$	34,103.50
COST: m³ mud	us$ 238	Drilled/m:	us$ 30	m³/drilled:	us$ 1581

Problems

Solutions

Comments:

Test BOP w/500 to 3000 psi. P/U and M/U 6 1/8" PDC BIT. RIH to 568 m. M/U Kelly & RIH w/circulation to 568 m. (top of cement). Kick drill . Drill cement from 568 m to 600 m. Displace hole mud by POLYNOX ,clean shakers. Drill cement and shoe to 601 m. Drill to 1023 m., circulated and POOH to surface, change bit to HC505 WITH 5X10/32". Drill to 1739 & POOH from 1739 m. to 580 m.Flow check ok and RIH from 580 to 1739 m .

POOH from 1739 m to surface. M/U Schlumberger. Safety meeting. Run# -1 AITH-PEX, Run # 2 DSI-GR, Run # 3 GR and Run # -4 MDT -GR
RIH from surface to 1739m. Circulate. POOH from 1739 to surface L/D drill string. Retrive wear bushing + pin look.M/U Washing tool ,wash BOP. R/U Weatherford and prejob safety meeting. RIH 4 1/2" casing ,Float Shoe 1736 m, Float collar= 1716.6 m. Circulate. M/U HASA circulate head. Pre Job safety meeting on Cement Job. Perform pressure test 500/5000 psi. Cement 4 1/2" casing as per program.

Mud contractor: HALLIBURTON - BAROID Made on: 24-May-07 By: Sosa - Schamber - Aburto

FINAL MUD REPORT

Field: Aguada Pichana
Well: AP - 225
Rig: ODE 39

Depth (TMD)	1739 m	Well duration	10 days	From (	15-May-07	to	24-May-07)
Metres drilled	1739 m	Drilling time	67 1/2 Hours				
Vol. ground drilled	45 m3	Reaming	Hours	Mud treatment			Hours

Drilling mud volumes

Handled volumes:	WBM	NABM	*losses volume:	WBM	NABM
Made up	218.00 m3		form. losses		m3
Received	m3		Surf. losses	140.50	m3
TOTAL HANDLED	218.00 m3		Dumped		m3
Transferred (out)	m3		Abandonment	71.00	m3
* Losses	140.50 m3		Left behind csg		m3

Completion fluid volumes

Handled volume	25 m3
Dumped + surface losses	11 m3
Formation losses	m3
Left behind csg	14 m3
Transferred out	m3

PRODUCTS (drilling)	Unit	AMOUNT Used	Damaged	Total	Unit Price		COST Used	Total	Cost %
ALDACIDE	lt				USD	5.46			
BARACARB 150	kg				USD	0.80			
BARACARB 5	kg	1362.000		1362.000	USD	0.80	1089.60	1089.60	2.63
BARACARB 25	kg	2724.000		2724.000	USD	0.80	2179.20	2179.20	5.26
BARACOR 100	lt				USD	2.93			
BARA-DEFOAM W300	lt				USD	3.31			
BARAFILM	lt	104.000		104.000	USD	3.18	330.72	330.72	0.80
BARASCAV-L	lt	208.000		208.000	USD	1.61	334.88	334.88	0.81
BARAZAN D PLUS	kg	146.900		146.900	USD	13.42	1971.40	1971.40	4.76
Baritina	kg				USD	0.39			
BAROLUBE GOLD SEAL	lt	624.000		624.000	USD	4.98	3107.52	3107.52	7.50
Bentonita	kg	10300.000		10300.000	USD	0.12	1236.00	1236.00	2.98
Cal	kg	3575.000		3575.000	USD	0.20	715.00	715.00	1.72
Carbonato de Calcio 200	kg				USD	0.12			
Cloruro de Potasio	kg	500.000		500.000	USD	0.82	410.00	410.00	0.99
CMC LoVis	kg	350.000		350.000	USD	4.95	1732.50	1732.50	4.18
FILTER CHEK	kg	2315.400		2315.400	USD	3.20	7409.28	7409.28	17.87
EP-MUD LUBE	lt				USD	2.49			
Estearato de Alumino	kg				USD	5.97			
EZ-SPOT	lt				USD	3.94			
LIGNOX PLUS	kg	681.000		681.000	USD	2.10	1430.10	1430.10	3.45
Mica	kg				USD	0.40			
Mixcel Fino	kg				USD	1.29			
PAC-L	kg	612.900		612.900	USD	6.14	3763.21	3763.21	9.08
PAC-R	kg	204.300		204.300	USD	6.14	1254.40	1254.40	3.03
Soda Caustica	kg	300.000		300.000	USD	1.38	414.00	414.00	1.00
Su Carb 150	kg	1250.000		1250.000	USD	0.37	462.50	462.50	1.12
Su Carb 5	kg	1250.000		1250.000	USD	0.37	462.50	462.50	1.12
Su Carb 50	kg	2500.000		2500.000	USD	0.37	925.00	925.00	2.23
THERMA THIN	kg				USD	4.35			
XCD POLYMER	kg				USD	19.91			
XLR-RATE	lt	4160.000		4160.000	USD	2.94	12230.40	12230.40	29.50
1. TOTAL PRODUCTS	mt	33168		33168			**41458.21**	**41458.21**	100.00
2. MUD REC. FROM ITAUX1	m3								
3. GRAND TOTAL (1 + 2)								**41458.21**	
4. TRANSFERRED MUD	m3								
5. TRANSFERRED MUD	m3								
6. WELL COST (3-4-5)								**41458.21**	
UNIT COST:	/m3 mud:	**190.18**			/m drilled:	**23.84**		/ m3 drilled:	**920**

TECHNICAL COST	Mud engineer:	8,840.00	Mud laboratory:		
SHALE SHAKER SCREENS			MUD CLEANER SCREENS		
Size	Nb	Cost	Size	Nb	Cost

COST OF ADDITIONAL SERVICES	
Costo Cementing:	
Completion Fluid:	1,028.10
MUD PLANT:	
OTHERS: (transporte)	1,209.04

Mud contractor: HALLIBURTON - BAROID Made on: 24-May-07 By: Sosa- Aburto - Schamber

7) CASING TALLIES

CASING TALLY

Rig :	ODE-39
Well :	AP-225
Date :	20-May-07

Stick up:	0.96 m	TD :	1,739.00 m	Rat hole	2.93 m	Total Joints	190
TotalLength	1,737.03 m	Casing Ø:	4 1/2 in.	Mud weight:	1.12 SG	Joints to RIH	184
		Shoe at:	1,736.07 m	Hook weight:	15,000 lbs	Excess Joints	6

Type	Grade	Weight	OD	ID	Ext Vol	Steel Vol.	Torq Max	Torq Opt	Torq Min
1	L80 - SEC - CR13	10.50	4.500 in.	4.052 in.	10.40 l/m	2.08 l/m	3996	4,440 ft. lbs	4884
2									
3									
4									

Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain bbl	Mud Gain m3	Remarks
									Central. Con Stop Rings a mitad de caño
Float Shoe	1	1	0.46	0.46	1,735.61	15014	0	0.0	BAKER LOCK + TESTEAR
1	1	2	9.21	9.67	1,726.40	15286	0	0.0	C1 + Stop Ring
2	1	3	9.44	19.11	1,716.96	15565	0	0.0	C2 + Stop Ring
Float Collar	1	4	0.37	19.48	1,716.59	15576	0	0.0	BAKER LOCK + TESTEAR
3	1	5	9.2	28.68	1,707.39	15847	0	0.1	C3 + Stop Ring
4	1	6	9.22	37.90	1,698.17	16120	0	0.1	C4 + Stop Ring
5	1	7	9.43	47.33	1,688.74	16398	1	0.1	C5 + Stop Ring
6	1	8	9.43	56.76	1,679.31	16677	1	0.1	C6 + Stop Ring
7	1	9	9.14	65.90	1,670.17	16947	1	0.1	C7 + Stop Ring
8	1	10	8.6	74.50	1,661.57	17201	1	0.2	C8 + Stop Ring
9	1	11	9.43	83.93	1,652.14	17480	1	0.2	C9 + Stop Ring
10	1	12	9.44	93.37	1,642.70	17759	1	0.2	C10 + Stop Ring
11	1	13	9.44	102.81	1,633.26	18038	1	0.2	C11 + Stop Ring
12	1	14	9.44	112.25	1,623.82	18316	1	0.2	C12 + Stop Ring
13	1	15	9.44	121.69	1,614.38	18595	2	0.3	
14	1	16	9.43	131.12	1,604.95	18874	2	0.3	C13 + Stop Ring
Pup Joint	1		2.1	133.22	1,602.85	18936	2	0.3	
RN	1	17	0.45	133.67	1,602.40	18949	2	0.3	CONJUNTO ARMADO
Pup Joint	1		2.1	135.77	1,600.30	19011	2	0.3	
15	1	18	9.43	145.20	1,590.87	19290	2	0.3	C14 + Stop Ring
16	1	19	9.44	154.64	1,581.43	19569	2	0.3	
17	1	20	9.36	164.00	1,572.07	19845	2	0.3	C15 + Stop Ring
18	1	21	9.05	173.05	1,563.02	20113	2	0.4	
19	1	22	9.44	182.49	1,553.58	20392	2	0.4	C16 + Stop Ring
20	1	23	8.97	191.46	1,544.61	20657	3	0.4	
21	1	24	9.43	200.89	1,535.18	20935	3	0.4	C17 + Stop Ring
22	1	25	8.55	209.44	1,526.63	21188	3	0.4	
23	1	26	9.44	218.88	1,517.19	21467	3	0.5	C18 + Stop Ring
24	1	27	9.43	228.31	1,507.76	21745	3	0.5	
25	1	28	9.44	237.75	1,498.32	22024	3	0.5	C19 + Stop Ring
26	1	29	8.92	246.67	1,489.40	22288	3	0.5	
27	1	30	9.43	256.10	1,479.97	22566	3	0.5	
28	1	31	9.43	265.53	1,470.54	22845	3	0.6	
29	1	32	9.44	274.97	1,461.10	23124	4	0.6	C20 + Stop Ring
30	1	33	9.44	284.41	1,451.66	23403	4	0.6	
31	1	34	9.43	293.84	1,442.23	23681	4	0.6	
32	1	35	9.43	303.27	1,432.80	23960	4	0.6	
33	1	36	9.43	312.70	1,423.37	24239	4	0.7	C21 + Stop Ring
34	1	37	9.43	322.13	1,413.94	24517	4	0.7	
35	1	38	9.44	331.57	1,404.50	24796	4	0.7	
36	1	39	9.43	341.00	1,395.07	25075	4	0.7	
37	1	40	9.44	350.44	1,385.63	25354	5	0.7	C22 + Stop Ring
38	1	41	9.43	359.87	1,376.20	25632	5	0.7	
39	1	42	9.43	369.30	1,366.77	25911	5	0.8	
40	1	43	9.07	378.37	1,357.70	26179	5	0.8	
41	1	44	9.43	387.80	1,348.27	26458	5	0.8	C23 + Stop Ring
42	1	45	9.43	397.23	1,338.84	26736	5	0.8	
43	1	46	9.42	406.65	1,329.42	27014	5	0.8	
44	1	47	9.43	416.08	1,319.99	27293	5	0.9	
45	1	48	8.68	424.76	1,311.31	27550	6	0.9	C24 + Stop Ring
46	1	49	9.43	434.19	1,301.88	27828	6	0.9	
47	1	50	8.85	443.04	1,293.03	28090	6	0.9	
48	1	51	9.28	452.32	1,283.75	28364	6	0.9	
49	1	52	9.43	461.75	1,274.32	28642	6	1.0	C25 + Stop Ring
50	1	53	9.42	471.17	1,264.90	28921	6	1.0	
51	1	54	9.43	480.60	1,255.47	29199	6	1.0	
52	1	55	9.43	490.03	1,246.04	29478	6	1.0	
53	1	56	9.43	499.46	1,236.61	29757	7	1.0	C26 + Stop Ring
54	1	57	9.43	508.89	1,227.18	30035	7	1.1	
55	1	58	9.43	518.32	1,217.75	30314	7	1.1	
56	1	59	9.43	527.75	1,208.32	30592	7	1.1	
57	1	60	9.43	537.18	1,198.89	30871	7	1.1	C27 + Stop Ring
58	1	61	9.43	546.61	1,189.46	31150	7	1.1	
59	1	62	9.44	556.05	1,180.02	31428	7	1.2	
60	1	63	9.43	565.48	1,170.59	31707	7	1.2	
61	1	64	9.43	574.91	1,161.16	31986	8	1.2	C28 + Stop Ring
62	1	65	9.44	584.35	1,151.72	32265	8	1.2	
63	1	66	9.44	593.79	1,142.28	32544	8	1.2	
64	1	67	9.43	603.22	1,132.85	32822	8	1.3	
65	1	68	9.43	612.65	1,123.42	33101	8	1.3	C29 + Stop Ring
66	1	69	9.43	622.08	1,113.99	33379	8	1.3	

CASING TALLY

Rig :	ODE-39
Well :	AP-225
Date :	20-May-07

Stick up:	0.96 m	TD :	1,739.00 m	Rat hole	2.93 m	Total Joints	190
TotalLength	1,737.03 m	Casing Ø:	4 1/2 in.	Mud weight:	1.12 SG	Joints to RIH	184
		Shoe at:	1,736.07 m	Hook weight:	15,000 lbs	Excess Joints	6

Type	Grade	Weight	OD	ID	Ext Vol	Steel Vol.	Torq Max	Torq Opt	Torq Min
1	L80 - SEC - CR13	10.50	4.500 in.	4.052 in.	10.40 l/m	2.08 l/m	3996	4,440 ft. lbs	4884
2									
3									
4									

Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain bbl	Mud Gain m3	Remarks
									Central. Con Stop Rings a mitad de caño
67	1	70	9.43	631.51	1,104.56	33658	8	1.3	
68	1	71	9.19	640.70	1,095.37	33929	8	1.3	
69	1	72	9.44	650.14	1,085.93	34208	9	1.4	C30 + Stop Ring
70	1	73	9.43	659.57	1,076.50	34487	9	1.4	
71	1	74	9.43	669.00	1,067.07	34766	9	1.4	
72	1	75	9.44	678.44	1,057.63	35044	9	1.4	
73	1	76	9.43	687.87	1,048.20	35323	9	1.4	
74	1	77	8.61	696.48	1,039.59	35577	9	1.5	
75	1	78	9.43	705.91	1,030.16	35856	9	1.5	
76	1	79	9.43	715.34	1,020.73	36135	9	1.5	
77	1	80	9.43	724.77	1,011.30	36413	9	1.5	
78	1	81	9.43	734.20	1,001.87	36692	10	1.5	
79	1	82	9.43	743.63	992.44	36971	10	1.5	
80	1	83	9.43	753.06	983.01	37249	10	1.6	
81	1	84	9.43	762.49	973.58	37528	10	1.6	
82	1	85	9.00	771.49	964.58	37794	10	1.6	
83	1	86	9.43	780.92	955.15	38072	10	1.6	
84	1	87	9.43	790.35	945.72	38351	10	1.6	
85	1	88	9.43	799.78	936.29	38629	10	1.7	
86	1	89	8.99	808.77	927.30	38895	11	1.7	
87	1	90	9.43	818.20	917.87	39174	11	1.7	
88	1	91	9.43	827.63	908.44	39452	11	1.7	
89	1	92	9.02	836.65	899.42	39719	11	1.7	
90	1	93	8.93	845.58	890.49	39983	11	1.8	
91	1	94	9.43	855.01	881.06	40261	11	1.8	
92	1	95	8.98	863.99	872.08	40527	11	1.8	
93	1	96	9.43	873.42	862.65	40805	11	1.8	
94	1	97	9.43	882.85	853.22	41084	12	1.8	
95	1	98	9.43	892.28	843.79	41362	12	1.9	
96	1	99	9.43	901.71	834.36	41641	12	1.9	
97	1	100	9.44	911.15	824.92	41920	12	1.9	
98	1	101	9.44	920.59	815.48	42199	12	1.9	
99	1	102	9.43	930.02	806.05	42477	12	1.9	
100	1	103	8.65	938.67	797.40	42733	12	2.0	
101	1	104	9.43	948.10	787.97	43012	12	2.0	
102	1	105	9.43	957.53	778.54	43290	13	2.0	
103	1	106	9.44	966.97	769.10	43569	13	2.0	
104	1	107	8.96	975.93	760.14	43834	13	2.0	
105	1	108	9.43	985.36	750.71	44112	13	2.1	
106	1	109	9.43	994.79	741.28	44391	13	2.1	
107	1	110	9.43	1,004.22	731.85	44670	13	2.1	
108	1	111	9.43	1,013.65	722.42	44948	13	2.1	
109	1	112	8.90	1,022.55	713.52	45211	13	2.1	
110	1	113	9.43	1,031.98	704.09	45490	14	2.1	
Pup Joint	1		3.01	1,034.99	701.08	45579	14	2.2	
R	**1**	**114**	**0.40**	**1,035.39**	**700.68**	**45591**	**14**	**2.2**	**CONJUNTO ARMADO**
Pup Joint	1		3.15	1,038.54	697.53	45684	14	2.2	
111	1	115	9.43	1,047.97	688.10	45962	14	2.2	
112	1	116	9.43	1,057.40	678.67	45962	14	2.2	
113	1	117	9.44	1,066.84	669.23	46241	14	2.2	
114	1	118	9.43	1,076.27	659.80	46520	14	2.2	
115	1	119	9.43	1,085.70	650.37	46798	14	2.2	
116	1	120	9.43	1,095.13	640.94	47077	14	2.3	
117	1	121	9.42	1,104.55	631.52	47355	14	2.3	
118	1	122	8.93	1,113.48	622.59	47619	14	2.3	
119	1	123	9.43	1,122.91	613.16	47898	15	2.3	
120	1	124	9.44	1,132.35	603.72	48177	15	2.3	
121	1	125	9.43	1,141.78	594.29	48455	15	2.4	
122	1	126	9.43	1,151.21	584.86	48734	15	2.4	
123	1	127	9.43	1,160.64	575.43	49012	15	2.4	
124	1	128	9.42	1,170.06	566.01	49291	15	2.4	
125	1	129	9.43	1,179.49	556.58	49569	15	2.4	
126	1	130	9.43	1,188.92	547.15	49848	15	2.5	
127	1	131	9.43	1,198.35	537.72	50127	16	2.5	
128	1	132	8.80	1,207.15	528.92	50387	16	2.5	
129	1	133	9.43	1,216.58	519.49	50665	16	2.5	
130	1	134	9.43	1,226.01	510.06	50944	16	2.5	
131	1	135	9.43	1,235.44	500.63	51222	16	2.6	
132	1	136	9.04	1,244.48	491.59	51490	16	2.6	
133	1	137	9.43	1,253.91	482.16	51768	16	2.6	
134	1	138	9.42	1,263.33	472.74	52046	16	2.6	
135	1	139	9.43	1,272.76	463.31	52325	17	2.6	

CASING TALLY

Rig :	ODE-39
Well :	AP-225
Date :	20-May-07

Stick up:	0.96 m	TD :	1,739.00 m	Rat hole	2.93 m	Total Joints	190
TotalLength	1,737.03 m	Casing Ø:	4 1/2 in.	Mud weight:	1.12 SG	Joints to RIH	184
		Shoe at:	1,736.07 m	Hook weight:	15,000 lbs	Excess Joints	6

Type	Grade	Weight	OD	ID	Ext Vol	Steel Vol.	Torq Max	Torq Opt	Torq Min
1	L80 - SEC - CR13	10.50	4.500 in.	4.052 in.	10.40 l/m	2.08 l/m	3996	4,440 ft. lbs	4884
2									
3									
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Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain bbl	Mud Gain m3	Remarks
									Central. Con Stop Rings a mitad de caño
136	1	140	8.46	1,281.22	454.85	52575	17	2.6	
137	1	141	9.31	1,290.53	445.54	52850	17	2.7	
138	1	142	9.43	1,299.96	436.11	53129	17	2.7	
139	1	143	8.45	1,308.41	427.66	53378	17	2.7	
140	1	144	9.42	1,317.83	418.24	53657	17	2.7	
141	1	145	9.31	1,327.14	408.93	53932	17	2.7	
142	1	146	9.21	1,336.35	399.72	54204	17	2.8	
143	1	147	8.63	1,344.98	391.09	54459	17	2.8	
144	1	148	9.43	1,354.41	381.66	54737	18	2.8	
145	1	149	9.44	1,363.85	372.22	55016	18	2.8	
146	1	150	8.55	1,372.40	363.67	55269	18	2.8	
147	1	151	8.97	1,381.37	354.70	55534	18	2.9	
148	1	152	9.44	1,390.81	345.26	55813	18	2.9	
149	1	153	9.44	1,400.25	335.82	56092	18	2.9	
150	1	154	9.31	1,409.56	326.51	56367	18	2.9	
151	1	155	9.43	1,418.99	317.08	56645	18	2.9	
152	1	156	9.43	1,428.42	307.65	56924	19	3.0	
153	1	157	9.43	1,437.85	298.22	57203	19	3.0	
154	1	158	9.43	1,447.28	288.79	57481	19	3.0	
155	1	159	9.43	1,456.71	279.36	57760	19	3.0	
156	1	160	9.32	1,466.03	270.04	58035	19	3.0	
157	1	161	9.43	1,475.46	260.61	58314	19	3.1	
158	1	162	9.43	1,484.89	251.18	58592	19	3.1	
159	1	163	9.32	1,494.21	241.86	58868	19	3.1	
160	1	164	9.25	1,503.46	232.61	59141	20	3.1	
161	1	165	9.33	1,512.79	223.28	59417	20	3.1	
162	1	166	9.43	1,522.22	213.85	59695	20	3.1	
163	1	167	9.43	1,531.65	204.42	59974	20	3.2	
164	1	168	9.26	1,540.91	195.16	60248	20	3.2	
165	1	169	9.43	1,550.34	185.73	60526	20	3.2	
166	1	170	9.31	1,559.65	176.42	60801	20	3.2	
167	1	171	9.43	1,569.08	166.99	61080	20	3.2	
168	1	172	9.43	1,578.51	157.56	61358	21	3.3	
169	1	173	9.32	1,587.83	148.24	61634	21	3.3	
170	1	174	9.43	1,597.26	138.81	61912	21	3.3	
171	1	175	9.12	1,606.38	129.69	62182	21	3.3	
172	1	176	9.44	1,615.82	120.25	62461	21	3.3	
173	1	177	9.42	1,625.24	110.83	62739	21	3.4	
174	1	178	9.43	1,634.67	101.40	63018	21	3.4	
175	1	179	9.43	1,644.10	91.97	63296	21	3.4	
176	1	180	9.38	1,653.48	82.59	63573	22	3.4	
177	1	181	9.43	1,662.91	73.16	63852	22	3.4	
178	1	182	9.31	1,672.22	63.85	64127	22	3.5	
179	1	183	9.19	1,681.41	54.66	64399	22	3.5	
180	1	184	9.42	1,690.83	45.24	64677	22	3.5	
181	1	185	9.43	1,700.26	35.81	64956	22	3.5	
182	1	186	8.87	1,709.13	26.94	65218	22	3.5	
183	1	187	9.43	1,718.56	17.51	65496	22	3.6	
184	1	188	9.43	1,727.99	8.08	65775	23	3.6	
Pup Joint	1		1.37	1,729.36	6.71	65815	23	3.6	
CHD	1		0.23	1,729.59	6.48	65822	23	3.6	Hang Off Point = 6.48 m
CHU	1	199	0.06	1,729.65	6.42	65824	23	3.6	PUW=
RT	1		0.65	1,730.30	5.77	65843	23	3.6	SOW=
LJ	1	200	6.73	1,737.03	-0.96	66042	23	3.6	Tomar Pesos Registrar

TBG 4 1/2" 10.5 #/ft L-80 CR-13 SEC Torque (ft.lbs) : Min - 3996 / Opt 4440 / Max 4884

CASING TALLY

Rig :	ODE-39
Well :	AP-225
Date :	16-May-07

Stick up:	1.22 m	TD :	606.00 m	Rat hole	3.33 m	Total Joints	46
TotalLength	603.89 m	Casing Ø:	7 in.	Mud weight:	1.09 SG	Joints to RIH	42
		Shoe at:	602.67 m	Hook weight:	20,000 lbs	Excess Joints	4

Type	Grade	Weight	OD	ID	Ext Vol	Steel Vol.	Torq Min	Torq Opt	Torq Max
1	N80 - SEC	23 lbs/ft	7.000 in.	6.366 in.	25.07 l/m	4.53 l/m	6255	6,950 ft. lbs	7645
2									
3									
4									

Joint #	Type #	Order #	Joint Length (m)	Cumul. Length (m)	Distance to RT (m)	Hook Load (Lbs)	Mud Gain bbl	Mud Gain m3	Remarks
Float Shoe	1	1	0.46	0.46	602.21	20030	0	0.0	Testear
1	1	2	14.40	14.86	587.81	20966	0	0.1	C1 + Stp Rng (3 m del Zapato)
2	1	3	14.24	29.10	573.57	21892	1	0.1	C2 + Stp Rng al Centro
Float Collar	1	4	0.40	29.50	573.17	21918	1	0.1	Testear - C3 + Stp Rng (3 m Collar)
3	1	5	14.44	43.94	558.73	22856	1	0.2	C4 + Stp Rng
4	1	6	13.86	57.80	544.87	23757	2	0.3	C5 + Stp Rng
5	1	7	13.88	71.68	530.99	24660	2	0.3	C6 + Stp Rng
6	1	8	14.16	85.84	516.83	25580	2	0.4	C7 + Stp Rng
7	1	9	14.30	100.14	502.53	26510	3	0.5	C8 + Stp Rng
8	1	10	14.27	114.41	488.26	27437	3	0.5	
9	1	11	14.34	128.75	473.92	28369	4	0.6	
10	1	12	14.34	143.09	459.58	29302	4	0.6	
11	1	13	14.26	157.35	445.32	30229	4	0.7	
12	1	14	14.33	171.68	430.99	31160	5	0.8	C9 + Stp Rng
13	1	15	14.29	185.97	416.70	32089	5	0.8	
14	1	16	14.27	200.24	402.43	33017	6	0.9	
15	1	17	14.23	214.47	388.20	33942	6	1.0	
16	1	18	14.32	228.79	373.88	34872	7	1.0	C10 + Stp Rng
17	1	19	14.20	242.99	359.68	35796	7	1.1	
18	1	20	14.34	257.33	345.34	36728	7	1.2	
19	1	21	14.39	271.72	330.95	37663	8	1.2	
20	1	22	14.31	286.03	316.64	38593	8	1.3	
21	1	23	14.97	301.00	301.67	39566	9	1.4	C11 + Stp Rng
22	1	24	14.20	315.20	287.47	40490	9	1.4	
23	1	25	13.22	328.42	274.25	41349	9	1.5	
24	1	26	13.52	341.94	260.73	42228	10	1.6	
25	1	27	13.53	355.47	247.20	43107	10	1.6	
26	1	28	14.28	369.75	232.92	44036	11	1.7	C12 + Stp Rng
27	1	29	14.31	384.06	218.61	44966	11	1.7	
28	1	30	13.87	397.93	204.74	45867	11	1.8	
29	1	31	14.03	411.96	190.71	46779	12	1.9	
30	1	32	14.26	426.22	176.45	47706	12	1.9	
31	1	33	14.32	440.54	162.13	48637	13	2.0	C13 + Stp Rng
32	1	34	13.87	454.41	148.26	49539	13	2.1	
33	1	35	13.78	468.19	134.48	50435	13	2.1	
34	1	36	14.33	482.52	120.15	51366	14	2.2	
35	1	37	13.81	496.33	106.34	52264	14	2.2	
36	1	38	14.10	510.43	92.24	53180	15	2.3	C14 + Stp Rng
37	1	39	14.29	524.72	77.95	54109	15	2.4	
38	1	40	14.29	539.01	63.66	55038	15	2.4	
39	1	41	14.29	553.30	49.37	55967	16	2.5	
40	1	42	14.07	567.37	35.30	56882	16	2.6	
41	1	43	14.29	581.66	21.01	57811	17	2.6	C15 + Stp Rng
42	1	44	14.26	595.92	6.75	58738	17	2.7	
WHDown	1	45	0.17	596.09	6.58	58749	17	2.7	Hang off point=6,58 m
WHUp	1		0.46	596.55	6.12	58779	17	2.7	Tomar Pesos
L-Joint+RTool	1	46	7.34	603.89	-1.22	59256	17	2.7	

TBG 7" 23 #/ft N-80 SEC Torque (ft.lbs) : Min - 6255 / Opt 6950 / Max 7645

Total 7" Casing 46 Tubos
Total 7" a Bajar 42 Tubos

Total 7" Sobrante 4 Tubos = (43 x 14.32m) - (44 x 13.83m) - (6 x 13.64m) - (46 x 14.33m)

8) CEMENTING REPORT

TOTAL AUSTRAL	CEMENTING 4 1/2" tbg	Report N° 2	DATE: 24-May-07	AP-225

Casing to be Cemented	4.5	inch								**Cement Job type**	Surface casing				
Casing shoe	1736	mMD	1736	mVD	**Mud type**	WBM		**SG**	1.12			**BHST**	79	°C	
Drilling Size	6 1/8	inch			**LOT / FIT**	-	EMW	**at**	-	mVD		**BHCT**	46	°C	
TD	1739	mMD	1739	mVD	**Pore press.**	-	EMW	**at**	-	mVD		**API schedule**	-		
Prev casing	7	inch	23	lbs/ft	**Format. frac**	-	EMW	**at**	-	mVD		**-Pressure**		bars	
Prev csg shoe	603	mMD	603	mVD								**-Temperature**		°C	

Laboratory fluids design

Products, additives, water	Unit	SPACERS		SLURRIES			Characteristics			SLURRIES		
		n°1	n°2	n°3	n°1	n°2				n°1	n°2	
Cement G	MT				1	1	**Specific gravity**	**SG**		1.15	1.90	
Fresh water	lt				1,323	381	**Thickening Time :**	**40BC**			02:52 hs	
Halad - 477	kg				20		**Thickening Time:**	**70BC**		04:30 hs +	02:58 hs	
DAIR 3000L	lt				2	2	**Thickening Time:**	**100BC**			03:02 hs	
CFR-3	kg				4	20	**Free Water % :**	**vertical**				
Microblock	kg					70	**Free Water % :**	**45°**				
HR-5	kg					1	**Fluid loss ml**	**1000 psi**	**@ 45 °C**	136	22	
Tuned Light	kg				700		**Yield**	**m3 slurry/ton cmt**		2.65	0.81	
Tuned Spacer	l	1000										
SSA 1	kg	375					**Compress Strength @ 65 C**		**50 psi**	07:35 hs	02:27 hs	
Halad - 567L	kg					20			**500 psi**		03:09 hs	
SEM-7	lt	10	10						**2633 psi**		24:11 hs	
Fe 2	kg	7	32						**362 psi**	22:57 hs		
Mud Flush	lt		1000									
Super Flush 101				1000								
Cloruro Calcio				10								
Final volume or Yield												

Rheologies (laboratory / on site)

FLUIDS	T°	SG	F300	F200	F100	F60	F30	F6	F3	G0	G10		PV	YV	n	K
Mud		1.12														
Spacer1		1.2														
Spacer2		1.02														
Lead	75 F	1.15	107	75	45	36	24	14					93	14	0.74	0.81
Tail	75 F	1.90	162	125	77	56	29	14					127.5	34.5	0.70	1.71
Mud	80	1.12	29	20	14		4	3		3	8		17	12		
Thin Mud																
Spacer1		0.00														
Spacer2		1.02														
Lead		1.15													#DIV/0!	#DIV/0!
Tail		1.90													#DIV/0!	#DIV/0!

Products used and cost

Products	Unit	SPACERS		SLURRIES			Unit price	Cost
		n°1	n°2	n°3	Lead	Tail		
Cement G	MT				4.45	2.75	390.00	1072.50
Fresh water	l				5,886	1,047		
Tuned Light	m3				11.8		1275.00	15045.65
Halad-447	kg				100		12.75	1275.00
CFR-3	kg				18	55	10.20	744.60
D-Air 4000L	l		9		20	9	11.22	426.36
Microblock	l					208	5.10	1060.80
Halad-567 LXP	l					60	22.95	1377.00
HR-5	kg					3	10.20	30.60
Tuned Spacer	l		6400				0.78	4961.28
Silice	kg		1500				0.51	765.00
Sem 7	l	86	89	15			10.20	1938.00
Fe 2	kg	275	50				3.57	1160.25
KCl	kg		200				0.77	153.00
Super Flush 101(c/ e	l			2400			0.61	1468.80
Cloruro Calcio	kg			100			1.02	102.00
Mud Flush	l	8800					0.09	807.84
Service							11127.00	11127.00
Adit Serv							168.00	168.00
Total cost		2666.8	7066.6	1723.8	18464.2	4202.9	**USD**	**43,683.68**

Operation summary

Operation break down	Volume m3	Flow L/mn	Press bars	Time mn
Circulation		900	69	200
Batch mixing	14.0			120
Test Lines			355	15
Spacers	10.3	960	69	21
Lead cement	11.81	880	69	16
Tail cement	2.21	880	62	3
Displacement	14.38	880	75	25
Total displac.			69	
Pressure test			213	

Slurries volumes excess (%)

	Caliper	OR/AND	Excess
Lead	6.25		10%
Tail	6.21		10%

Results	**Plan.**	**Actual**	
Top Lead	453.00		mMD
Top Tail	1536.07		mMD
internal top (FC)			mMD

Material used on site	**Fabrication**	Halliburton Batch Mixer, 100 bbls x 2
	Silos	Bulk Transport, 660 cuft. x 2
	Displacement	Halliburton HT 400, 20 bbls displacement tanks.
	Pits	Halliburton Tanks
	Van for data acquisition	

Comments

Normal Drilling.
Run 30 bow centralizers 3.5"
Test Lines. Drop Calibrator Plug. Pump 20 bbl de Mud Flush + 40 bbl of Tuned Spacer + 31.7 bbl Mud Flush. Test TBG 10 min OK. W/3170 psi. rupture fussible disk.
Pumping 5 bbl Mud Flush + 30 bbl Superflush 101. Drop bottom plug.
Pump 74.5 bbl of 1.15 SG Lead Slurry and 14 bbl of 1.9 SG tail slurry. Drop top plug.
Displace with 90.4.Bbl of water. Final pressure: 1090 psi, bump plug: Ok. Test tubing w/1700 psi. Flow back: 0.5 bbl. Floats OK.
Good return during job.

Rig	ODE 39
Cement Contract	Halliburton

Invoicing Halliburton USD **43,683.68** * total c/discounts and split

HALLIBURTON

Pedido de Equipo Nº: 2159
Sales Order Nº: 5122566

PARTE DE OPERACIONES DE CEMENTACION Y BOMBEO

DISTRITO:	NEUQUEN	CMPTO:	NEUQUEN	FECHA:	24-May-07		
YACIMIENTO:	AGUADA PICHANA	POZO:	AP-225	PROV.:	NEUQUEN		
CLIENTE:	TOTAL AUSTRAL	EQUIPO DE:	ODE-39	DISTANCIA:	140	Km	
SOLICITADO POR:	Victor Barros	RECIBIDO POR:	Reynaldo Villalva	HORA DE LLAMADA:	17:00 hs		23 Mayo
HORA DE LLEGADA:	19:00 hs - 23 Mayo	INICIO:	06:30 hs - 24 May	TERMINO:	10:00 hs		
OPERATION TIME:	03:50 hs	LOST TIME:		STAND BY:			

Datos del Pozo:				Datos de la Tuberia			
Prof. Final:	1739 mts	Tope:	453 mts	Diámetro y Tipo:	4 1/2	Peso Casing:	10.50
Diámetro Promedio:	6.21	Den. Lodo:	1.12 SG	Prof. del Zapato:	1736.07 mts	Profundidad DV:	-
Reologia Lodo:	17 VP	PF	12	Prof. del Collar:	1716.59 mts	Tipo Liner:	-
Tipo de Lodo:	Polynox	Geles:	3 - 8	Prof. Aro de Tope:	-	Diametro Liner:	-
Prof. de Barras:	-	Punzados:	-	Prof. Hta	-	Profundidad Liner:	-

Tipo de Operación: CEMENTACION TUBING PRODUCCION 4 ½"

Presiones: Inicial: 1000 psi Final: 1090 psi Tope tapón: 1700 psi

Caudales: Tratamiento: 6 Bb/min Desplazamiento: 0.5 - 5 - 4 - 2 Bb/min

Descripcion del bombeo:		Volúmenes	Densidades
Spacer 1	Mud Flush	20.0 Bbl	1.02 SG
Spacer 2	Tuned Spacer	40.0 Bbl	1.20 SG
Spacer 3	Mud Flush	35.0 Bbl	1.02 SG
Spacer 4	Agua + ClCa2	5.0 Bbl	1.08 SG
Spacer 5	Agua Fresca	5.0 Bbl	1.02 SG
Spacer 6	Super Flush 101	15.0 Bbl	1.20 SG
Spacer 7	Agua Fresca	5.0 Bbl	1.02 SG
Lead Slurry	Cemento "G" + 2.00% Halad-447 + 70.00% Tuned Light + 0.10 l/bol D-Air 4000L + 0.40% CFR-3	74.3 Bbl	1.15 SG
Tail Slurry	Cemento "G" + 1.0 L/bol Halad 567L + 2.00% CFR 3 + 3.5 L/bol Microblock + 0.10 l/bol D Air 4000L + 0.10% HR-5	13.9 Bbl	1.90 SG
Displacement	Agua Filtrada	90.4 Bbl	1.00 SG

Materiales:

TIPO	CANTIDAD	UNIDADES	HES	CLIENTE
CEMENTO "G"	55	bolsas	x	
Tuned Light	11.8	m^3	x	
Halad-447	100.0	Kg	x	
CFR-3	73.0	Kg	x	
D-Air 4000L	38.0	Litros	x	
Microblock	208.0	Litros	x	
Halad-567 LXP	60.0	Litros	x	
HR-5	3.0	Kg	x	
Tuned Spacer	6400.0	Litros	x	
Silice	1500.0	Kg	x	
Sem 7	190.0	Litros	x	
Fe 2	325.0	Kg	x	
KCl	200.0	Kg	x	
Super Flush 101(c/ espaciad)	2400.0	Litros	x	
Cloruro Calcio	100.0	Kg	x	
Mud Flush	8800.0	Litros		

Elementos de Entubacion:

TIPO	CANT.

Equipos:

TIPO		OPERADOR
432 - 78515	ADC	L. Campo
435-B-47	MIXER	H. Retamal
358 - 78511	MIXER	H. Rodriguez
346 - BM86	BULK	A. Ibarguen
Cont -BM-158	BULK	C. Olea
325-TR 106	CISTERNA	M. Diaz
322 - FR 500	CISTERNA	E. Montero
AV-1832	COMPUVAN	S. Teruelo
Cont	PICK UP	R. Villalva
AV-1828	PICK UP	S. Alvarez

Registro de la Operación:

TIEMPO	DETALLE	CAUDAL BPM	PRESIONES Csg (PSI)	OBSERVACIONES
19:00 hs - 23May	Llega a locacion y espera orden para ingresar			Almacena Agua Filtrada de Desplaza
20:00 hs	Arma equipos y prepara colchones + agua de mezcla.			en Tanque de HES
04:00 hs	Finaliza de entubar. Conecta cabeza de circulacion. Circula compañia DLS.	900 l/min	1050 psi	Circula normal
06:30 hs	Realiza reunion de seguridad y trabajo. Prueba lineas con 500/ 5000 psi OK.		5000 psi	
07:00 hs	Comienza a mezclar lechadas en Batch Mixer. Continua circulando pozo.	900 l/min	1050 psi	
07:55 hs	Monta cabeza c/ tpn inf cargado. Bombea 20 bbl de Mud Flush+ 40 bbl Tuned Spacer.	960 l/min	1000 psi	
08:18 hs	Bombea 31.7 bbl Mud Flush. Llega Tpn Calibrador a Collar. Test c/ 2550-3050 psi OK	880 l/min	3050 psi	Test TBG OK
08:35 hs	Bombea resto de Mud Flush (5 bbl) + Secuencia obturante Superflush (30 bbl)	880 l/min	900 psi	Tpn rompe c/ 3170 psi
08:51 hs	LanzaTpn Inferior y bombea 74.5 bbl de Lech Relleno 1.15 SG+14 bbl Lech Ppal 1.9 SG.	800 l/min	900 psi	
09:14 hs	Lava Lineas c/Agua Dulce y Salmuera. Lanza Tapon Superior .			
09:20 hs	Desplaza con 90.4 bbl de Salmuera Filtrada.	880 - 320 l/min	1090 psi	
09:45 hs	Tope tapon (ok). Registra 3 min de prueba OK		1700 psi	
10:00 hs	Descarga presión. Collar Cierra (ok). Retorna 0.5 bbl..			
10:15 hs	Finaliza operacion. Desmonta equipos y líneas. Retira de locación.			

DATOS ADICIONALES SOBRE LA OPERACION:

Tiempo de circulación antes de Cementar:	3.5 hs
Tiempo sin circular previo a Cementar:	0:00
Reciprocación en la circulación previa y durante el trabajo:	no
Fué el tapon de fondo arrojado antes o después de colchones?:	despues
Circuló(normal, parcial o no) previo a la Cementación?:	normal
Se usó Batch Mixer?:	si

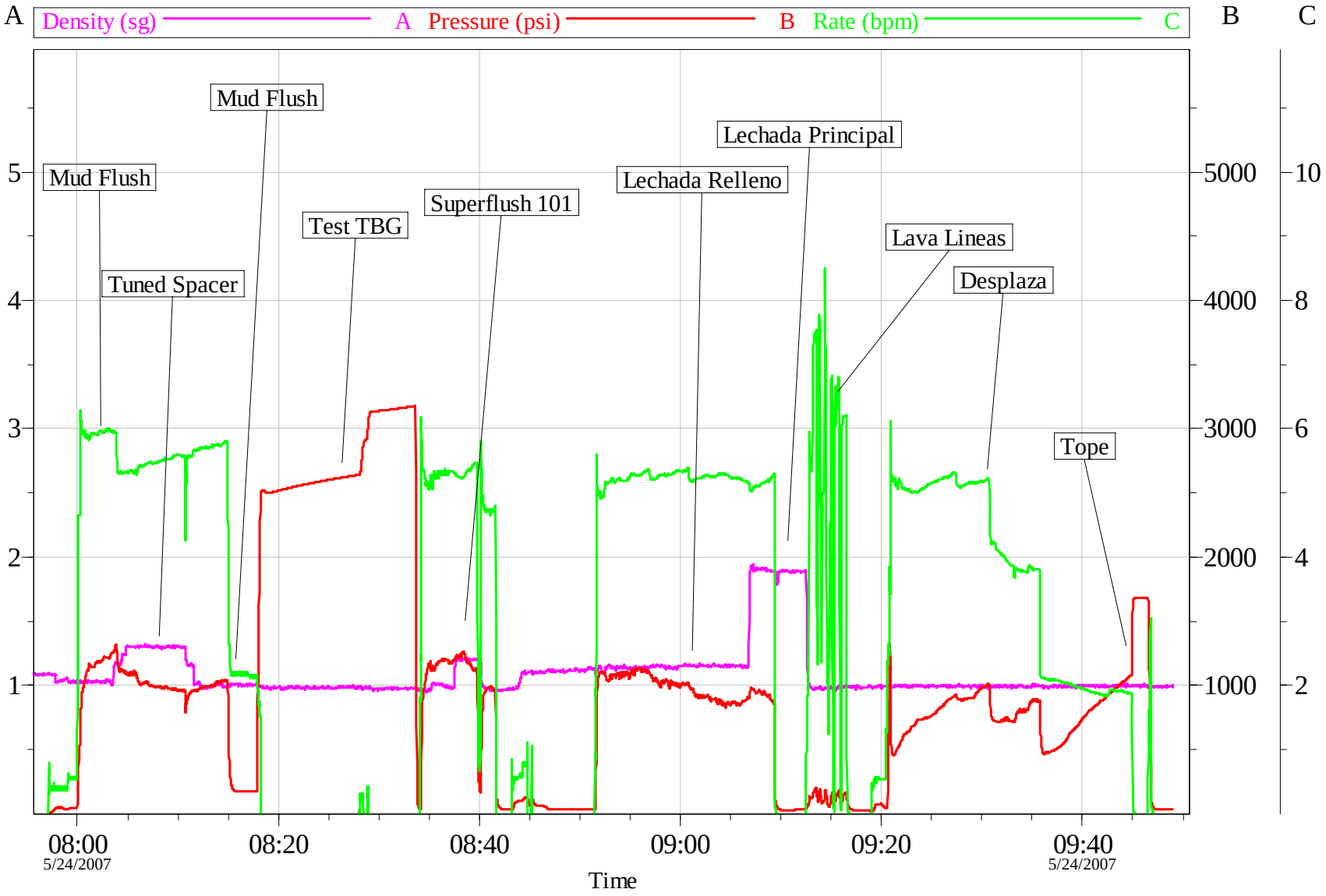
Caudal y presión de Circulación:	900 l/min	1050 psi
Cantidad de centralizadores y tipo:	30	bow
Hizo tope tapón?:	si	
Accionó el collar de Retención?:	si	
Circuló durante el trabajo?:	si	
Tiempo total de mezclado:	60 min	
Tiempo de desplazamiento:	25 min	

COMENTARIOS:

POR EL CLIENTE: *Victor Barros*

POR HALLIBURTON ARGENTINA : *Reynaldo Villalva* *Sergio Alvarez*

AP 225 - Cement TBG 4.5"



Customer: TOTAL AUSTRAL SA	Job Date: 24-May-2007	Sales Order #:
Well Description: AP-225 - 4.5"	TOTAL Rep: V. Barros - C. Contreras	HASA Rep: Villalva - Alvarez

HALLIBURTON
OptiCem v6.1.1
24-May-07 09:56

TOTAL AUSTRAL	CEMENTING 7" csg	Report N° 1	DATE: 14-02-08	AP-225

Casing to be Cemented	7	inch						Cement Job type	Surface casing						
Casing shoe	602.67	mMD	602.67	mVD	Mud type	WBM		SG	1.10			BHST	not record	°C	
Drilling Size	8 3/4	inch			LOT / FIT	-	EMW	at	-	mVD		BHCT	not record	°C	
TD	606.0	mMD	608	mVD	Pore press.	-	EMW	at	-	mVD		API schedule	-		
Prev casing		inch		lbs/ft	Format. frac	-	EMW	at	-	mVD		-Pressure	70	bars	
Prev csg shoe		mMD		mVD								-Temperature	15	°C	

Laboratory fluids design

Products, additives, water	Unit	SPACERS n°1	SPACERS n°2	SLURRIES n°1	SLURRIES n°2		Characteristics			SLURRIES n°1	SLURRIES n°2	
Cement G	MT			4.2	6.85		Specific gravity		SG	1.50	1.90	
Fresh water	l	4767.00		4,545	3,054		Thickening Time :		50BC	+5:00		
Halad - 447	kg				30		Thickening Time:		40BC			
Bentonita Prehidratada	kg			125			Thickening Time:		70BC		7:10	
Cloruro de Calcio	kg			100			Free Water % :		vertical	0	-	
D-Air 3000L	lt			8	11		Free Water % :		45°	ND	ND	
KCl	kg						Fluid loss ml	1000 psi	@ 31 °C	ND	136	
							Yield	m3 slurry/ton cmt		1.4256	0.7668	
							Compress Strength @ 46 C		50 psi		01:33	
									500 psi		04:49	
									3287 psi	-	24:20	
									451 psi	34:02		
Final volume or Yield												

Rheologies (laboratory / on site)

FLUIDS	T°	SG	F300	F200	F100	F60	F30	F6	F3	G0	G10		PV	YV	n	K
Mud																
Spacer1																
Spacer2																
Lead	24	1.50	58	44	36	31	24	20					33	25	0.29	7.72
Tail	24	1.90	76	57	41	34	27	20					52.5	23.5	0.48	3.14
													#N/A	#N/A		
Mud	50	1.1											15	14		
Thin Mud																
Spacer1																
Spacer2													#N/A	#N/A	#DIV/0!	#DIV/0!
Lead															#DIV/0!	#DIV/0!
Tail													#N/A	#N/A	#DIV/0!	#DIV/0!

Products used and cost

Products	Unit	SPACERS n°1	SPACERS n°2	SLURRIES Lead	SLURRIES Tail	SLURRIES Top job	Unit price	Cost
Cement G	MT			4.65	6.85		390.00	4485.00
Fresh water	m³	4.8		4.5	3.1			
Halad - 447	kg				25		12.75	318.75
Bentonita	kg			125			0.26	31.88
Cloruro de Calcio	kg			100			1.02	102.00
D-Air 4000L	lt			11	8		11.22	213.18
Services							8648.00	8648.00
Adit Services							0.00	0.00
Total cost				2070.8	3080.0			$ 13,798.81

Operation summary

Operation break down	Volume m3	Flow L/mn	Press bars	Time mn
Circulation		1100	41	120
Batch mixing	11.24			
Test Lines			34-276	15
Spacers	4.77	960	28	5
Lead cement	5.99	960	17	8
Tail cement	5.26	960	14	6
Displacement	74.23	960-420	72	20
Total displac.				
Pressure test			214	

Slurries volumes excess (%)

	Caliper	OR/AND	Excess
Lead			40%
Tail			10%

Results	Plan.	Actual	
Top Lead	0.00		mMD
Top Tail	300.00		mMD
internal top (FC)			mMD

Material used on site		
	Fabrication	Halliburton Batch Mixer, 100 bbls.
	Silos	Bulk Transport, 660 cuft.
	Displacement	Halliburton HT 400, 20 bbls displacement tanks.
	Pits	

Comments

Drilling normally.
Run 15 bow centralizers 7". Lead Cement Volume = Bit Diameter + 40% Excess. Tail Cement Volume = Bit Diameter + 10% Excess.
Pump 30 bbl of water and drop bottom plug.
Pump 37.7 bbl 1.5 SG lead slurry.
Pump 33 bbl 1.9 SG tail slurry. Drop top plug.
Desplace with 75 bbl of water. Final pressure: 1050 psi, bump plug: 3000 psi. Flow back: 0.5 bbl. Floats OK.
Cement to surface when displacing 60 bbl of mud.

Invoicing Halliburton USD	13,798.81	* total c/discounts and split	Rig: DLS-147 / Cement Contract: Halliburton

HALLIBURTON

Pedido de Equipo Nº
Sales Order Nº 5110949

PARTE DE OPERACIONES DE CEMENTACION Y BOMBEO

DISTRITO:	NEUQUEN	CMPTO:	NEUQUEN	FECHA:	17-May-2007
YACIMIENTO:	AGUADA PICHANA	POZO:	AP-225	PROV.:	NEUQUEN
CLIENTE:	TOTAL	EQUIPO DE:	ODE 39	DISTANCIA:	145 Km
SOLICITADO POR:	Victor Barros	RECIBIDO POR:	R. Tapia	HORA DE LLAMADA:	14:00 - 16 mayo
HORA DE LLEGADA:	14:00 hs - 16 Mayo	INICIO:	13:00 hs - 17 Mayo	TERMINO:	15:30 hs
OPERATION TIME:	2.5 hs	LOST TIME:	0	STAND BY:	0

Datos del Pozo:				Datos de la Tuberia			
Prof. Final:	606.00	Tope:	Superficie	Diámetro y Tipo:	7" N-80	Peso Casing:	23.00
Diámetro Promedio:	8 ¾	Den. Lodo:	1.10 SG	Prof. del Zapato:	602.67 mts	Profundidad DV:	-
Reología Lodo:	15 VP	PF	14	Prof. del Collar:	573.17 mts	Tipo Liner:	-
Tipo de Lodo:	POLYNOX	Tubing :	-	Prof. Aro de Tope:	-	Diametro Liner:	-
Prof. de Barras:	-	Punzados:	-	Prof. Hta	-	Profundidad Liner:	-

Tipo de Operación CEMENTACION CAÑERIA SUPERFICIE 7"

Presiones:	Inicial:	400 psi	Final:	1050 psi	Tope tapón:	3100	psi
Caudales:	Tratamiento:	6 lts/min			Desplazamiento:	7 - 2	Bb/min

Descripcion del bombeo:		Volúmenes	Densidades
Spacer 1	Agua	30.0 bbl	1.00 SG
Spacer 2			
Spacer 3			
Spacer 4			
Spacer 5			
Lead Slurry	Cemento "G" + 3.00% Bentonita Preh.+ 2.50% Cloruro de Calcio + 0.10 l/bol D-Air 3000L	37.7 bbl	1.50 SG
Tail Slurry	Cemento "G" + 0.40% Halad 447 + 0.10 l/bol D-Air 3000L	33.1 bbl	1.90 SG
Displacement	Agua	75.0 bbl	1.00 SG

Materiales: **Elementos de Entubacion:** **Equipos:**

TIPO	CANTIDAD	UNIDADES	HES	CLIENTE	TIPO	CANT.	TIPO		OPERADOR
CEMENTO "G"	230	bolsas	x				ADC	432-78515	Campos L.
Halad 447	25	kg	x				MIXER	435-B047	Hector Retamal
Cloruro de Calcio	100	kg	x				BULK	436 BM86	Marrero J.
D-Air 3000L	19	lts	x						Arias G
Bentonita Prehidratada	125	kg	X				Vann	1832	J. Miguel Diaz
							Unid.Liviana	1844	Paez G.
							Unid.Liviana	1828	Alvarez S.
							Unid. Liviana	CONT	Reynaldo Villalva

Registro de la Operación:

TIEMPO	DETALLE	CAUDAL BPM	PRESIONES Csg (PSI)	OBSERVACIONES
21:30hs 16 Abril	Llega a locacion			
07:00 hs-17 Mayo	Arma equiposy líneas. Prepara agua de mezcla			
12:00 hs	Finaliza entubación. Monta cabeza c/ tapones cargados. Cia DLS circula pozo.	1100 l/min	600 psi	Circula normal
13:00 hs	Realiza reunion de seg. y trabajo. Prueba lineas con 500/4000 psi por 10 min ok			
13:15 hs	Comienza a mezclar lechadas. Continua circulando	1100 l/min	600 psi	
14:15 hs	Bombea 30 bbl de agua	6 bpm	400 psi	
14:21 hs	Lanza Tapon Inferior + bombea 37.7 bbl lechada 1.5 s.g	6 bpm	250 psi	
14:29 hs	Bombea 33.1 bbl lechada principal 1.9 s.g.	6 bpm	200 psi	
14:35 hs	Lanza tapon sup (verifica abriendo cabeza). Desplaza con 75 bbl de agua.	7 - 2 bpm	1050 psi	Retorna cemento desde los 60 bbl
15:01 hs	Tope tapon incrementa presion a 1600 y 3000 psi. Chequea csg 10 min OK		3000 psi	de desplazamiento. Ecualiza a
15:14 hs	Se desfoga y retorna 0.5 bbl Cierran elementos de flotacion ok			27 bbl de desplazamiento
15:30 hs	Finaliza operacion. Desmonta líneas y equipos.			

DATOS ADICIONALES SOBRE LA OPERACION:

Tiempo de circulación antes de Cementar:	120 min	Caudal y presión de Circulación:	1100 l/min	600 psi
Tiempo sin circular previo a Cementar:	5 min	Cantidad de centralizadores y tipo:	15	bow
Reciprocación en la circulación previa y durante el trabajo:	no	Hizo tope tapón?:	si	
Fué el tapon de fondo arrojado antes o después de colchones?:	despues	Accionó el collar de Retención?:	si	
Circuló(normal, parcial o no) previo a la Cementación?:	normal	Circuló durante el trabajo?:	si	
Se usó Batch Mixer?:	si	Tiempo total de mezclado:	60 min	
		Tiempo de desplazamiento:	20 min	

COMENTARIOS:

POR EL CLIENTE:

partopecem.xls

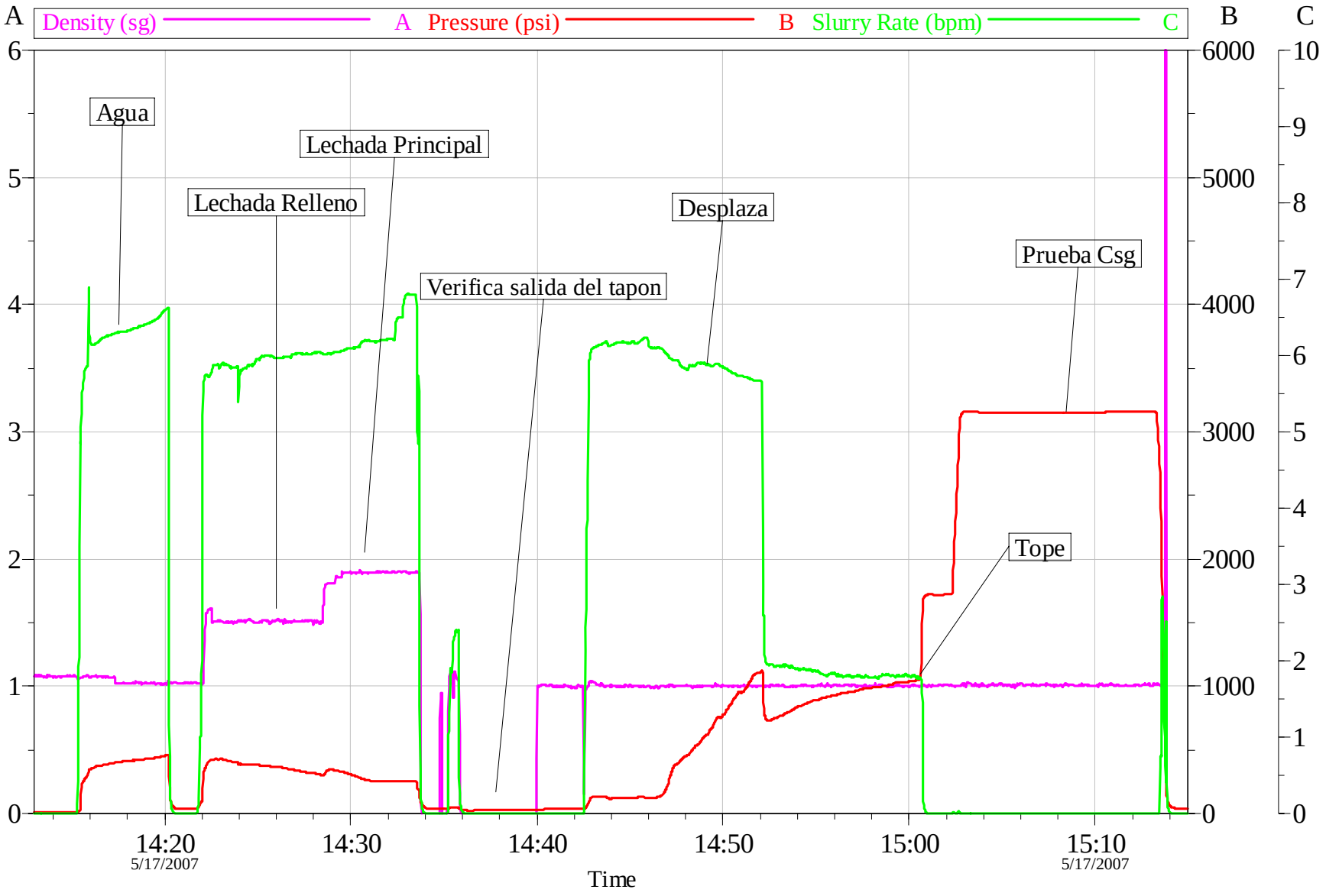
Victor Barros

POR HALLIBURTON ARGENTINA :

FO-ARG-HES-CEM-010-Rev. D 28/09/2004

Jose Pacheco
Reynaldo Villalva
Sergio Alvarez

AP 225 - CSG 7in -



Customer: TOTAL	Job Date: 17-May-2007	Sales Order #:
Well Description: AP 225 - CSG 7"	Cust Rep: V. Barros HASA Rep	Paez - Villalva - Alvarez

HALLIBURTON
OptiCem v6.1.1
17-May-07 15:19

9) SAFETY

Rig Safety Summary

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

Activity Achievement

Rig/WS Unit

Rig/Unit Name	Rig/Unit Type	Parent Contract	Local Contract	RKB Elev/MSL (ft)	Start Date	End Date
ODE-39	MLR	Others	ODE	22.01	5/10/2007	

Safety Incidents

Incident

Date	Type	Parent Company	Immediate Cause	Fundamental Cause	Fatality?	Fatality Number	Lost time?	Lost Days
					No		No	

Severity

HR Severity	HP Severity	MR Severity	MP Severity	ER Severity	EP Severity	CR Severity	CP Severity

Comment

STOP Cards Submitted

Start Date	Parent Company	Quantity	Comment
5/11/2007 00:00	Contractor	4	
5/11/2007 00:00	Halliburton	5	
5/11/2007 00:00	Total	2	
5/12/2007 00:00	Others	3	
5/13/2007 00:00	Contractor	4	
5/14/2007 00:00	Halliburton	1	
5/14/2007 00:00	Others	5	
5/15/2007 00:00	Total	3	
5/16/2007 00:00	Total	1	
5/17/2007 00:00	Weatherford	8	
5/18/2007 00:00	Halliburton	4	
5/19/2007 00:00	Geoservices	2	
5/19/2007 00:00	Others	1	
5/19/2007 00:00	Total	1	
5/20/2007 00:00	Contractor	1	
5/20/2007 00:00	Halliburton	1	
5/20/2007 00:00	Others	1	
5/21/2007 00:00	Contractor	1	
5/21/2007 00:00	Total	1	
5/22/2007 00:00	Contractor	1	
5/22/2007 00:00	Schlumberger	4	
5/23/2007 00:00	Others	1	
5/23/2007 00:00	Total	1	
5/24/2007 00:00	Weatherford	3	

BOP Tests, Safety Drills and Meetings

Date	Type	Comment
5/10/2007 14:15	PJSM DTM	
5/11/2007 08:15	PJSM DTM	
5/12/2007 08:15	PJSM DTM	
5/13/2007 08:15	PJSM DTM	
5/14/2007 08:15	PJSM DTM	
5/14/2007 12:15	PJSM Mast	
5/15/2007 08:00	Toolbox Meeting	
5/15/2007 19:30	Toolbox Meeting	
5/16/2007 08:00	Toolbox Meeting	
5/16/2007 20:00	Toolbox Meeting	
5/17/2007 06:45	PJSM Csg	
5/17/2007 14:00	PJSM Cmt	
5/17/2007 16:15	PJSM	N/U BOP
5/18/2007 05:15	BOP's Test	
5/18/2007 08:00	Toolbox Meeting	
5/18/2007 14:00	Kick Drill	
5/19/2007 08:00	Toolbox Meeting	
5/19/2007 20:00	Toolbox Meeting	
5/20/2007 08:00	Toolbox Meeting	
5/20/2007 19:00	Weekly Meeting	
5/20/2007 20:00	Toolbox Meeting	
5/21/2007 08:00	Toolbox Meeting	

Report printed: 2/14/2008

Rig Safety Summary

TOTAL Austral

Well Name: AP-225

Country : Argentina Field : AGUADA PICHANA Platform : N/A	Slot : North : East :	Water Depth : Location : Onshore Well shape : Vert	Activity : DEV N° 1 Start Date : 5/10/2007 End Date : 5/24/2007	Total AFE+Supp (Loc) : Field Est (Loc) : 1,178,873 Final Depth : 5,705.4

BOP Tests, Safety Drills and Meetings

Date	Type	Comment
5/21/2007 20:00	Toolbox Meeting	
5/22/2007 04:15	PJSM Logg Job	
5/22/2007 08:00	Toolbox Meeting	
5/22/2007 20:00	Toolbox Meeting	
5/23/2007 02:45	Pre-Job Meeting	
5/23/2007 15:30	PJSM Run 4 1/2" Tbg	
5/23/2007 20:30	PJSM Run 4 1/2" Tbg	
5/24/2007 06:15	PJSM Cement Job	
5/24/2007 13:45	PJSM N/D BOP Stack	

10) DAILY DRILLING REPORT

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 99

MOVING, MOVING	
Daily progress	
Drilling Hours	
Midnight depth	

Date	5/10/2007
Report number	1
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity

Safety Incidents

Date	Type

Daily Summary :
Condition rig for moving to AP-225. R/D Weatherford Stab Master and Cat Walk.

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move to AP-225.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
02:00	0.25	Pre Job Safety Meeting DTM.	HSE	0.25
02:15	17.75	Condition Rig for moving from AP-228 to AP-225. Rig Down: 20 % Rig Move: 0 % Rig Up: 0 %	ASSY	18.00
20:00	4.00	Wait on day light.	DAY	22.00

Remarks

Rig move equipment:

Cranes: 1 x 110 Ton
Gin Pole Trucks: 2
Low Bed Trucks: 3
Semi Trucks:
Fork Lift: 1

- Expended time used to R/D Weatherford Stab Master and Cat Walk 3 Hrs.

- Distance between locations 13 Km.

Mud

Mud Type	**Density (...**	**ECD (lb/...**	**Mud Vol ...**
OW R...	**Solids...**	**Sand**	**LGS (%)**	**HGS (%)**
PV OR (cp)	**YP OR (l...**	**YS Calc (...**	**Marsh vi...**
Filtrate (mL/30...	**HTHP Filt (mL/3...**	**Oil Cutti...**
Mf (mL)	**Pf (mL)**	**Pm (mL)**	**pH**
Gel 0 (lbf...	**Gel 10 (l...**	**Ca (mg/L)**	**Chlor (m...**
Comment			

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)

Safety stocks

Main Stock Des	Unit	Consu...	Stock

Cost (USD)

Daily Cost : 263,125
Cumulative Cost : 263,125

Mud Costs

Cost (Loc)

Cum Field (Loc)

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/10/2007	PJSM DTM

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	**Wave Per (s)**	**Wave Ht (ft)**
Wind Spd (kn...	**Wind Dir (°)**	**Visibility (km)**
Current Spee...	**Current Dir (°)**	**Max Var Load...**

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	15
Operator - WS	4
Service Cies	6

Cumul POB :25

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 100

MOVING, MOVING

Daily progress	
Drilling Hours	
Midnight depth	

Date	5/11/2007
Report number	2
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test		
PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Contractor	4
Halliburton	5
Total	2

Daily Summary :
Condition rig for moving. Rig Move to AP-225.

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move to AP-225.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	0.25	Pre Job Safety Meeting DTM.	HSE	8.25
08:15	11.75	Condition Rig for moving. Rig move to AP-225. Rig Down: 50 % Rig Move: 40 % Rig Up: 15 %	ASSY	20.00
20:00	4.00	Wait on day light.	DAY	24.00

Remarks

Rig move equipment:

Cranes: 1 x 110 Ton - 1 x 70 Ton
Gin Pole Trucks: 2
Low Bed Trucks: 8
Semi Trucks: 1
Fork Lift: 1

- Lowered Draworks and Mast 15:30 Hs.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
OW R...	Solids...	Sand	LGS (%)	HGS (%)
PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
Mf (mL)	Pf (mL)	Pm (mL)	pH
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)

Safety stocks

Main Stock Des	Unit	Consu...	Stock

Cost (USD)

Daily Cost : 5,600
Cumulative Cost : 268,725

Mud Costs

Cost (Loc)
Cum Field (Loc)

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/10/2007	PJSM DTM
5/11/2007	PJSM DTM

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)
Wind Spd (kn...	Wind Dir (°)	Visibility (km)
Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	24
Operator - WS	3
Service Cies	15

Cumul POB :42

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 101

MOVING, MOVING

Daily progress	
Drilling Hours	
Midnight depth	

Date	5/12/2007
Report number	3
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Others	3

Daily Summary :
Rig Move to AP-225.

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move to AP-225.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	0.25	Pre Job Safety Meeting DTM.	HSE	8.25
08:15	11.75	Condition Rig for moving. Rig move to AP-225. Rig Down: 100 % Rig Move: 70 % Rig Up: 60 %	ASSY	20.00
20:00	4.00	Wait on day light.	DAY	24.00

Remarks

Rig move equipment:

Cranes: 1 x 110 Ton - 1 x 70 Ton
Gin Pole Trucks: 4
Low Bed Trucks: 8
Semi Trucks: 7
Fork Lift: 1

Mud

Mud Type	**Density (...**	**ECD (lb/...**	**Mud Vol ...**
OW R...	**Solids...**	**Sand**	**LGS (%)**	**HGS (%)**
PV OR (cp)	**YP OR (l...**	**YS Calc (...**	**Marsh vi...**
Filtrate (mL/30...	**HTHP Filt (mL/3...**	**Oil Cutti...**
Mf (mL)	**Pf (mL)**	**Pm (mL)**	**pH**
Gel 0 (lbf...	**Gel 10 (l...**	**Ca (mg/L)**	**Chlor (m...**

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)

Safety stocks

Main Stock Des	Unit	Consu...	Stock

Cost (USD)

Daily Cost : 5,600
Cumulative Cost : 274,325

Mud Costs

Cost (Loc)
Cum Field (Loc)

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/10/2007	PJSM DTM
5/11/2007	PJSM DTM
5/12/2007	PJSM DTM

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	**Wave Per (s)**	**Wave Ht (ft)**
Wind Spd (kn...	**Wind Dir (°)**	**Visibility (km)**
Current Spee...	**Current Dir (°)**	**Max Var Load...**

Roll (°)	**Pitch (°)**	**Heave (ft)**	**T (low) (°F)**

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	24
Operator - D&C	3
Service Cies	6

Cumul POB :33

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 102

MOVING, MOVING

Daily progress	
Drilling Hours	
Midnight depth	

Date	5/13/2007
Report number	4
Water Depth	
Activity Type & N°	DEV 1

Daily Summary :
Rig Move to AP-225.

6:00 am Status :
Wait on day light.

Planned Operation :
Rig move to AP-225.

BOP Test

Type	Last Date	Next Date
BOP's Test PJSM N/D BOP Stack		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Stop Cards

Parent Company	Quantity
Contractor	4

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	0.25	Pre Job Safety Meeting DTM.	HSE	8.25
08:15	11.75	Rig move to AP-225. Rig Down: 100 % Rig Move: 100 % Rig Up: 80 %	ASSY	20.00
20:00	4.00	Wait on day light.	DAY	24.00

Remarks

Rig move equipment:

Cranes: 1 x 110 Ton - 1 x 70 Ton
Gin Pole Trucks: 3
Low Bed Trucks: 1
Fork Lift: 1

00:00 - 06:00 - Wait on day light.

Mud

Mud Type	**Density (...**	**ECD (lb/...**	**Mud Vol ...**
OW R...	**Solids...**	**Sand**	**LGS (%)** / **HGS (%)**
PV OR (cp)	**YP OR (l...**	**YS Calc (...**	**Marsh vi...**
Filtrate (mL/30...	**HTHP Filt (mL/3...**	**Oil Cutti...**	
Mf (mL)	**Pf (mL)**	**Pm (mL)**	**pH**
Gel 0 (lbf...	**Gel 10 (l...**	**Ca (mg/L)**	**Chlor (m...**

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)

Safety stocks

Main Stock Des	Unit	Consu...	Stock

Cost (USD)

Daily Cost : 5,600
Cumulative Cost : 279,925

Mud Costs

Cost (Loc)
Cum Field (Loc)

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/10/2007	PJSM DTM
5/11/2007	PJSM DTM
5/12/2007	PJSM DTM
5/13/2007	PJSM DTM

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	**Wave Per (s)**	**Wave Ht (ft)**
Wind Spd (kn...	**Wind Dir (°)**	**Visibility (km)**
Current Spee...	**Current Dir (°)**	**Max Var Load...**

Roll (°)	**Pitch (°)**	**Heave (ft)**	**T (low) (°F)**

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	24
Operator - D&C	3
Service Cies	9

Cumul POB :36

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Rig :ODE-39, ODE

Well Name: AP-225

Days w/o LTA : 103

MOVING, MOVING

Daily progress	
Drilling Hours	
Midnight depth	

Date	5/14/2007
Report number	5
Water Depth	
Activity Type & N°	DEV 1

Daily Summary :
Complete Rig Up. Rise Mast and Draworks. Condition rig prior to spud well.

6:00 am Status :
Condition rig prior to spud well.

Planned Operation :
Condition rig prior spud well. Perform pre spud test.

BOP Test

Type	Last Date	Next Date
BOP's Test		
PJSM N/D BOP Stack		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Stop Cards

Parent Company	Quantity
Halliburton	1
Others	5

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	8.00	Wait on day light.	DAY	8.00
08:00	0.25	Pre Job Safety meeting on DTM operation.	HSE	8.25
08:15	15.75	Rig move to AP-225. Condition rig prior to spud well.....R1 Rig Down: 100 % Rig Move: 100 % Rig Up: 100 %	ASSY	24.00

Remarks

Rig move equipment:

Cranes: 1 x 70 Ton
Gin Pole Trucks: 1

R1 - Condition Rig :

- Cumulate drilling water.
- Install mud pumps.
- Install mud pits.
- Raise Mast and Draworks at 14 hs.
- R/U Weatherford Cat Walk.

00:00 - 06:00 - Condition rig prior to spud well.

- Prepare Mud :
30 m3 of Spud Mud.
75 m3 of Polinox Mud.

- R/U and M/U Swivel and Kelly.

- Install 4" and 2" HP lines.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
OW R...	Solids...	Sand	LGS (%)	HGS (%)
PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
Mf (mL)	Pf (mL)	Pm (mL)	pH
Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)

Safety stocks

Main Stock Des	Unit	Consu...	Stock

Cost (USD)

Daily Cost : 5,600
Cumulative Cost : 285,525

Mud Costs

Cost (Loc)
Cum Field (Loc)

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/12/2007	PJSM DTM
5/13/2007	PJSM DTM
5/14/2007	PJSM DTM
5/14/2007	PJSM Mast

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)
Wind Spd (kn...	Wind Dir (°)	Visibility (km)
Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	24
Operator - WS	3
Service Cies	13

Cumul POB :40

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Rig :ODE-39, ODE

Well Name: AP-225

Days w/o LTA : 104

8"3/4, DRILLING

Daily progress	328.08
Drilling Hours	3.00
Midnight depth	328.1

Date	5/15/2007
Report number	6
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Total	3

Safety Incidents

Date	Type

Daily Summary :
Condition rig prior spud well. Perform pre spud test.

6:00 am Status :
Drill 8 3/4" to 291 m.

Planned Operation :
Drill 8 3/4" hole to +/- 600 m.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
252.62	252.62	0.50	0.00

WellBore

Branch
AP-225

Expected TD
5,705

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	19.00	Condition Rig prior Spud AP-225 Well. Perform Pre Spud test.....R1	ASSY	19.00
19:00	0.50	P/U and M/U 8 3/4" PDC Bit.	ASSY	19.50
19:30	0.50	Pre Spud Meeting with drilling staff.	HSE	20.00
20:00	1.75	Spud AP-225 Well. Drill 8 3/4" hole section from 0 m to 44 m.	DRL	21.75
21:45	0.50	Perform C.O.M. test, transmission as follow: High..... 2.60 m overun ..... 10 seg Low..... 1.70 m overun ..... 25 seg	RIGMTN	22.25
22:15	1.00	Drill 8 3/4" hole section from 44 m to 80 m. Close CP butterfly valve at 60 m. Continue drilling circulation through flow line.	DRL	23.25
23:15	0.25	Displace hole with Polinox Mud.	CIRC1	23.50
23:30	0.25	Cumulative Teledrift survey time.	DEVI	23.75
23:45	0.25	Drill 8 3/4" hole section from 80 m to 100 m.	DRL	24.00

Remarks

R1- Condition Rig:
- Weld conductor pipe and connect flow line.
- Install emergency shower and wash eyes.
- Make ditches around mud pits and cellar.
- Install HP lines and test same at 5000 psi.
- R/Up Swivel and Kelly.
- Prepare BHA on pipe racks.
- Prepare 30 m3 of Bentonite Base Mud.
- Prepare 100 m3 Polynox Mud.
- Stow 7" casing on pipe racks.
- Receive 8 3/4" hole section materials.
- R/U Weatherford Stab Master.

Perform the following pre spud test:
- Pits water tights.
- Shakers screen function test.
- Degasser function test.
- Emergency shut down.
- Emergency lights.
- Emergency Showers and Wash eyes.
- Fire fighting equipment.
- Monkey board escape line.

00:00 -06:00 - Drill 8 3/4" hole from 100 m to 291 m.
Take Teledrift survey at 95 m - 0.5°.
Take Teledrift survey at 149 m - 1°.
Take Teledrift survey at 295 m - 1°.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.01	9.60	

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	5.3	0.1	5.0	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
16.0	15.0		60.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
6.0		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	2.00	11.70	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	5	200	2,000

Comment
Dumped volume 30 m3 of Spud Mud.

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
629.0	13.8	615.1

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	30.0	120.0
Diesel	L	2,300.0	26,800.0

Cost (USD)

Daily Cost : 48,864
Cumulative Cost : 334,389

Mud Costs

Cost (Loc)
11,112
Cum Field (Loc)
11,112

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
1	1	0.65	8 3/4in, Mi 516 PX, JX-2895	Drill Formation	0.0	328.08	3.00	109.4	328.08	3.00	11.9	768.7	476	130					

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA
1	Smith Mi 516 PX, Bit Sub w/ Float Valve, 6-1/2" Teledrift (1890), 1 x 6-1/2" Drill collar, 8-1/8" Stabilizer (#374), 8 x 6-1/2" Drill collar, XO, 8 x 4-3/4" Drill collar, 4-3/4" Hydraulic Jar (#1400-1359), 3 x 4-3/4" Drill collar, 12 x 3-1/2" HWDP

Date	Type
5/14/2007	PJSM DTM
5/14/2007	PJSM Mast
5/15/2007	Toolbox Meeting
5/15/2007	Toolbox Meeting

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	22
Operator - WS	4
Service Cies	9

Cumul POB :35

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Rig :ODE-39, ODE

Well Name: AP-225

Days w/o LTA : 105

8"3/4, DRILLING

Daily progress	1,660.11
Drilling Hours	13.00
Midnight depth	1,988.2

Date	5/16/2007
Report number	7
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Total	1

Safety Incidents

Date	Type

Daily Summary :
Drill 8 3/4" hole sectionto 606 m. Control trip to 80 m. RIH to 518 m. Tight spot 15 kips. Ream down to 549 m. RIH to 606 m. Circulate hole clean.

6:00 am Status :
R/U Weatherford casing equipment.

Planned Operation :
RIH 7" casing. Cement 7" casing.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
488.85	488.82	1.00	0.00
967.85	967.75	1.00	0.00
1,502.62	1,502.45	1.00	0.00
1,971.78	1,971.57	0.50	0.00

WellBore

Branch
AP-225

Expected TD
5,705

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)

Next : 7" +/- 600 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	13.00	Drill 8 3/4" hole section from 100 m to 606 m.	DRL	13.00
13:00	1.25	Cumulative Teledrift survey time.	DEVI	14.25
14:15	0.75	Cumulative rig service time: - Mecanic repair failure at Engine # 2. - Change out mud piston rubber Pump # 2.	RIGMTN	15.00
15:00	0.50	Sweep hole with 3 m3 of HiVisc pill. Circulate hole clean. FR= 2000 lts/min - SPP= 2100 psi.	CIRC1	15.50
15:30	4.75	Rack Kelly. Perform flow check. Set C.O.M. POOH from 606 m to 80 m.....R1	TRIP	20.25
20:15	2.00	RIH from 80 m to 518 m. Tight spot 15 kips.....R2	TRIP	22.25
22:15	1.00	P/U and M/U kelly. Wash and ream down to 549 m. FR= 2000 lts/m - SPP= 2100 psi - WOB= 5/10 kpis - RPM= 130.	REAM	23.25
23:15	0.25	Rack kelly. RIH to 606 m.	TRIP	23.50
23:30	0.50	Sweep hole with 3 m3 of HiVisc pill. Circulate hole clean. FR= 2000 lts/min - SPP= 2100 psi.	CIRC1	24.00

Remarks

R1 - Max Overpull 25 Kips. At 88 m observe normal drag.

R2 - L/D 1 x 4 3/4" DC with Box connection damage + 1 x 3 1/2" HW with Pin connection damage.

00:00 - 00:15 - Take Teledrift survey at 601 m - 0.5°.
00:15 - 04.30 - POOH to surface. L/D 9 x 6 1/2" DC + 1 x 8 1/8" Stab + 1 x 6 1/2" Teledrift + 8 3/4" Bit.
04:30 - 06:00 - Prepare to run 7" casing. R/U Weatherford casing equipment.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.18	9.60	

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	6.6	0.1	6.3	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
15.0	14.0		57.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
6.0		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	2.00	11.50	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	7	200	1,900

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
10.1	145.3	479.9

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Drilling Water	m³	0.0	155.0
Baryte	kg	0.0	15,000.0
Diesel	L	5,640.0	21,160.0

Cost (USD)

Daily Cost : 31,282
Cumulative Cost : 365,671

Mud Costs

Cost (Loc)
5,561
Cum Field (Loc)
16,673

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
1	1	0.65	8 3/4in, Mi 516 PX, JX-2895	Drill Formation	328.1	1,660.11	13.00	127.7	1,988.19	16.00	19.8	2,248.1	528	150					

Bit Dull

Bit Dull
1-1-WT-A-X-1-NO-TD

Drill String Runs

BHA No.	BHA
1	Smith Mi 516 PX, Bit Sub w/ Float Valve, 6-1/2" Teledrift (1890), 1 x 6-1/2" Drill collar, 8-1/8" Stabilizer (#374), 8 x 6-1/2" Drill collar, XO, 8 x 4-3/4" Drill collar, 4-3/4" Hydraulic Jar (#1400-1359), 3 x 4-3/4" Drill collar, 12 x 3-1/2" HWDP

Date	Type
5/15/2007	Toolbox Meeting
5/15/2007	Toolbox Meeting
5/16/2007	Toolbox Meeting
5/16/2007	Toolbox Meeting

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	22
Operator - WS	2
Service Cies	19

Cumul POB :43

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Rig :ODE-39, ODE

Well Name: AP-225

Days w/o LTA : 106

8"3/4, CASING & CEMENT

Daily progress	0.00
Drilling Hours	
Midnight depth	1,988.2

Date	5/17/2007
Report number	8
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Weatherford	8

Safety Incidents

Date	Type

Daily Summary :
POOH to surface. Prepare to run casing. RIH 7" casing as per program. Circulate hole clean. Cement 7" as per program. N/U 7 1/16" BOP Stack.

6:00 am Status :
Prepare to RIH 6 1/8" Bit.

Planned Operation :
RIH 6 1/8" PDC Bit. Drill cement and float equipment. Drill 6 1/8" hole section.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	0.25	Take Teledrift survey at TD.	DEVI	0.25
00:15	4.25	Perform flow check.Rack Kelly. Set C.O.M. POOH to surface.....R1	TRIP	4.50
04:30	2.25	Prepare to run 7" casing. R/U Weatherford casing equipment.	CAS	6.75
06:45	0.25	Pre Job Safety Meeting on run 7" casing.	HSE	7.00
07:00	5.00	M/U shoe track. Test float elements. RIH 7" casing as per program to 595.92 m casing shoe.....R2	CAS	12.00
12:00	0.75	M/U 7 1/16" WH + Running Tool + Landing Joint. Set same onto base plate. Run last joint with circulation due to tight hole.....R2	CAS	12.75
12:45	1.25	Circulate hole condition mud. FR= 1100 lts/min - SPP= 600 psi.	CAS	14.00
14:00	0.25	Pre Job Safety Meeting on Cement Job.	HSE	14.25
14:15	1.50	Cement 7" casing as per program. R/D cement equipment.....R3	CEM	15.75
15:45	0.50	L/D Landing Joint + Running Tool. Install test plug onto WH. Condition Rig Floor.	CAS	16.25
16:15	0.50	Pre Job Safety Meeting on N/U BOP Stack.	HSE	16.75
16:45	7.25	N/U 7 1/16" BOP Stack.	BOPASSY	24.00

Remarks

R1 - L/D 9 x 6 1/2" DC + 1 x 8 8/1" Stab + 6 1/2" Teledrift + 8 3/4" PDC Bit.

R2- RIH 7 " casing 23 lbs/ft - N-80 - SEC.
Float Shoe = 602,67 m
Float Collar = 573.17m
PUW = 50 Kips.
SOW = 40 Kips.

R3- Cement job:
Test lines with 500/4000 psi 10 min OK. Pump 30 bbl water spacer. Drop bottom plug. Pump 37.7 bbl Lead Slurry 1.5 sg + 33.1 bbl Tail Slurry 1.9 sg. Drop top plug. Displace with 75 bbl fresh water FR= 7/2 bpm. Final Pressure = 1050 psi. Bump plug with 3000 psi 10 min OK. Bleed off 0.5 bbl. Float equipment OK. Observe cement on surface. No losses.

00:00 - 01:45 - N/U 7 1/16" BOP Stack.
01:45 - 05:15 - Perform BOP function and pressure test.
05:15 - 05:30 - RIH wear bushing. Install pin lock.
05:30 - 06:00 - Condition rig floor. Prepare 4 3/4" BHA.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.01		

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	5.3	0.1	5.0	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
15.0	14.0		50.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
6.0		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	1.90	11.30	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	6	200	1,900

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
0.0	133.0	346.9

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	147.0	160.0
Diesel	L	3,380.0	17,780.0

Cost (USD)

Daily Cost : 191,614
Cumulative Cost : 557,285

Mud Costs

Cost (Loc)
731
Cum Field (Loc)
17,404

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/16/2007	Toolbox Meeting
5/17/2007	PJSM Csg
5/17/2007	PJSM Cmt
5/17/2007	PJSM

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	22
Operator - WS	4
Service Cies	9

Cumul POB :35

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 107

6"1/8, DRILLING

Daily progress	918.64
Drilling Hours	8.00
Midnight depth	2,906.8

Date	5/18/2007
Report number	9
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Halliburton	4

Safety Incidents

Date	Type

Daily Summary :
N/U 7 1/16" BOP Stack. Perform function and pressure test. RIH 6 1/8" PDC Bit. Drill out cement and float elements. Displace hole with polinox mud. Take SCR. Drill 6 1/8" hole section to 886 m.

6:00 am Status :
Drilling 6 1/8" hole at 999 m.

Planned Operation :
Drill 6 1/8" hole to TD.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
2,299.87	2,299.62	1.00	0.00
2,624.67	2,624.38	1.00	0.00

WellBore

Branch
AP-225

Expected TD
5,705

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	1.75	N/U 7 1/16" BOP Stack.	BOPASSY	1.75
01:45	3.50	Perform BOP pressure and function test.....R1	BOPTEST	5.25
05:15	0.25	RIH wear bushing. Install pin lock.	WHASSY	5.50
05:30	4.75	Condition rig floor. Prepare BHA on pipes racks. RIH to 338 m.	TRIP	10.25
10:15	1.00	M/U circulation head. Circulate through vent lines and poor boy degasser.	CIRC1	11.25
11:15	0.25	Perform Teledrift test, signal ok.	DEVI	11.50
11:30	2.25	RIH to 568 m. P/U and M/U kelly. RIH to 571 m.	TRIP	13.75
13:45	0.25	Perform kick drill. Good drilling crew reaction.	HSE	14.00
14:00	0.50	Drill out cement and float collar to 600 m.	CEMDRL	14.50
14:30	0.50	Displace hole with Polinox Mud.	CIRC1	15.00
15:00	0.25	Dril out cement and float shoe. Wash rat hole to 606 m.	CEMDRL	15.25
15:15	0.25	Take SCR Pump N° 1 y 2.....R2	KCK	15.50
15:30	8.00	Drill 6 1/8" hole section from 606 m to 886 m.	DRL	23.50
23:30	0.50	Cumulative Teledrift survey time.	DEVI	24.00

Remarks

R1 - Perform BOP Function and Pressure Test :

- Lower Pipe Rams - Upper Pipe Rams and Shear Rams 500/3000 psi 5/10 min. OK.
- Kill line and Choke line valves 500/3000 psi 5/10 min. OK.
- Annular BOP 500/3000 psi 5/10 min. OK.

R2- SCR at 606 m MW 1.08 sg:
Pump # 1.....500 lts/min.....350 psi.
Pump # 1.....700 lts/min.....650 psi.

Pump # 2.....500 lts/min.....350 psi.
Pump # 2.....700 lts/min.....650 psi.

00:00 - 06:00 - Drill 6 1/8" hole section from 886 m to 999 m. Reduce WOB due to deviation tendency.
WOB= 3 Ton - RPM= 150 Tpm - FR= 1050 lts/min - SPP= 1500 psi.
Take Teledrift survey at 906 m - 2°.
Take Teledrift survey at 953 m - 2 1/2°.
Take Teledrift survey at 982 m - 3°.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.01		

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	5.3	0.1	5.0	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
14.0	13.0		50.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
4.0		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	1.90	11.30	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	6	200	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
328.7	37.1	638.5

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	61.0	140.0
Diesel	L	2,660.0	15,120.0

Cost (USD)

Daily Cost : 32,866
Cumulative Cost : 590,151

Mud Costs

Cost (Loc)
8,245
Cum Field (Loc)
25,649

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
2	2	0.38	6 1/8in, Mi 516, JX-2711	Drill Formation	1,988.2	918.64	8.00	114.8	918.64	8.00	15.4	1,479.4	277	150					

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA
2	Smith Mi 516, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP

Date	Type
5/17/2007	PJSM Cmt
5/17/2007	PJSM
5/18/2007	Toolbox Meeting
5/18/2007	Kick Drill

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	22
Operator - WS	4
Service Cies	9

Cumul POB :35

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 108

6"1/8, DRILLING

Daily progress	590.55
Drilling Hours	10.00
Midnight depth	3,497.4

Date	5/19/2007
Report number	10
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Geoservices	2
Others	1
Total	1

Safety Incidents

Date	Type

Daily Summary :
Drill 6 1/8" hole to 1023 m. Take Totco survey with slick line winch. POOH to surface. Change out PDC Bit. RIH to bottom. Take EDrift survey with slick line winch. Drill 6 1/8" hole to 1066 m.

6:00 am Status :
Drill 6 1/8" hole to 1130 m.

Planned Operation :
Drill 6 1/8" hole to TD.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
3,284.12	3,283.39	3.00	0.00
3,333.33	3,332.53	3.00	0.00
3,333.33	3,332.53	3.00	0.00
3,408.79	3,407.92	2.00	0.00

WellBore

Branch
AP-225

Expected TD
5,705

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	7.25	Drill 6 1/8" hole section from 886 m to 1023 m.....R1	DRL	7.25
07:15	1.50	Cumulative Teledrift survey time.	DEVI	8.75
08:45	1.50	Circulate hole clean. FR= 1055 lts/min - SPP= 1630 psi. Meanwhile prepare to take Totco survey with slick line winch.	CIRC1	10.25
10:15	0.75	Take Totco survey at 1016 m with negative result, instrument failure.	NSMISC	11.00
11:00	0.50	Circulate hole clean. FR= 1067 lts/min - SPP= 1685 psi. Meanwhile prepare to take Totco survey with slick line winch.	NSMISC	11.50
11:30	1.00	Take Totco survey at 1016 m - 3°.	DEVI	12.50
12:30	3.25	Rack kelly. Drop Totco. Flow check. POOH to surface.	NODEVI	15.75
15:45	0.50	Recover Totco from 1016 m - 3°. Teledrift operator change instrument range from 1° to 7°.	NODEVI	16.25
16:15	4.00	P/U and M/U 6 1/8" Hughes PDC Bit. RIH to bottom.....R2	NODEVI	20.25
20:15	0.25	P/U and M/U kelly. Circulate hole clean. FR= 1065 lts/min - SPP= 1750 psi.	NODEVI	20.50
20:30	0.50	Take EDrift survey at 1016 m -	NODEVI	21.00
21:00	2.75	Drill 6 1/8" hole section from 1023 m to 1066 m.	DRL	23.75
23:45	0.25	Cumulative Teledrift survey time.	DEVI	24.00

Remarks

R1 - Drill 6 1/8" from 906 m to 1023 m with controled parameters due to deviation tendency.

From 906 m to 953 m WOB= 12 kpis - RPM= 150 Tpm. (Teledrift 906 m - 2°.)
From 953 m to 982 m WOB= 8 kpis - RPM= 150 Tpm. (Teledrift 953 m - 2 1/2°.)
From 982 m to 1004 m WOB= 6 kpis - RPM= 160 Tpm. (Teledrift 982 m - 3°.)
(Teledrift 1001 m - 3°)

R2 - Perform Teledrift test at top of Drill collars, signal ok.

00:00 - 06:00 - Drill 6 1/8" hole section from 1066 m to 1130 m. Control WOB due to deviation tendency.
WOB= 4.5 Ton - RPM= 150 Tpm - FR= 1050 lts/min - SPP= 1580 psi.
Take Teledrift survey at 1068 m - 3°.
Take Teledrift survey at 1096 m - 1°.
Take Teledrift survey at 1124 m - 1°.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.10	9.93	

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	5.9	0.1	5.6	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
16.0	14.0		55.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
4.0		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.40	1.90	11.40	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	9	200	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
5.7	100.6	543.6

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	25.0	145.0
Diesel	L	3,640.0	11,480.0

Cost (USD)

Daily Cost : 28,368
Cumulative Cost : 618,519

Mud Costs

Cost (Loc)
3,747
Cum Field (Loc)
29,396

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
2	2	0.38	6 1/8in, Mi 516, JX-2711	Drill Formation	2,906.8	449.48	7.25	62.0	1,368.11	15.25	6.6	1,631.7	277	150					
3	3	0.38	6 1/8in, HC-505, 7302760	Drill Formation	3,356.3	141.08	2.75	51.3	141.08	2.75	7.9	1,537.4	277	150					

Bit Dull

Bit Dull
1-1-WT-A-X-1-NO-BHA

Drill String Runs

BHA No.	BHA
2	Smith Mi 516, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP
3	Hughes HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP

Date	Type
5/18/2007	Toolbox Meeting
5/18/2007	Kick Drill
5/19/2007	Toolbox Meeting
5/19/2007	Toolbox Meeting

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	21
Operator - WS	4
Service Cies	10

Cumul POB :35

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 109

6"1/8, DRILLING

Daily progress	1,522.31
Drilling Hours	21.75
Midnight depth	5,019.7

Date	5/20/2007
Report number	11
Water Depth	
Activity Type & N°	DEV 1

Daily Summary :
Drill 6 1/8" to 1530 m. Take Teledrift survey.

6:00 am Status :
Drill 6 1/8" to 1628 m.

Planned Operation :
Drill 6 1/8" hole to TD.

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
3,937.01	3,935.84	2.00	0.00
4,091.21	4,089.99	1.00	0.00
4,402.89	4,401.62	1.00	0.00
4,717.85	4,716.53	1.00	0.00

WellBore

Branch: AP-225

Expected TD 5,705

Stop Cards

Parent Company	Quantity
Contractor	1
Halliburton	1
Others	1

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	21.75	Drill 6 1/8" hole section from 1066 m to 1530 m.....R1	DRL	21.75
21:45	2.25	Cumulative Teledrift survey time.....R2	DEVI	24.00

Remarks

R1 - Drill 6 1/8" hole section from 1066 m to 1130 m. Control WOB due to deviation tendency.
WOB= 4.5 Ton - RPM= 150 Tpm - FR= 1050 lts/min - SPP= 1580 psi.

R2 - Perform Teledrift rotation test at 1469 m, signal ok.

* Perform Weekly Safety Meeting with drilling crew about hands care.

00:00 - 06:00 - Drill 6 1/8" hole section from 1530 m to 1628 m.
Take Teledrift survey at 1535 m - 1°.
Take Teledrift survey at 1630 m - 1°.

Take SCR Pump N° 1 and N° 2 at 1595 m MW 1.12.

Pump # 1.....500 lts/min.....500 psi.
Pump # 1.....700 lts/min.....1100 psi.

Pump # 2.....500 lts/min.....600 psi.
Pump # 2.....700 lts/min.....1050 psi.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.35	10.10	

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	7.6	0.1	7.1	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
17.0	13.0		56.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
4.0		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	1.90	11.40	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	10	220	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
278.6	151.0	671.2

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	60.0	155.0
Diesel	L	4,980.0	17,500.0

Cost (USD)

Daily Cost : 37,981
Cumulative Cost : 656,501

Mud Costs

Cost (Loc)
13,360
Cum Field (Loc)
42,757

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
3	3	0.38	6 1/8in, HC-505, 7302760	Drill Formation	3,497.4	1,522.31	21.75	70.0	1,663.39	24.50	17.9	2,146.6	277	150					

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA
3	Hughes HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP

Date	Type
5/19/2007	Toolbox Meeting
5/20/2007	Toolbox Meeting
5/20/2007	Weekly Meeting
5/20/2007	Toolbox Meeting

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	21
Operator - WS	5
Service Cies	13

Cumul POB :39

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 110

Date	5/21/2007
Report number	12
Water Depth	
Activity Type & N°	DEV 1

6"1/8, DRILLING

Daily progress	685.70
Drilling Hours	11.50
Midnight depth	5,705.4

Daily Summary :
Dill 6 1/8" hole to 1739 m. Wiper trip to casing shoe. RIH to bottom. Circulate hole clean. POOH to 1500 m.

6:00 am Status :
Perform logging Run # 1.

Planned Operation :
POOH to surface. Perform electrical loggs.

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack		

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
5,036.09	5,034.72	1.00	0.00
5,347.77	5,346.36	1.00	0.00
5,646.33	5,644.87	1.00	0.00
5,688.98	5,687.51	1.00	0.00

WellBore

Branch
AP-225

Expected TD
5,705

Stop Cards

Parent Company	Quantity
Contractor	1
Total	1

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	3.25	Drill 6 1/8" hole from 1530 m to 1595 m.	DRL	3.25
03:15	0.50	Cumulative Teledrift survey time.	DEVI	3.75
03:45	0.25	Take SCR Pump # 1 and # 2.....R1	KCK	4.00
04:00	8.25	Drill 6 1/8" hole from 1595 m to 1739 m.....R2	DRL	12.25
12:15	0.50	Cumulative Teledrift survey time.	DEVI	12.75
12:45	0.50	Sweep hole with 3 m3 of HiVisc pill. Circulate hole clean. FR= 1050 lts/min - SPP= 2150 psi - BUG= 2 %.	CIRC1	13.25
13:15	6.25	Perform flow check. Rack kelly. Set C.O.M. POOH to 580 m.....R3	TRIP	19.50
19:30	2.75	RIH from 580 m to 1716 m. P/U and M/U kelly wash down to 1739 m.	TRIP	22.25
22:15	0.75	Sweep hole with 3 m3 of HiVisc pill. Circulate hole clean. FR= 1050 lts/min - SPP= 2100 psi - BUG= 1.4 %.	CIRC1	23.00
23:00	1.00	Perform flow check. Rack kelly. Drop EDrift survey instrument. POOH to 1500 m.	TRIP	24.00

Remarks

R1 - Take SCR Pump N° 1 and N° 2 at 1595 m MW 1.12 sg.

Pump # 1.....500 lts/min.....500 psi.
Pump # 1.....700 lts/min.....1100 psi.

Pump # 2.....500 lts/min.....600 psi.
Pump # 2.....700 lts/min.....1050 psi.

R2 - Max Gas peak at Mulichinco formation:
1623 m - 9.09 %.
1691.5 m - 8.64 %.
1739 m - 9.18 %.

R3 - POOH to 1069 m. From 1150 m to 1069 m observe drag and swabbing, Max overpull 15/25 kips. P/U and M/U kelly circulate hole with rotation. FR= 1050 lts/min - SPP= 2100 psi. From 1069 m to 925 m Max overpull 25 kips. From 925 m to casing shoe no drag and swabbing.

00:00 - 03:45 - POOH to surface. Retrieve EDrift survey instrument. Change out Teledrift by short drill collar. (EDrift survey 1721 m - 1°.)
03:45 - 04:00 - Condition rig floor.
04:00 - 04:30 - R/U Schlumberger logging equipment.
04:30 - 04:45 - Pre Job Safety Meeting on Logg Job.
04:45 - 06:00 - Perform electrical loggs.
Run # 1 ..... AITH - PEX ..... BHT= 62.22° C.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.35	9.51	

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	7.7	0.1	7.3	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
17.0	14.0		52.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
3.8		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	2.00	11.60	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	9	200	2,300

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
5.7	108.8	568.1

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	29.0	148.0
Diesel	L	5,040.0	12,460.0

Cost (USD)

Daily Cost : 28,405
Cumulative Cost : 684,905

Mud Costs

Cost (Loc)
3,784
Cum Field (Loc)
46,540

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
3	3	0.38	6 1/8in, HC-505, 7302760	Drill Formation	5,019.7	685.70	11.50	59.6	2,349.08	36.00	17.9	2,146.6	277	150					

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA
3	Hughes HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP

Date	Type
5/20/2007	Weekly Meeting
5/20/2007	Toolbox Meeting
5/21/2007	Toolbox Meeting
5/21/2007	Toolbox Meeting

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	22
Operator - WS	5
Service Cies	15

Cumul POB :42

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 111

6"1/8, DRILLING

Daily progress	0.00
Drilling Hours	
Midnight depth	5,705.4

Date	5/22/2007
Report number	13
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Contractor	1
Schlumberger	4

Daily Summary :
POOH to surface. Schlumberger perform electrical logging. RIH used PDC Bit to 925 m.

6:00 am Status :
POOH L/D Drill String to 992 m.

Planned Operation :
RIH 4 1/2" Tubing as per program.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	4.00	POOH to surface.....R1	TRIP	4.00
04:00	0.25	Pre Job Safety Meeting on Log Job.	HSE	4.25
04:15	17.50	R/U Logging equipment. Schlumberger perform electrical logging. R/D Logging equipment.	ELOG	21.75
		Run # 1 ..... AITH - PEX ..... BHT = 62.22 ° C.		
		Run # 2 ..... DSI - GR		
		Run # 3 ..... CMR - GR		
		Run # 4 ..... MDT - GR.....R2		
21:45	0.25	Pre Job Safety Meeting.	HSE	22.00
22:00	2.00	P/U and M/U used PDC Bit. RIH to 925 m.	TRIP	24.00

Remarks

R1 - Retrieve EDrift survey instrument. Change out Teledrift by short drill collar. (EDrift survey 1721 m - 1°.) Condition rig floor.

R2 - Perform 22 # pressure points.
Min Formation Pressure = 0.812 EMW - 1658.50 m.
Max Formation Pressure = 1.024 EMW - 1697.40 m.

00:00 - 01:45 - RIH to 1717 m. Wash down to 1739 m.
01:45 - 02:45 - Sweep hole with 3 m3 of HiVisc pill. Circulate hole clean FR= 1050 lts/min - SPP= 2080 psi - BUG= 0.45 %.
02:45 - 03:00 - Pre Job Safety Meeting.
03:00 - 06:00 - POOH L/D drill string from 1739 m to 992 m.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.35		

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	7.8	0.1	7.5	

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
17.0	14.0		53.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
3.8		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	1.90	11.30	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	9	220	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
0.0	124.7	443.4

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	79.0	160.0
Diesel	L	2,100.0	10,360.0

Cost (USD)

Daily Cost : 96,942
Cumulative Cost : 781,847

Mud Costs

Cost (Loc)
2,296
Cum Field (Loc)
48,836

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
3	3	0.38	6 1/8in, HC-505, 7302760	Drill Formation	5,705.4	0.00			2,349.08	36.00									

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA
3	Hughes HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP

Date	Type
5/21/2007	Toolbox Meeting
5/22/2007	PJSM Logg Job
5/22/2007	Toolbox Meeting
5/22/2007	Toolbox Meeting

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)
Wind Spd (kn...	**Wind Dir (°)**	**Visibility (km)**
Current Spee...	**Current Dir (°)**	**Max Var Load...**

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	21
Operator - WS	5
Service Cies	16

Cumul POB :42

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Rig :ODE-39, ODE

Well Name: AP-225

Days w/o LTA : 112

6"1/8, CASING & CEMENT

Daily progress	0.00
Drilling Hours	
Midnight depth	5,705.4

Date	5/23/2007
Report number	14
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack		

Stop Cards

Parent Company	Quantity
Others	1
Total	1

Daily Summary :
RIH 6 1/8" PDC Bit to bottom. Circulate hole clean. POOH L/D drill string. Wash and flush BOP + WH. RIH 4 1/2" tubing to 1095 m.

6:00 am Status :
Circulate condition mud.

Planned Operation :
Cement 4 1/2" tubing as per program.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3
4 1/2	5,695.8

Next : 4 1/2" +/- 1736 m

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	1.75	RIH to 1717 m. Wash down to 1739 m.	TRIP	1.75
01:45	1.00	Sweep hole with 3 m3 of HiVisc pill. Circulate hole clean. FR= 1050 lts/min - SPP= 2080 psi - BUG= 0.45 %.	CIRC1	2.75
02:45	0.25	Pre Job Safety Meeting.	HSE	3.00
03:00	10.00	Perform flow check. Rack kelly. Set C.O.M. POOH to surface L/D drill string.....R1	TRIP	13.00
13:00	0.75	Retrieve wear bushing. M/U washing tool. Wash and Flush 7 1/16" BOP Stack + Well Head.	WHASSY	13.75
13:45	0.25	Perform Tubing Hanger dummy run.....R2	CAS	14.00
14:00	1.25	Prepare to run 4 1/2" Tubing. R/U Weatherford Tubing equipment.	CAS	15.25
15:15	0.25	Pre Job Safety Meeting on run 4 1/2" tubing.	HSE	15.50
15:30	8.50	M/U shoe track. Test float elements. RIH 4 1/2" Tubing as per program to 1095 m.....R3	CAS	24.00

Remarks

R1 - Perform flow check at casing shoe and top of BHA.

R2 - Stick Up 0.96 m.

R3 - Fill up tubing string and break circulation at :

603 m - FR= 800 lts/min - SPP= 230 psi - PUW= 27 kips - SOW= 25 kips.
1047 m - FR= 800 lts/min - SPP= 380 psi - PUW= 40 kips - SOW= 35 kips.

00:00 - 02:30 - RIH 4 1/2" Tubing to 1606 m.
02:30 - 02:45 - Fill up string and break circulation at 1606 m - FR= 800 lts/min - SPP= 750 psi - PUW= 60 kips - SOW= 55 kips.
02:45 - 03:30 - RIH 4 1/2" Tubing to 1725 m.
03:30 - 04:00 - P/U and M/U Tubing Hanger + Running Tool. Set Tubing Hanger onto WellHead
PUW= 65 kips
SOW= 55 kips
04:00 - 06:00 - Circulate hole condition mud. FR= 913 lts/min - SPP= 1170 psi.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.35		

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	7.7	0.1	7.3	0.1

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
17.0	13.0		51.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
3.8		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	2.00	11.40	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	9	200	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
0.0	21.4	422.0

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	30.0	160.0
Diesel	L	2,800.0	7,560.0

Cost (USD)

Daily Cost : 324,155
Cumulative Cost : 1,106,002

Mud Costs

Cost (Loc)
731
Cum Field (Loc)
49,567

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)
3	3	0.38	6 1/8in, HC-505, 7302760		5,705.4	0.00			2,349.08	36.00									

Bit Dull

Bit Dull
1-2-WT-N-X-1-ER-TD

Drill String Runs

BHA No.	BHA
3	Hughes HC-505, Bit Sub w/ FV, 4-3/4" Teledrift (# 2021), 4-3/4" SDC, 5-15/16" Stab (#426), 1 x 4-3/4" DC, 5-15/16" Stab (#466), 17 x 4-3/4" DC, 4-3/4" Hydraulic Jar (#1420-1359), 3 x 4-3/4" DC, 12 x 3-1/2" HWDP, 1 x 3-1/2" DP, DICV, 3-1/2" DP

Date	Type
5/22/2007	Toolbox Meeting
5/23/2007	Pre-Job Meeting
5/23/2007	PJSM Run 4 1/2" Tbg
5/23/2007	PJSM Run 4 1/2" Tbg

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	21
Operator - WS	6
Service Cies	31

Cumul POB :58

Daily Drilling Report

TOTAL Austral

Field :AGUADA PICHANA
Platform :N/A

Well Name: AP-225

Rig :ODE-39, ODE

Days w/o LTA : 113

6"1/8, CASING & CEMENT

Daily progress	0.00
Drilling Hours	
Midnight depth	5,705.4

Date	5/24/2007
Report number	15
Water Depth	
Activity Type & N°	DEV 1

BOP Test

Type	Last Date	Next Date
BOP's Test	5/18/2007	6/1/2007
PJSM N/D BOP Stack	5/24/2007	5/25/2007

Stop Cards

Parent Company	Quantity
Weatherford	3

Daily Summary :
RIH 4 1/2" Tubing as per program. Set Tbg Hanger onto WellHead. Circulate hole condition mud. Cement 4 1/2" Tbg as per program. Wash and flush BOP + WH. Install Pack off bushing on tubing hanger. Set TWCV onto tubing hanger. N/D 7 1/16" BOP. N/U X-Mass Tree.

6:00 am Status :
Conditon rig for moving.

Planned Operation :
R/D and Move to AP-226.

Survey Data

MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)

WellBore

Branch
AP-225

Expected TD
5,705

Safety Incidents

Date	Type

Casing Strings

Main Nom OD (in)	Set Depth (ftKB)
7	1,977.3
4 1/2	5,695.8

Next :

Formations

Top Depth (ftKB)	Top Depth (TVD) (ftKB)	Formation Name
3,894.4	3,893.2	Top Avile
5,301.8	5,300.4	Top Upper Mulichinco
5,367.5	5,366.0	Top Middle Mulichinco
5,610.2	5,608.8	Top Lower Mulichinco

Time Log

Start Time	Dur (hrs)	Comment	Code	Cum Dur (hrs)
00:00	3.50	RIH 4 1/2" Tubing to 1725 m.....R1	CAS	3.50
03:30	0.50	P/U and M/U Tubing Hanger + Running Tool. Set Tubing Hanger onto WellHead.....R2	CAS	4.00
04:00	2.25	M/U circulation head. Circulate hole condition mud prior cement job. FR= 913 lts/min - SPP= 1170 psi.....R3	CAS	6.25
06:15	0.25	Pre Job Safety Meeting on Cement Job.	HSE	6.50
06:30	0.25	Perform pressure test cement lines with 500/5000 psi 5/10 min.	CEM	6.75
06:45	1.00	Circulate hole meanwhile mix cement slurrys.	CEM	7.75
07:45	2.25	Cement 4 1/2" Tubing as per program.....R4	CEM	10.00
10:00	1.00	R/D Cement equipment.	CEM	11.00
11:00	2.00	L/D running tool + landing joint. P/U and M/U washing tool. Wash and flush WellHead + BOP Stack. L/D washing tool. M/U Pack off bushing + running tool. Set same on tubing hanger.....R5	WHASSY	13.00
13:00	0.75	R/U Geoservice slick line equipment. Install TWCV onto tubing hanger. R/D slick line equipment.	SLICK	13.75
13:45	0.25	Pre Job Safety Meeting on N/D BOP.	HSE	14.00
14:00	4.00	N/D 7 1/16" BOP Stack.	BOPASSY	18.00
18:00	2.00	N/U X-Mass tree. Perform pressure test.....R6	XTASSY	20.00
		End of Well AP-225. Rig move to AP-226. Distance between locations 14 Km.		

Remarks

R1 - Fill up tubing string and break circulation at :

1606 m - FR= 800 lts/min - SPP= 750 psi - PUW= 60 kips - SOW= 55 kips.

R2 - RIH 4 1/2" Tubing 10.5 # - CR13 - SEC - L80. Float Shoe= 1736.07 m - Float Collar= 1716.59 m.
PUW= 65 kpis - SOW= 55 kips.

R3 - Mud Rheology before cement job VP= 17 YP= 12. Meanwhile R/D Weatherford Tubing equipment.R/U Halliburton cement equipment.

R4 - Pump 20 bbl Mud Flush Spacer 1.02 sg. Pump 40 bbl Tuned Spacer 1.2 sg. Pump 35 bbl Mud Flush Spacer 1.02 sg. Pump 30 bbl Super Flush 101 1.2 sg. (Bump Calibration Plug with 91.7 bbl - Get to 2600 psi - 10 min, Increase to 3100 psi - 5 min, ok. Shear rupt disc with 3200 psi.) Drop bottom Plug. Pump 74.5 bbl Lead Slurry 1.15 sg + 14 bbl Tail Slurry 1.9 sg. Flush lines until circulate clean. Drop Top Plug. Displace with 90.4 bbl 2 % KCL filtered Brine. Final Pressure 1090 psi. Bump Plug 1700 psi . Hold 2 min. Bleed off 0.5 bbl. Float equipments OK. No losses.

R5 - Perform pressure test 500/5000 psi - 10 min.

R6 - Perform pressure test:
Ring Gasket.....500/5000 psi - 10 min .
Metal Seal.....500/5000 psi - 10 min .

* Well Cost Updated.

Mud

Mud Type	Density (...	ECD (lb/...	Mud Vol ...
Lime mud	9.35		

OW R...	Solids...	Sand	LGS (%)	HGS (%)
	7.7	0.1	7.3	0.1

PV OR (cp)	YP OR (l...	YS Calc (...	Marsh vi...
17.0	12.0		50.00

Filtrate (mL/30...	HTHP Filt (mL/3...	Oil Cutti...
3.8		

Mf (mL)	Pf (mL)	Pm (mL)	pH
2.50	2.00	11.50	12.5

Gel 0 (lbf...	Gel 10 (l...	Ca (mg/L)	Chlor (m...
3	8	200	2,200

Comment

Vol Add (bbl)	Vol Lost (bbl)	Final Volume (bbl)
0.0	422.0	0.0

Safety stocks

Main Stock Des	Unit	Consu...	Stock
Baryte	kg	0.0	15,000.0
Drilling Water	m³	60.0	100.0
Diesel	L	2,380.0	5,180.0

Cost (USD)

Daily Cost : 72,871
Cumulative Cost : 1,178,873

Mud Costs

Cost (Loc)
1,904
Cum Field (Loc)
51,471

Parameters

BHA No.	Bit Run	TFA (incl Noz) (in²)	Bit and Core Head Inventory	Type	Start (ftKB)	Int Depth (ft)	Drill Time (hrs)	Int ROP (ft/hr)	Cum Depth (ft)	Cum Drill Time (hrs)	WOB (kips)	SPP (psi)	Flow Rate (gpm)	RPM (rpm)	Drill Tq (ft-lbs)	Off Btm Tq (ft-lbs)	PU Str Wt (kips)	SO Str Wt (kips)	FRW (kips)

Bit Dull

Bit Dull

Drill String Runs

BHA No.	BHA

Date	Type
5/23/2007	PJSM Run 4 1/2" Tbg
5/23/2007	PJSM Run 4 1/2" Tbg
5/24/2007	PJSM Cement Job
5/24/2007	PJSM N/D BOP Stack

Supervisor
Victor Manuel Barros

Weather Conditions

Wave Dir (°)	Wave Per (s)	Wave Ht (ft)

Wind Spd (kn...	Wind Dir (°)	Visibility (km)

Current Spee...	Current Dir (°)	Max Var Load...

Roll (°)	Pitch (°)	Heave (ft)	T (low) (°F)

Support Vessels\H...

Vessel Name	Type

POB

Type	Count
Drlg Contractor	26
Operator - WS	3
Service Cies	8

Cumul POB :37